# Table of Contents

Interaction Administrator ................................................................. 6
About Setup Assistant ........................................................................ 6
New features in Interaction Administrator ..................................... 7
Overview of Interaction Administrator ........................................... 9
License Management ........................................................................ 9
Navigation Controls ....................................................................... 9
Telephony Server Configuration .................................................... 10
User and Workgroup Configuration ............................................... 11
CIC System Configuration ............................................................... 11
Starting IC server modules ............................................................. 12
Minimum Hardware and Software Requirements .......................... 12
Command-line Options ................................................................... 12
Interaction Administrator Interface ............................................. 14
System security for IA ................................................................. 26
Collective ....................................................................................... 29
Collective concepts ......................................................................... 29
Home Site ..................................................................................... 30
Peer Site ....................................................................................... 31
Assistants ..................................................................................... 35
Add Location Assistant ................................................................... 35
Managed IP Phone Assistant ....................................................... 39
IC Server ...................................................................................... 47
Server Configuration ................................................................. 47
Lines ............................................................................................. 65
Line Groups .................................................................................. 123
Stations ......................................................................................... 129
Managed IP Phones ........................................................................ 194
SIP Bridges .................................................................................... 254
Audio Sources ............................................................................. 254
Server Parameters .......................................................................... 255
Structured Parameters ..................................................................... 289
Regionalization ............................................................................. 290
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>License Allocation</td>
<td>307</td>
</tr>
<tr>
<td>License Configuration</td>
<td>307</td>
</tr>
<tr>
<td>People</td>
<td>311</td>
</tr>
<tr>
<td>Security for people</td>
<td>311</td>
</tr>
<tr>
<td>ACD</td>
<td>334</td>
</tr>
<tr>
<td>Default User</td>
<td>339</td>
</tr>
<tr>
<td>Roles</td>
<td>341</td>
</tr>
<tr>
<td>Users</td>
<td>346</td>
</tr>
<tr>
<td>Workgroups</td>
<td>373</td>
</tr>
<tr>
<td>Password Policies</td>
<td>398</td>
</tr>
<tr>
<td>Schedules</td>
<td>404</td>
</tr>
<tr>
<td>Secure Input Forms</td>
<td>407</td>
</tr>
<tr>
<td>Wrap-up Codes</td>
<td>412</td>
</tr>
<tr>
<td>Wrap-up Categories</td>
<td>415</td>
</tr>
<tr>
<td>CIC Client Buttons</td>
<td>418</td>
</tr>
<tr>
<td>Client Configuration</td>
<td>420</td>
</tr>
<tr>
<td>Account Codes</td>
<td>436</td>
</tr>
<tr>
<td>Client Templates</td>
<td>440</td>
</tr>
<tr>
<td>Response Management</td>
<td>441</td>
</tr>
<tr>
<td>Skills</td>
<td>446</td>
</tr>
<tr>
<td>Access Control Groups</td>
<td>448</td>
</tr>
<tr>
<td>About inheritance of configuration properties</td>
<td>455</td>
</tr>
<tr>
<td>Activating configuration changes for users, workgroups, roles, and the default user</td>
<td>456</td>
</tr>
<tr>
<td>System Configuration</td>
<td>457</td>
</tr>
<tr>
<td>System Configuration Pages</td>
<td>457</td>
</tr>
<tr>
<td>Interaction Processor</td>
<td>469</td>
</tr>
<tr>
<td>Phone Numbers</td>
<td>472</td>
</tr>
<tr>
<td>Report Logs</td>
<td>507</td>
</tr>
<tr>
<td>Accumulators</td>
<td>533</td>
</tr>
<tr>
<td>System Parameters</td>
<td>535</td>
</tr>
<tr>
<td>Status Messages</td>
<td>536</td>
</tr>
<tr>
<td>Actions</td>
<td>541</td>
</tr>
<tr>
<td>Log Retrieval Assistant (LRA)</td>
<td>545</td>
</tr>
<tr>
<td>Mail</td>
<td>548</td>
</tr>
</tbody>
</table>
Interaction Administrator

About Setup Assistant

During installation, the installer uses IC Setup Assistant to configure any or all of the following features for Interaction Administrator:

- CIC administrator and network information
- CIC license
- Dial plan
- Database
- CIC optional components, such as Switchover, Multi-Site RTM, and TFTP server
- Site Information (Interaction Tracker — add-on license)
- Server Group Certificate and Private Key (Switchover)
- Interaction Recorder (add-on license)
- Speech Recognition engine (add-on license)
- Mail provider
- Log Retrieval Assistant
- SIP Lines and Default Registration
- Stations
- Users
- Workgroups
- Roles
- Default hours of operation
- Group call processing
- DCOM security

After the installation is complete, you can re-run IC Setup Assistant to complete the tasks that you cannot complete in Interaction Administrator or anywhere else in CIC.

When you re-run the IC Setup Assistant, a different Welcome page appears. From this page, you can make the following changes by re-running IC Setup Assistant:

- Identity
- Optional components
- Dial plan
- Rename DS
- Database
- DCOM
- Certificates

You must make additions or changes to the following configurations in Interaction Administrator:

- Site information
- SIP lines and default registration group
- Interaction Recorder
• Speech recognition
• Mail provider
• Log retrieval assistant
• Stations
• Users
• Workgroups
• Roles

Additions or changes to the following configurations must be made in Interaction Attendant:

• Default hours of operation
• Group call processing

**New features in Interaction Administrator**

The CIC product suite has a new distribution model with new naming, faster release cycles, and higher quality. CIC 4.0 SU 6 was the last release using the older model. CIC 2015 R1 is first of the new releases. CIC 2015 R1 or later can be applied to any CIC 4.0 SU.

Interaction Administrator for Interaction Center (IC) version 4.0 contains the following new features to assist you in customizing and configuring Interaction Center. The new features include:

Access Control Groups: Access Control Groups (ACGs) provide a flexible way of defining administrative access rights.

AudioCodes phones: CIC now supports AudioCodes phones.

**Concurrent Licensing:** This new license option allows licenses to be assigned to more users than there are licenses available.

**Crystal Reports:** The Report Management container is now used to configure Crystal Reports 2013. You can now configure Crystal Reports run by IC Business Manager to execute without a direct connection to the database server. You can also configure secure parameters to restrict report results with secure parameters.

Enhanced Interaction Administrator Change Notification Log: CIC supports enhanced change audit logging for selected Interaction Administrator containers.

Gmail OAuth support: CIC now supports OAuth 2.0 for Gmail authentication.

Interaction Analyzer: Interaction Analyzer's real-time word and phrase spotting allows for fully-integrated speech analytics with supervisors and agents being informed in real time of interaction scores and spotted keywords and phrases.
Interaction Update: You can now configure the local Interaction Update provider URI in the System Configuration container.

Password policies now contain additional configuration options for enhanced security.

PureCloud for CIC Integration: The new PureCloud container allows you to easily configure the integration between your IC server and your PureCloud organization.

Remote Content Server: Interaction Recorder Remote Content Server provides multiple efficiencies in recording telephone conversations and screen activity in the Interaction Center environment. The Remote Content Server can take over the certain tasks from the IC server improving bandwidth.

Security: The new security configuration and management dialog boxes have changed significantly, allowing simplified management of these security settings. With the addition of a search function and the ability to get better insight into the security inheritance model, administration and ongoing system maintenance has become much easier. The new security settings also allow more granular control over existing features.

Server parameters for IC Business Manager views allow you to restrict the number of records that may appear in the IC Business Manager statistics views.

Session Manager Regionalization: An off-server session manager can be assigned to a specific region/location and all the client applications (the CIC clients and Interaction Center Business Manager) running in that location use the local off-server session manager.

Single sign-on: When single sign-on is enabled, a user can log in once and then access multiple CIC applications without being prompted to log in again. To simplify the configuration process, activate the Single Sign-on Configuration Utility plug-in by enabling the EnableSSOConfiguration server parameter.

SMS: New configuration options are available for SMS messages. These include associating an SMS broker account with a workgroup or user, purging SMS data, and tracking SMS messages with Interaction Tracker.

Advanced syslog tracing options are available for Polycom phones.

Wrap-up Categories: Wrap-up codes can be associated with categories.
Overview of Interaction Administrator

License Management

Use the License Management dialog box to view and load licenses.

**Note:** Only users with the master administrator right can access the License Management dialog box.

For complete instructions on updating your licenses, go to the License Management system at the Interactive Intelligence license Web site at [http://license.inin.com](http://license.inin.com). You can also find information on licensing in the *IC Licensing Overview* in the CIC Documentation Library.

To access the License Management dialog box, do one of the following:

- On the button bar, click.
- On the File menu, click License Management.

To load licenses of *.I3Lic or *.I3Lic.xml file types, click Load License.

To view the features included with the loaded licenses, click the Features tab.

To view your machine host ID, click View Host ID.

**Related topics**

Host ID

**Navigation Controls**

The following navigation controls are always available in Interaction Administrator:

Lists support quick-key selection. That means you can select an entry inside any list and then press the letter or number key that begins the entry you want to select. The cursor jumps to the first entry in the list that begins with that character. If there are multiple entries that begin with the same character, you can continue to press the same character key to select the next entry that begins with that character.

- In the list view (right pane), once an entry is highlighted, you can press Enter to open the page for that entry.
• When a configuration dialog box is open to a particular page, and there are multiple entries in that configuration container, you can click on the >> button at the bottom of the page to view that page in the next entry down the list. If the Confirm Auto-save check box is selected, you can make changes to each page, click the >> (or << to go up) button, and the changes are saved automatically.

• Interaction Administrator automatically remembers which container was selected from one session to the next. In addition, it remembers which property page you were on each time you open a page.

• Context sensitive menus are available in the list view (right pane) when you right-click, or when you see the Context menu available on the menu bar. The available menus depend on which container is selected.

**Telephony Server Configuration**

An IC server contains telephony hardware resources (for example, analog and/or digital voice boards, fax boards, station boards, etc.) that connect incoming telephone lines with your company’s PCs, telephones, fax machines, etc. Each IC server has a specific number of configurable resources that are defined in Interaction Administrator containers found under the container named after the IC server (for example, I3Server). These include:

• Report logs and accumulators activated for this server
• Telephone lines that are defined to use a particular phone number, telephony board, port/channel, and other attributes
• Line groups that are named groups of telephone lines used for specific applications
• Stations (for example, PCs, telephones, fax devices and stand-alone fax machines ) that have extensions and are associated with specific boards, ports/channels, and so on

Each IC server also supports server parameters that are similar to macros that contain data (such as drive and path information) unique to that server and that can be used by the IC Interaction Processor as it operates.

**Related topics**

Add Stations Assistant
Add User Assistant
[CIC System Configuration]
Configure a SIP Line
Line Group Configuration
Station Group Configuration
User and Workgroup Configuration
**User and Workgroup Configuration**

Each CIC user has at least one unique attribute (such as an extension number) along with many other attributes that define the user’s CIC client interface, status messages, telephone privileges, security controls, workgroup memberships, and so on. Each user inherits default values for some of these attributes from the Default User configuration container, which is the logical place to start user configuration. The CIC installation program creates a minimal set of Default User attributes that can be modified.

Each CIC user must have a network user account (for a Windows server) and have a Microsoft Exchange mail account to receive voicemail and faxes. Configuring CIC users is easier if the network and Exchange accounts are already established, but it is not required. Each user can be a member of zero or more CIC workgroups, which are logical groups of users that can (optionally) have a common telephone extension and serve as a queue for ACD calls as well as other attributes. Workgroups also inherit some default attributes from the Default User configuration container.

Wherever a user logs in to the CIC network, the Interaction Processor (IP) identifies that user by his or her unique extension number and routes calls to the extension number of his or her current workstation. IP then routes calls and tracks user interactions based on that user’s activity.

**Related topics**

Delete User

CIC System Configuration

Telephony Server Configuration

Overview of how to add users

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**CIC System Configuration**

CIC system resources control specific features and functionality provided in the Interaction Center for the entire configuration, regardless of how many servers or users are installed. System-level configuration includes:

- Interaction Processor (IP) variables and startup handlers
- Phone number identification and pattern matches. All dial plan configuration and phone number classifications are controlled in the Phone Numbers container.
- Report, Report Log, and Accumulator activity for gathering and producing call activity reports
- System-wide parameters that can be referenced by all CIC handlers on each server
• **Status messages** that can be defined on the server and set on each workstation running a CIC client.
• **Action** definitions
• Log Retrieval
• Administrative, fax, and voice **email account names**
• Interaction Process Automation
• **Interaction Feedback**
• Fax server, Interaction Fax Viewer default attributes and fax groups that are named groups of fax devices used for specific applications.
• **Database** and data source configuration
• Predefined Web chat messages and URLs for agents taking Web chat sessions
• Voice recognition
• Media Servers
• SIP Proxies
• MRCP Servers
• **Session Manager**
• SMS

**Starting IC server modules**

The IC server installation procedure sets up the IC Console service, which starts all the IC server modules automatically as Windows services when the server is rebooted. If the server is restarted for any reason, all CIC services are automatically started. In addition, if any individual module is ever terminated (for example, someone kills a process in Task Manager), it will automatically be restarted when IC Console is running as a service.

In general, we recommend that any future IC server restarts include a complete power cycle of the server to ensure that the telephony hardware and/or software is completely reset.

**Warning:** Do NOT manually edit the registry entries in the IC ProcessTree and do NOT use these optional EicService command line arguments without explicit instructions from qualified Interactive Intelligence representatives. Doing so could cause your system to stop functioning or not start as designed.

**Minimum Hardware and Software Requirements**

The system requirements for the current release are available on the Product Information site.

**Command-line Options**

**Specifying an alternate IC server**
You can specify an alternate IC server when you start Interaction Administrator from a command line. This allows you to use the same workstation to configure or test with multiple IC servers.

**To specify an alternate IC server with Interaction Administrator**

1. Open a command prompt and type one of the following:
   - `IAShellA.exe /notifier=servername`
     
     **Note:** If your release of CIC includes the Multi-server Administration license and you are attempting to make configuration changes to a Multi-server Administration slave, a warning message is displayed. The message instructs you to change the `/notifier=servername` parameter to point to the Multi-server Administration Master.
   - `IAShellA.exe /notifier=ipaddress`

   Substitute the name of another IC server on the network for `servername`, or enter that server’s IP address if the `servername` is not available on the LAN.

**Related topics**

Overview of starting options for Interaction Administrator

**Start Interaction Administrator as a master administrator**

If you accidentally delete all of the user accounts with master administrator privileges, you can start Interaction Administrator from the IC server console.

**Note:** You will not be able to start it as master administrator from another computer.

**To start Interaction Administrator as a master administrator**

1. On the IC server, open a command prompt and type one of the following:
   - `C:> IAShellU.exe`
   - `C:> IAShellU.exe /notifier=localhost`

   Do not use the `/user` and `/password` command line arguments in this case. This starts Interaction Administrator as a (undefined) user with master administrator privileges. From there, you can recreate user accounts and assign master administrator privileges to other accounts.
Note: To prevent users from taking advantage of this safety feature, you can disable it completely with the following command line on the IC server: `C:> IAShellU.exe /nohocuspocus`

Related topics

Overview of starting options for Interaction Administrator

Specify the default language

You can start Interaction Administrator in a specific locale.

To specify the default language during startup

1. Enter the following at a command line: `IAShellA.exe /LANGID=[language code]`

Related topics

Overview of starting options for Interaction Administrator

Interaction Administrator Interface
Containers list

The following table describes the containers and subcontainers in Interaction Administrator.
If a listed container does not appear in your copy of Interaction Administrator, it may mean that you have not installed the release of CIC or functionality that requires that container, or it may mean that you do not have rights to the container.

<table>
<thead>
<tr>
<th>Configuration Container</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collective</td>
<td>If you have installed Interaction Multi-Site, this is the container in which you can configure several Multi-Site behaviors.</td>
</tr>
<tr>
<td>Collective: Home Site</td>
<td>Configures the site identifier and password for this IC server.</td>
</tr>
<tr>
<td>Collective: Peer Sites</td>
<td>Identifies other IC servers in the collective and allows you to check connectivity and synchronize with those sites.</td>
</tr>
<tr>
<td>Server (your IC server Name)</td>
<td>Configures the handlers, report logs, accumulators, and several other settings to run on this server. <strong>Note:</strong> When Interaction Administrator is connected to a backup server in a switchover pair, and you are connected to the backup server, the name of the server appears with the label &quot;(Backup).&quot;</td>
</tr>
<tr>
<td>Server: Lines</td>
<td>Configures digital lines for the server.</td>
</tr>
<tr>
<td>Server: Line Groups</td>
<td>Defines line groups and dial groups based on configured lines.</td>
</tr>
<tr>
<td>Server: Stations</td>
<td>Configures workstations, fax stations, stand-alone phones, or any other kind of station information including extension, board number, port number, etc.</td>
</tr>
<tr>
<td>Server: Stations: Templates</td>
<td>Configures the default behavior of stations by the type of station, such as standalone phone or workstation.</td>
</tr>
<tr>
<td>Server: Stations: Groups</td>
<td>Creates station groups so that you may transfer a caller to a specific group of stations.</td>
</tr>
<tr>
<td>Server: Stations: Default Station</td>
<td>Configures default station settings globally, including SIP stations settings.</td>
</tr>
<tr>
<td>Server: Managed IP Phones</td>
<td>Configures and manages IP phones.</td>
</tr>
<tr>
<td>Server: Managed IP Phones: Templates</td>
<td>Configures the default behavior when importing or creating new individual managed IP phones.</td>
</tr>
<tr>
<td>Server: Managed IP Phones: Ring Tones</td>
<td>Configures ring tone behavior for managed IP phones.</td>
</tr>
<tr>
<td>Server: Managed IP Phones: Default IP Phone</td>
<td>Configures the default IP phone provisioning line.</td>
</tr>
<tr>
<td>Server: Managed IP Phones: Registration Groups</td>
<td>Configures the settings used when provisioning managed IP phones.</td>
</tr>
<tr>
<td>Server: SIP Bridges</td>
<td>Configures connectivity paths (SIP bridges) between remote users and the IC server.</td>
</tr>
<tr>
<td>Server: Audio Sources</td>
<td>Configures sources that continuously transmit audio and can be listened to simultaneously by multiple calls.</td>
</tr>
<tr>
<td>Server: Server Parameters</td>
<td>Defines parameters used by handlers and IC subsystems for this server.</td>
</tr>
<tr>
<td>Section</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>Server</strong></td>
<td><strong>Structured Parameters</strong>&lt;br&gt;Defines typed, grouped parameters that are used by handlers and IC subsystems for this server.</td>
</tr>
<tr>
<td><strong>Regionalization</strong></td>
<td>Defines region-specific configuration options, such as locations.</td>
</tr>
<tr>
<td><strong>Regionalization</strong>: <strong>Locations</strong></td>
<td>Defines locations and endpoints (lines, stations, and servers) that share a common dial plan and sets the codec mappings for the endpoints.</td>
</tr>
<tr>
<td><strong>Regionalization</strong>: <strong>Default Regionalization</strong></td>
<td>Sets the default server location and conference settings.</td>
</tr>
<tr>
<td><strong>Regionalization</strong>: <strong>Selection Rules</strong></td>
<td>Configures rules that are used for prioritizing server use, per location.</td>
</tr>
<tr>
<td><strong>Licenses Allocation</strong></td>
<td>Displays licenses and their allocations based on users and stations.</td>
</tr>
<tr>
<td><strong>People</strong></td>
<td>Contains subcontainers where you configure users, workgroups, roles, and related functionality.</td>
</tr>
<tr>
<td><strong>People</strong>: <strong>Default User</strong></td>
<td>Controls user options, basic security and access control for all users, workgroup members, and roles. All users, workgroup members, and roles inherit these properties.</td>
</tr>
<tr>
<td><strong>People</strong>: <strong>Roles</strong></td>
<td>Defines roles, which are reusable sets of basic security settings and access control settings. You use roles to easily configure standardized security and access control levels for users and workgroups.</td>
</tr>
<tr>
<td><strong>People</strong>: <strong>Users</strong></td>
<td>Controls workgroups, options, basic security, ACD features, access control, etc., for each user.</td>
</tr>
<tr>
<td><strong>People</strong>: <strong>Workgroups</strong></td>
<td>Controls members, options, basic security, ACD features, and access control for workgroups.</td>
</tr>
<tr>
<td><strong>People</strong>: <strong>Password Policies</strong></td>
<td>Configures security policies for use with CIC passwords and apply these policies per role or user.</td>
</tr>
<tr>
<td><strong>People</strong>: <strong>Password Policies</strong>: <strong>Policies</strong></td>
<td>Defines new policies.</td>
</tr>
<tr>
<td><strong>People</strong>: <strong>Schedules</strong></td>
<td>Creates and configures schedules used to schedule menus in Interaction Attendant.</td>
</tr>
<tr>
<td><strong>People</strong>: <strong>Secure Input Forms</strong></td>
<td>Defines forms that Agents use to collect confidential customer information.</td>
</tr>
<tr>
<td><strong>People</strong>: <strong>Wrap-up</strong></td>
<td>Defines categories and codes that indicate the nature of interactions for reporting purposes.</td>
</tr>
<tr>
<td><strong>People</strong>: <strong>Wrap-up Categories</strong></td>
<td>Defines groupings of wrap-up codes for reporting and other purposes.</td>
</tr>
<tr>
<td><strong>People</strong>: <strong>Wrap-up</strong>: <strong>Wrap-up Codes</strong></td>
<td>Defines wrap-up codes that Agents associate with interactions to indicate the nature of the interaction.</td>
</tr>
<tr>
<td><strong>People</strong>: <strong>Client Buttons</strong></td>
<td>Configures buttons to appear in the CIC clients that open an application or invoke a custom handler.</td>
</tr>
<tr>
<td><strong>People</strong>: <strong>Client Configuration</strong></td>
<td>Defines templates that specify the CIC client configuration and apply these templates to users.</td>
</tr>
<tr>
<td>People: Client Configuration: <strong>Templates</strong></td>
<td>Defines new templates.</td>
</tr>
<tr>
<td>People: <strong>Queue Columns</strong></td>
<td>Configures which fields can be displayed in Interaction Client's My Interactions page.</td>
</tr>
<tr>
<td>People: <strong>Account Codes Configuration</strong></td>
<td>Enables the account code feature for tracking incoming and outgoing calls.</td>
</tr>
<tr>
<td>People: <strong>Account Codes Configuration: Account Codes</strong></td>
<td>Creates and configures account codes optionally used for incoming and outgoing calls.</td>
</tr>
<tr>
<td>People: <strong>Client Templates</strong></td>
<td>Defines templates that determine how the CIC clients should look and behave. The templates can be assigned to multiple agents to simplify the installation and configuration of their stations.</td>
</tr>
<tr>
<td>People: <strong>Response Management</strong></td>
<td>Creates a library of predefined responses that agents can use in chat sessions, email messages, and callbacks.</td>
</tr>
<tr>
<td>People: <strong>Response Management: Import Documents</strong></td>
<td>Imports previously exported response management documents into the library of responses.</td>
</tr>
<tr>
<td>People: <strong>Skills</strong></td>
<td>Defines ACD skills to assign to users or workgroups.</td>
</tr>
<tr>
<td>People: <strong>Access Control Groups</strong></td>
<td>Provides a flexible way to group CIC objects in order to assign administrative access rights to users and workgroups.</td>
</tr>
<tr>
<td><strong>System Configuration</strong></td>
<td>Controls default mailbox accounts, languages, and host server configuration.</td>
</tr>
<tr>
<td>System Configuration: <strong>Interaction Processor</strong></td>
<td>Configures handlers in Interaction Processor.</td>
</tr>
<tr>
<td>System Configuration: <strong>Interaction Processor: Handlers</strong></td>
<td>Lists handlers active on the server.</td>
</tr>
<tr>
<td>System Configuration: <strong>Interaction Processor: Initialization Functions</strong></td>
<td>Lists initialization functions used by CIC handlers (<strong>do not modify these functions</strong>).</td>
</tr>
<tr>
<td>System Configuration: <strong>Interaction Processor: Tables</strong></td>
<td>Enables you to create in-memory tabular databases for fast lookups on static data by handlers.</td>
</tr>
<tr>
<td>System Configuration: <strong>Phone Numbers</strong></td>
<td>Defines dial plans, dialing classifications, and phone number processing.</td>
</tr>
<tr>
<td>System Configuration: <strong>Report Logs</strong></td>
<td>Defines report logs that capture all call data. Several standard logs are bundled with CIC.</td>
</tr>
<tr>
<td>System Configuration: <strong>Accumulators</strong></td>
<td>Defines accumulators used to hold numbers of system events for tracking and monitoring system performance.</td>
</tr>
<tr>
<td>System Configuration: <strong>System Parameters</strong></td>
<td>Defines parameters that are used by handlers and IC subsystems on all servers across the system.</td>
</tr>
<tr>
<td>System Configuration: <strong>Status Messages</strong></td>
<td>Defines status messages and their attributes that appear in the CIC clients in the Status box (e.g., At Lunch, Available, etc.).</td>
</tr>
<tr>
<td>System Configuration: <strong>Actions</strong></td>
<td>Defines DDE actions and commands that can be invoked when a call connects or disconnects.</td>
</tr>
<tr>
<td>System Configuration: <strong>Log Retrieval Assistant</strong></td>
<td>Configures how logs are retrieved through Log Retrieval Assistant.</td>
</tr>
<tr>
<td>System Configuration</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Mail</td>
<td>Defines multiple mail storage sources.</td>
</tr>
<tr>
<td>Single Sign-On</td>
<td>Enables users to securely log in to CIC applications through third-party authentication providers.</td>
</tr>
<tr>
<td>Secure Token Server</td>
<td>Configures the Secure Token Server, which grants authenticated users access to specific CIC applications.</td>
</tr>
<tr>
<td>Identity Providers</td>
<td>Configures the Identity Providers, which authenticate login requests from users.</td>
</tr>
<tr>
<td>Security Specifications</td>
<td>Controls access to process-level variables in an Interaction Process Automation process.</td>
</tr>
<tr>
<td>Interaction Feedback</td>
<td>Configures settings for survey recordings.</td>
</tr>
<tr>
<td>Fax</td>
<td>Controls the fax appearance, cover page, and other options.</td>
</tr>
<tr>
<td>Fax Groups</td>
<td>Defines fax groups when multiple fax resources are available to be dedicated to specific purposes (e.g., inbound, outbound, etc.).</td>
</tr>
<tr>
<td>IC Data Sources</td>
<td>Defines external data sources CIC uses for report logs, contact databases, etc.</td>
</tr>
<tr>
<td>Contact Data Manager</td>
<td>Controls general resources used by the Contact List Sources.</td>
</tr>
<tr>
<td>Contact List Sources</td>
<td>Specifies CIC data sources to use for creating contact lists that integrate with CIC clients.</td>
</tr>
<tr>
<td>Web Services</td>
<td>(Available with Web add-on license, IC Web Services installed.) No configuration dialog exists for Web Services. You can, however, configure five parameters using the Parameters folder in the Web Services container.</td>
</tr>
<tr>
<td>Web Services Parameters</td>
<td>(Available with Web add-on license, IC Web Services installed.) Lets you configure parameters including the join and leave messages for Chats, the IC server name displayed for the agent’s side of Chats (you might put your company’s name here), the Web Services port number, and the time that visitor’s URLs will remain in the Web Sessions tab after they have left the website.</td>
</tr>
<tr>
<td>Recognition</td>
<td>Configures the behavior of all speech recognition servers.</td>
</tr>
<tr>
<td>Loquendo</td>
<td>Configures the behavior of all Loquendo speech recognition servers.</td>
</tr>
<tr>
<td>Loquendo:Servers</td>
<td>Configures the behavior of each individual Loquendo speech recognition server.</td>
</tr>
<tr>
<td>Interaction Speech Recognition</td>
<td>Configures the behavior of all Interaction Speech Recognition servers.</td>
</tr>
<tr>
<td>MRCP</td>
<td>Configures the behavior of all MRCP speech recognition servers.</td>
</tr>
<tr>
<td>System Configuration</td>
<td>Component</td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>System Configuration:Recognition:MRCP:Servers</td>
<td>Configures the behavior of each individual MRCP speech recognition server.</td>
</tr>
<tr>
<td>System Configuration:Recognition:Nuance Recognizer</td>
<td>Configures the behavior of all Nuance speech recognition servers.</td>
</tr>
<tr>
<td>System Configuration:Recognition:Nuance Recognizer: Servers</td>
<td>Configures the behavior of each individual Nuance speech recognition server.</td>
</tr>
<tr>
<td>System Configuration:Media Servers</td>
<td>Configures stand-alone media servers to record and monitor calls on media server devices, as well as play on-hold music to callers connected with a media server device.</td>
</tr>
<tr>
<td>System Configuration:Media Servers:Servers</td>
<td>Sets the location and other server-specific details for each media server.</td>
</tr>
<tr>
<td>System Configuration:SIP Proxies</td>
<td>Configures the settings for each SIP proxy.</td>
</tr>
<tr>
<td>System Configuration:MRCP Servers</td>
<td>Configures options for all MRCP servers including the protocol and network adapter.</td>
</tr>
<tr>
<td>System Configuration:MRCP Servers:Servers</td>
<td>Configures the SIP address, location, priority, and capabilities of each MRCP server.</td>
</tr>
<tr>
<td>System Configuration:Session Managers</td>
<td>Configures the settings for all Session Manager servers.</td>
</tr>
<tr>
<td>System Configuration:Session Managers:Servers</td>
<td>Configures the settings for each Session Manager server. These settings include the FQDN, the acceptable connections, and the server location.</td>
</tr>
<tr>
<td>System Configuration:SMS</td>
<td>Configures behavior of Short Message Service messages.</td>
</tr>
<tr>
<td>System Configuration:SMS:Brokers</td>
<td>Defines connection with a broker.</td>
</tr>
<tr>
<td>System Configuration:Problem Reporter</td>
<td>Enables an authorized user to report a problem with a CIC client to the user's support representative.</td>
</tr>
<tr>
<td>System Configuration:Problem Reporter</td>
<td>Enables an authorized user to report a problem with a CIC client to the user's support representative.</td>
</tr>
<tr>
<td>System Configuration:Layouts</td>
<td>Identifies station locations on floor plan images.</td>
</tr>
<tr>
<td>Interaction Tracker</td>
<td>Configures Interaction Tracker behavior that displays views of interaction history.</td>
</tr>
<tr>
<td>Interaction Tracker:Individual Types</td>
<td>Defines individual types such as Marketing Director.</td>
</tr>
<tr>
<td>Interaction Tracker:Organization Types</td>
<td>Defines organization types such as Marketing.</td>
</tr>
<tr>
<td>Interaction Tracker:iAddress Types</td>
<td>Defines iAddress types such as Home or Mobile.</td>
</tr>
<tr>
<td>Interaction Tracker:iAddress Subtypes</td>
<td>Defines iAddress sub-types to extend iAddress type such as Home 1 and Home 2.</td>
</tr>
<tr>
<td>Interaction Tracker:Tracker Attribute Types</td>
<td>Defines attribute types for individuals, locations and organizations to extend these types.</td>
</tr>
<tr>
<td>Interaction Tracker:Tracker Address Types</td>
<td>Defines address types such as billing or shipping.</td>
</tr>
<tr>
<td>Interaction Tracker:Titles</td>
<td>Defines titles such as Mr. or Mrs.</td>
</tr>
<tr>
<td>Interaction Tracker: <strong>Read-only Data Sources</strong></td>
<td>Designates read-only data sources, so that Data Manager does not modify them.</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Interaction Recorder</strong></td>
<td>Configures what interactions are recorded and how interactions are recorded.</td>
</tr>
<tr>
<td>Interaction Recorder: <strong>Policy Editor</strong></td>
<td>Creates policies that manage recordings.</td>
</tr>
<tr>
<td>Interaction Recorder: <strong>Screen Recording</strong></td>
<td>Configures Interaction Screen Recorder.</td>
</tr>
<tr>
<td>Interaction Recorder: <strong>Remote Content Server</strong></td>
<td>Configures Activity Types, Day Classifications, and Scheduling Units to prepare Forecasts and Schedules for Real-time Adherence.</td>
</tr>
<tr>
<td><strong>Interaction Optimizer</strong></td>
<td>Configures Activity Types, Day Classifications, and Scheduling Units to prepare Forecasts and Schedules for Real-time Adherence.</td>
</tr>
<tr>
<td><strong>Interaction Analyzer</strong></td>
<td>Defines the keywords that Interaction Analyzer uses to monitor conversations between agents and customers.</td>
</tr>
<tr>
<td>Interaction Analyzer: <strong>Keyword Sets</strong></td>
<td>Organizes keywords into logical groups.</td>
</tr>
<tr>
<td><strong>Report Management</strong></td>
<td>Configures custom reports that are run in Interaction Reporter in IC Business Manager.</td>
</tr>
<tr>
<td>Report Management: <strong>Report System Settings</strong></td>
<td>Configures the first day of a customer’s work week and sets the report timeout value.</td>
</tr>
</tbody>
</table>

**Menu Commands**

The menu bar includes commands on each of the **File**, **Edit**, **View**, **Context**, and **Help** menus. The following information describes the most important menu bar commands. Available commands vary according to the selected container.

**File**

The **File** menu includes the **Export**, **License Management**, and **Exit** commands.

**Export** dumps the existing CIC configuration data into a `.csv` file, which can then be opened with Excel.

**License Management** To update CIC licenses, click this command to display the **License Management** dialog.
The **Exit** command closes Interaction Administrator.

**Edit**

The **Edit** menu includes the **Copy** (Ctrl+C) and **Paste** (Ctrl+V) commands to copy and paste (with a new name) configuration entries. Copy and Paste work for all entries except Skills and Report Logs.

The menu also includes the following standard **New Entry (Insert)**, **Delete Entry (Delete)**, and **Properties (Enter)** commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Entry (Insert)</td>
<td>Requires that you select a configuration container in the tree view. Newly inserted items are added to the bottom of the list.</td>
</tr>
<tr>
<td>Delete Entry (Delete)</td>
<td>Requires that you select one or more configuration entries in the list view. A Delete leaves the previous item in the list selected.</td>
</tr>
<tr>
<td>Properties (Enter)</td>
<td>Requires that you select only one configuration entry in the list view.</td>
</tr>
</tbody>
</table>

**View**

The **View** menu includes the following commands:

- **Filter Bar (F3)**
- **Jump to/from filter Bar (Shift+F3)**
- **Clear Filter Bar (Alt+F3)**
- **Expand Tree**

Select this command to expand the tree and to show all branches.

- **Initial Tree**

Select this command to revert the initial tree view that is displayed when you start Interaction Administrator. The initial tree view displays the top-level (Production) as expanded and displays all sibling containers under Production.

- **Collapse Whole Tree**

This command collapses the entire tree showing only Site.

- **Refresh (F5)**

This command causes Interaction Administrator to read the directory services data and to refresh the entries in the list view. The list view does not redraw the list after every time you insert, delete, or modify an entry. The list view is refreshed only when you use the **Refresh (F5)** command, sort the columns, or when you select a new branch in the tree view.
**Toolbar**

This command controls (toggles) the appearance of the toolbar icons near the top of the Interaction Administrator window.

**Status Bar**

This command controls (toggles) the appearance of the status bar at the bottom of the window.

The **Status Bar** and **Toolbar** commands control (toggle) the appearance of the status bar at the bottom of the Interaction Administrator window, and the toolbar icons near the top of the window.

**Context**

The **Context** menu displays different commands, depending on whether Lines, Stations, or Users entries are displayed in the list view.

**Help**

Use the Help menu to display Help topics for Interaction Administrator and information for your CIC release.

**Selection Commands**

In the list view window, as well as most list boxes in the configuration pages, you can select one or more entries in the list using the standard Windows control keys. This allows you to delete multiple entries, or perform some context sensitive actions on a group of entries. Use the standard Windows GUI commands to select multiple rows (for example, hold the Shift or Ctrl key while selecting rows with the mouse.)

**Toolbar Commands**

Interaction Administrator includes an optional toolbar, which you can control from the View menu’s Toolbar command. The toolbar provides the following icon commands:

- ![New Entry (Insert)](image)
  - New Entry (Insert)
- ![Properties (Enter)](image)
  - Properties (Enter)
- ![Delete Entry (Delete)](image)
  - Delete Entry (Delete)
- ![Copy](image)
  - Copy
- ![Paste](image)
  - Paste
Right-Click Menu Commands

In the list view window, right-click displays a context sensitive menu to perform basic editing operations. This menu is populated with three static entries - New (Insert), Delete (Delete) and Properties (Enter). These commands are also available on the Edit menu and the Toolbar icons. A few types of configuration data support additional right-click menu commands in the list view. These include:

Lines

Line objects have three additional entries in the context sensitive menu. These commands work on multiple entries.

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>New</td>
<td>Create a new SIP line.</td>
</tr>
<tr>
<td>Delete</td>
<td>Remove the selected line or lines.</td>
</tr>
<tr>
<td>Set Active</td>
<td>Can be On or Off to activate or deactivate the selected lines. The line can not be deactivated if there are any active calls on the line. Some changes to SIP lines require <a href="#">deactivation and reactivation</a> in order for changes to take affect.</td>
</tr>
</tbody>
</table>

Stations

Station objects have one additional entry in the context sensitive menu. This action can be performed on multiple entries.

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set Active</td>
<td>Can be Yes or No to activate or deactivate the selected stations.</td>
</tr>
<tr>
<td>Set to Template</td>
<td>Sets the station to a specific station template values.</td>
</tr>
<tr>
<td>Set Preferred Language</td>
<td>Select the preferred language for the prompts for the selected station(s). The default setting is &lt;System Default&gt;.</td>
</tr>
<tr>
<td>Auto Extensions</td>
<td>Changes the extensions of the selected station(s).</td>
</tr>
<tr>
<td>Rename Station</td>
<td>Renames the selected station.</td>
</tr>
<tr>
<td>Change Station Type</td>
<td>Changes the station type of a selected station (workstation, stand-alone phone, or stand-alone Fax).</td>
</tr>
</tbody>
</table>
Station Assistant
Opens the Station Assistant.

Change Station Columns to View
Opens a dialog box to select the columns to view.

Managed IP Phone Properties
Opens the properties of a managed IP phone.

**Users**

Users’ entries have one additional item in the context sensitive menu. This action can be performed for multiple entries.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes made through these menu items are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
</table>
| Set Status                       | Select a status from the sub-menu (for example, At Lunch.) for the selected user(s).  
**Note:** In Interaction Administrator, you can change an agent’s current status to another status only if the current status is persistent. |
| Set Password...                 | Set passwords for Exchange or LotusNotes user(s) and set password options. |
| Set Auto-Answer ACD Calls        | Select Yes or No to change the auto-answer ACD calls setting. This also can be set (checked or unchecked) on the ACD tab under Options. |
| Set Auto-Answer non-ACD Calls    | Select Yes or No to change the auto-answer non-ACD calls setting. |
| Set Unified Messaging Destination| Select the server destination for messages when using SIP diversion.  
**Note:** For more information on configuring CIC to use UM, see Unified Messaging Integration with Interaction Center in the Technical Reference Documents section in the CIC Documentation Library on the IC server. |
| Set Preferred Language          | Select the preferred language for the prompts for the selected user(s). The default setting is <System Default>. |
| Set Time Zone...                | Sets the Time Zone... for the selected users. |
| Set Location                    | Sets the location of the selected users. |
| Set User’s NT Domain Name       | Click this option and type the name of the domain used to connect there user to the IC server, (i.e., i3 domain) and click OK. |
| Reset Failed Login Count        | Click this option to reset the count to 0, so that the user is no longer locked out of the system. |

**Managed IP Phones**

The following commands may be performed from the right-click menu in the managed IP phones list:
<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Multiple IP Phones, ...</td>
<td>Change options on multiple IP phones.</td>
</tr>
<tr>
<td>Reload Now</td>
<td>Reloads the selected managed IP phone(s) now.</td>
</tr>
<tr>
<td>Reload at a Scheduled Time</td>
<td>Reloads the selected managed IP phone(s) at a scheduled time.</td>
</tr>
<tr>
<td>Cancel Scheduled Reload</td>
<td>Cancels a scheduled reload of managed IP phone(s) and reverts phone to it’s previous status.</td>
</tr>
<tr>
<td>Reload All (Reload Required) Now</td>
<td>Reloads the managed IP phone(s) now that require a reload.</td>
</tr>
<tr>
<td>Unprovision</td>
<td>Unprovisions the managed IP phone(s) so that the phone can not be used.</td>
</tr>
<tr>
<td></td>
<td>For example, you might want to unprovision a managed IP phone if an employee leaves the company, and a new employee is going to use the phone. Unprovision it and it will be waiting to be provisioned for the next person.</td>
</tr>
<tr>
<td>Notes: Clearing the MAC or computer name will also cause the phone to become unprovisioned.</td>
<td></td>
</tr>
<tr>
<td>Set Active</td>
<td>Can be Yes or No to activate or deactivate the selected stations.</td>
</tr>
<tr>
<td>Set Preferred Language</td>
<td>Sets the language for all prompts for this managed IP phone. Can be set to &lt;System Default&gt; or any other languages that have been installed.</td>
</tr>
<tr>
<td>Set Custom Attributes</td>
<td>Define Custom Attributes for the selected IP phones.</td>
</tr>
<tr>
<td>Set Time Zone...</td>
<td>Sets the Time Zone... for the selected IP phones. This option is reserved for a future release.</td>
</tr>
<tr>
<td>Set Location</td>
<td>Sets the location of the managed IP phone.</td>
</tr>
<tr>
<td>Set to Template</td>
<td>Sets the managed IP phone options to a specific station template’s values.</td>
</tr>
<tr>
<td>Managed IP Phone Assistant</td>
<td>Opens the Managed IP Phone Assistant.</td>
</tr>
</tbody>
</table>

**Media Servers**

The following command may be performed from the right-click menu in the Media Servers list:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set Location</td>
<td>Sets the location of the media server.</td>
</tr>
</tbody>
</table>

**SIP Proxies**

The following command may be performed from the right-click menu in the SIP Proxies list:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set Location</td>
<td>Sets the location of the media server.</td>
</tr>
</tbody>
</table>
**MRCP Servers**

The following command may be performed from the right-click menu in the MRCP Servers list:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set Location</td>
<td>Sets the location of the media server.</td>
</tr>
</tbody>
</table>

**About Interaction Administrator**

Click the **About Interaction Administrator** button to display information about the CIC release. In addition, you can display details about Customer Interaction Center's environment and the environment of your computer.

**Auto Save feature**

Most of the time, using the (next) and (previous) browse buttons to view configuration data in a list (for example, the list of CIC users) displays the next or previous dialog immediately, unless you made changes to the settings. However, in a certain situation, IC may display the Auto Save dialog box and ask, "Do you want to save changes?" even if you did not make any changes. This can occur if a new release of CIC is installed and new attributes are supported in the registry.

For example, if a new field is added to the Line object in a new release of CIC, the next time a line entry is opened and the button is clicked, the Auto Save dialog box appears and asks "Do you want to save changes?" even though nothing was changed on the dialog.

This happens because Interaction Administrator looks at all fields currently in Directory Services (that is, the registry). When Interaction Administrator decides whether or not to save the configuration data for that page, it checks all fields that can be written against what is currently in the registry. Since a new field was added to Interaction Administrator in the patch release, it detects a difference and assumes the user changed something. As a result, the Auto Save dialog asks, "Do you want to save changes?" If you select "Yes," Interaction Administrator will not display the dialog for that property page again, unless you make a change.

**System security for IA**

**Toll Fraud Prevention**

Toll fraud is the theft of long distance service. A common type of toll fraud involves employees who use company phones in an unauthorized manner to make personal long distance calls. Because CIC is capable of performing many different telephone operations, CIC administrators should know that under certain conditions employees could use CIC features to commit toll fraud.

This topic addresses ways that CIC features could be used to commit toll fraud, and ways that CIC could be configured to prevent such abuses. This does not cover possible toll fraud activities that only a system administrator could commit (for example publishing rogue handlers), or toll
fraud activities that could be performed on an ordinary telephone system (for example using stolen phone access codes).

**Note:** All the toll fraud activities described in this topic occur in the context of an employee calling into the company’s phone system on a corporate toll-free number.

**Reply to a voice mail from a long distance caller**

**Description**

An employee calls into the IC’s auto attendant system via a corporate toll-free number. The employee listens to a personal voice mail message from a long distance caller. Upon playing the message, the IC auto attendant system allows the employee to reply back to the message, which the employee chooses to do. CIC dials the long distance number, the call connects, and it is charged to the company bill.

**Prevention**

You can prevent this type of toll fraud by blocking the employee from initiating all long distance calls, including the ability to reply to long distance calls. In Interaction Administrator you can set Basic Security rights so that the employee does not have the option to initiate Long Distance, International, or 900 Service calls. These rights can be set for an individual user, a workgroup, or the entire company. For more information, see the [Configuration Property Inheritance](#) and User Rights.

**Set the forward number to a long distance number**

**Description**

An employee sets the user status to Available, Forward. However, the forward number the employee enters is the long distance number of a friend that the employee wants to call. Later, the employee calls his/her own extension via a corporate toll-free number. CIC automatically forwards the call to the friend’s long distance phone, the call connects, and it is charged to the company bill. For more information, see the help for the CIC clients.

**Prevention**

Again, the key to preventing this type of toll fraud is to block the employee from initiating long distance calls, which includes forwarding a call to a long distance number. Interaction Administrator allows you to set Basic Security rights so that the employee does not have the option to initiate Long Distance, International, or 900 Service calls. These rights can be set for an individual user, a workgroup, or the entire company. For more information, see the [Configuration Property Inheritance](#) and User Rights help.

**Set the forward number to a local number and call from long distance**
**Description**

An employee sets the user status to **Available, Forward**. However, the forward number the employee enters is a friend’s local phone number. Then, from a long distance number (for example while on vacation in another state) the employee calls his/her own extension using a corporate toll-free number. CIC automatically forwards the call to the friend’s local number and the call connects. For more information, see the *Forward Calls* help topic in Interaction Client.

This scenario is similar to the previous one. However, instead of CIC forwarding a call from a local number to a long distance number, now CIC is forwarding a call from a long distance number to a local number. In either case, the result is the same—the employee has used a company phone line to make an unauthorized long distance call.

**Prevention**

Preventing this type of toll fraud activity requires you to block the employee from setting the forward number to a local external number. There are several ways to do this:

- **Block the employee’s ability to configure the Interaction Client**

  One simple way to prevent this type of toll fraud is to block the employee from making any configuration changes to the Interaction Client, including the ability to set a forward number. In the Interaction Administrator you can set the Basic Security rights so that the employee does not have the rights to view and modify the Configuration Page on Interaction Client. You can set these rights for an individual user, a workgroup, or the entire company. For more information, see the *Configuration Property Inheritance* and User Rights help topics.

- **Remove the "Available, Forward" status**

  Another simple way to prevent this type of toll fraud is to completely remove the Available, Forward status. In Interaction Administrator’s *Status Messages* container, you can delete this status. This solution is more extreme because removing a status can be performed only on a global level. In other words, if you remove this status for one employee, it will also be removed for the entire company. For more information, see the *User Configuration* help topic.

- **Configure CIC so that it forwards calls only to internal numbers**

  A final way to prevent this type of toll fraud is to configure CIC so that all employees—both those in and out of the office—must set their forward numbers to internal extensions. Again, this prevents the forward number feature from being abused, while still allowing it to be used for work related purposes. To configure CIC so that it requires all employees to set their forward numbers to internal extensions, insert a lookup step in the *SystemIVRRemoteEmployee* handler. The lookup step should check to see if the forward number is a valid extension. If it is valid, the handler would allow the employee to set personal attributes; if it is not valid, the handler could play an "Invalid Number"
message and permit the employee to reenter the forward number. For more information on this handler, see the **SystemIVRRemoteEmployee** help topic in Interaction Designer.

**Related topics**

System security for CIC

**Client Admin Components Login Details**

The first time a CIC client application is started (without explicitly passing a CIC user name and password) after logging in to the network domain, the application calls the EICAuth COM object on the IC server. The EICAuth program attempts to authenticate the network domain user who started the application. At this point, the Notifier compares the NT Domain User field values (see the **User Configuration** property page in Interaction Administrator) stored on the IC server with the domain/account name in use on the client workstation. If it finds an exact match, the CIC client connection succeeds and the login authentication information for that user is cached on the client workstation for subsequent logins (during the remainder of the current Windows session). If the Notifier does not find an exact match between the client’s domain/user name and the user configuration data on the IC server, the login is denied and the client application can prompt the user to manually log in.

**Related topics**

System security for CIC

**Collective**

**Collective concepts**

A collective is a group of IC servers that communicate with each other and that share resources. In a collective, IC servers act as **home sites** and **peer sites**.

The **home site** for a user depends on the user's configuration. By default, a user's home site is the site that the user is logged on to. However, you can configure a "permanent" home site for a user, if necessary.

The collective for a user looks different on each of the CIC sites that the user logs on to. For example, suppose that IC servers in Indianapolis, Indiana, Deerfield Beach, Florida, and Aix, France all communicate with one another. For example, if a user logs on in Indianapolis, then Indianapolis is the user's home site and Deerfield Beach and Aix are peer sites.

A user in a collective can log on to any of the collective’s sites. For example, a user in Indianapolis can see whether or not another user in Deerfield is on the phone. If a user visits Indianapolis, someone dialing that user’s extension from any of the other sites is automatically
connected to the phone that person is currently logged on to in Indianapolis. When new users are added in any of these cities, the users automatically appear in the company directory, which is viewable from all of the other cities.

A user can be shared between the collective site and workgroups that span the collective. User data is replicated between collective sites, but not all users are replicated. Only users that are members of spanning workgroups are replicated.

All calls or workgroup-related activity for the user are routed to the last CIC site the user logged on to.

For more information, see the *Multi-Site Technical Reference* document in the CIC Documentation Library on your IC server.

**Overview of the process to set up a collective**

To set up a collective, in the **Collective** container, use the **Home Site** subcontainer to configure the home site. Then use the **Peer Sites** container to add one or more peer sites.

**Related topics**

Home site concepts

Configure a home site

Peer site concepts

Add a peer site

Configure a peer site

Configure trusted access for a peer site

User extensions that span peer sites

---

**Home Site**

![Configure a home site](image)

**To configure a home site**

1. In the **Collective** container, double-click the **Home Site** container.
2. In the list view window, right-click **Configuration**. The **Home Site Configuration** dialog box appears.
3. In the **Site Identifier** box, type a number that uniquely identifies this site. This number appears in all CIC report logs and can be used to create custom queries that isolate data for this site. The default value is 0 (zero). For the purposes of reports, a 0 means that a single IC server is writing data to the report logs.

4. In the **Password** box, type a password for the site. Passwords are case-sensitive and can be any length or character. The next time that you open this dialog box, the **Password** and **Confirm** boxes will display 16 asterisk (*) characters, regardless of the length of the password that you type now.

   **Tip:** You can change the password whenever you open the **Site Configuration** dialog box.

5. In the **Confirm** box, re-type the password.

6. In the **Note ID Dial String Digits** box, type a two-digit value. This value identifies a multi-site call when it is sent to a peer site through an established tie-line connection. For example, *90.

7. Do one of the following:
   - If you have a switchover environment, complete steps 8 and 9.
   - Otherwise, skip to step 10.

8. In the **Switchover Server Configuration** section, in the **Switchover Server A** and **Switchover Server B** lists, select the locations of the switchover servers. For example, you may have switchover servers in different geographic locations. This location is not the computer name. This location of a switchover server allows you to change the codecs that is associated with the server.

9. Type the server names.

10. To activate the site as a home site in a collective, select the **Activate this site to participate in a multi-site configuration** check box.

11. Click **OK**.

**Related topics**

**Home site concepts**

**Collective concepts**

**Peer Site**

*Add a peer site*

**To add a peer site to a collective**

1. In the **Collective** container, double-click the **Peer Sites** container.

2. In the list view window, right-click and then click **New**. The **Entry Name** dialog box appears.

3. Type the name of the peer site.

   **Note:** The name of the peer site must match an existing site name.

4. Click **OK**. The **Peer Site Configuration** dialog box appears.
5. Configure the peer site. For more information, see *Configure a peer site*.

**Related topics**

*Configure a peer site*

*Configure trusted access for a peer site*

Peer site concepts

*Collective concepts*

These instructions assume that you have added a peer site to the collective and want to edit its configuration.

If you are in the process of adding a peer site, start with step 3.

**To configure a peer site**

1. In the **Collective** container, double-click the **Peer Sites** container.
2. In the list view window, right-click the name of the peer site that you want to configure. The **Peer Site Configuration** dialog box appears.
3. In the **Site Identifier** box, type a number or a set of numbers that identifies the peer site. The site identifier (site ID) allows peer sites to connect to one another. The default value is 0 (zero). You cannot use a host name.
4. In the **Phone Number** box, type the telephone number of the peer site. CIC uses this telephone number to route calls to a user who is logged on to the peer site.
5. In the **Password** box, type the password of the peer site. Passwords are case-sensitive. Use the password you set when you configured the site as a home site. For more information, see *Configure a home site*.
6. Do one of the following:
   - If you have a Multi-Server Administration license, complete steps 7 and 8.
   - Otherwise, skip to step 9.
7. In the **Site Address** box, type the IP address or host name for this peer site.
8. In the **Location** list, select a location. For more information, see *Locations*.
9. Sometimes peer sites are connected via tie lines as well as via PSTN. When a tie line has been established between two sites CIC has a **Tie Line Optimization** feature that allows it to process multi-site calls more efficiently. Do you want to use the Tie Line Optimization feature?
• If yes, select the **Use Note ID Dial String** check box.
• Otherwise, skip to the next step.

10. Press **Check Site** to verify that the peer site be reached with the site identifier and that the password for the peer site is correct.

11. Press **Synchronize** to force the local site and the peer site to synchronize.

   **Note:** If you change the peer site name or the site ID, you must press **Synchronize** in order to save the change.

12. Click **OK**.

**Related topics**

*Add a peer site*

*Configure a home site*

*Locations*

*Configure trusted access for a peer site*

**Peer site concepts**

*Collective concepts*

**Trusted access concepts**

Trusted access refers to the ability of selected users to publish and manage handlers or to act as master administrators, when they are logged on to a peer site.

**Note:** Trusted access applies only to users who the appropriate security right(s) and access right. For more information, see **Security**.

When trusted access is configured, a user must have the appropriate security right(s) in order to perform the tasks:

• An Interaction Designer user must have the **Publish** right in order to update production handlers or publish new handlers on the IC server.
• An Interaction Designer user must have the **Manager** right in order to add or remove production handlers from the IC server.
A user must have **Master Administrator** access in to act as a master administrator.

For information on assigning the security rights, see *Security*.

**Related topics**

- Security
- Configure trusted access for a peer site
- Peer site concepts
- Configure a peer site
- Collective concepts
- **Configure trusted access for a peer site**

For more information on trusted access, see Trusted access concepts.

**To configure trusted access for a peer site**

1. In the **Collective** container, double-click the **Peer Sites** container.
2. In the list view window, right-click the name of the peer site that you want to configure. The **Peer Site Configuration** dialog box appears.
3. Click the **Trusted Access** tab.
4. To allow users who have the **Publish** right for handlers to update production handlers or publish new handlers on the IC server while they are logged on to this peer site, select the **Publish Handlers** check box.
5. To allow users who have the **Manage** right for handlers to add handlers to or remove handlers from the IC server while they are logged on to this peer site, select the **Manage Handlers** check box.
6. To allow users who are master administrators to perform their master administrator responsibilities from this peer site, select the **Master Administrator** check box.
7. Click **OK**.

**Related topics**

- Trusted access concepts
- Peer site concepts
- Configure a peer site
- Collective concepts
- **User extensions that span peer sites**
It is always important to plan for growth when you create user extensions in Interaction Administrator. Consider both the growth of your current site and the growth of other sites or other CIC systems.

**Note:** Avoid duplicate user extensions.

When multiple CIC sites form a collective, CIC replicates user information throughout the collective. A user who spans sites (a “spanner”) on an IC server that is part of a collective cannot have the same user extension as another spanner on another IC server in the collective.

For example, suppose User A on Server 1 is part of a workgroup that spans sites. User A has an extension of 8001. User B on Server 2 is part of a workgroup that spans sites. User B also has an extension of 8001. When their user data is replicated throughout the collective, they will have a problem getting calls and other services.

Use careful planning if you change user extensions. The extensions must be unique if a user is added to a workgroup that spans sites. Here are some suggested approaches:

- Change the user extension altogether. For example, if User A on Server 1 had an extension of 8001, change the extension to 8801.
- Add a digit to the beginning of the user’s extension. For example, if User A on Server 1 has an extension of 8001, then change the extension to 18001. This extension means “Server 1, User A extension 8001.” Likewise, if User B on Server 2 has an extension of 8001, then change it to 28001. This extension means Server 2, User B extension 8001.

Related topics
- Collective concepts
- Configure a peer site
- Assistants
  - Add Location Assistant
  - Location Assistant Overview

This page lists each location configuration task and provides a summary of each task. The check box next to each task indicates if the task needs to be completed (gray checkmark), has been completed (green checkmark), is optional (no checkmark), or cannot be completed without other prerequisite configuration (red "X"). You can also choose a task listed on the left to further configure or examine this location's behavior.

Click Next to go to Assign Stations.

Related Topics:
- Assign Stations
Use this page to assign stations to this location. What the Assign Stations page displays depends on whether or not the perquisite station line group (see SIP Station Transport) configuration exists.

**Station Support Exists**

If station support exists, a summary of what stations are assigned to this location is displayed. Click **Add or remove stations…** to modify the station members that are in the station line group assigned to this location.

**No Station Support Exists**

If no station support exists, you are prompted to create a station line group in the first task, Add Station Support. After adding station support, you can return to this task by selecting **Assign Stations** on the left, or clicking **Back**. Once station support exists, you can click **Add or remove stations…** to modify the station members that are in the station line group assigned to this location.

Click **Next** to go to **Add Gateway**.

**Related Topics:**

- Location Assistant Overview
- Add Gateway
- Call Routing
- Select Media Server
- Regionalization
Add Gateway

This page allows you to use line objects to create a SIP gateway associated with this location. Click **Add or remove gateway lines...** to open the **Assign Endpoints** dialog box. From this dialog box, you can click **Add Lines** to add lines as endpoints or to change the line endpoint memberships for this location. You can also click **Create a new line...** to create a new SIP line.

Once you add lines to the location, click **Next** to go to **Call Routing** and make sure that the dial plan is configured properly.

**Related topics**

- [Location assistant overview](#)
- [Assign stations](#)
- [Call routing](#)
- [Select media server](#)
- [Regionalization](#)

Call Routing

This page displays a table of this location's gateway usage within the dial plan. The table displays each line, its dial group, and indicates whether it's used in the dial plan. This task helps the user set up dial plan entries to help route calls for the gateways associated with a location. If no gateways have been added, you're prompted to return to the **Add Gateway** task.

Click **Update the dial plan for these gateways...** to open the first page of the Dial Plan Call Routing Wizard, Select a Gateway Line and it's Dial Group. The wizard allows you to configure dial groups and specific dial plan entries.

Click **Review the current dial plan...** to open the Regional Dial Plan page in the Phone Numbers sub-container listed under the System Configuration container. The Regional Dial Plan page displays the associated attributes of the dial plan.

After updating the dial plan for the gateways, or reviewing the current dial plan, click **Next** to go to **Select Media Server**.
Use this page to associate a media server with this location.

Add or remove media servers...

Click this link to add or remove a media server associated with this location. Select Add or Remove from the Assign Endpoints page.

Click OK to save the media server changes. Click Close to save all the changes made to this location and to close the Location Assistant.
Managed IP Phone Assistant
Add Managed IP Phones
Create Managed IP Phones From a CSV File

Saving Managed IP Phones

If you are ready to save the import results, click on **Commit Changes**. Click **Back** to make changes.

It may take several hours to import all the IP phones, depending on the number of IP phones and station appearances being created for each phone. On average, expect the import to take 1 to 2 seconds per IP phone with a single station appearance.

If you imported a CSV list based on type, manufacturer, and model (CSV Managed IP Phone TMM List), clicking **Commit Changes** takes you to the following pages:

- Access Control
- Station Appearance Licenses
- License Allocation Results

If you imported a CSV list based on template (CSV Managed IP Phone Template List), clicking **Commit Changes** takes you to the **License Allocation Results** page.

**Access control**

This page may appear when you run the Add Stations Assistant or the Managed IP Phones Assistant.

**Note for the Add Stations Assistant**: If you created a dial plan in IC Setup Assistant, select the dial plan classifications for the new stations. If you did not create a dial plan in IC Setup Assistant, no Available classifications appear. After you create the dial plan in Interaction Administrator after installation, run the Add Stations Assistant in Interaction Administrator and specify the outbound dialing privileges for your stations.

Use the Access control page to select the dial plan classifications for new stations. These classifications determine the outbound dialing privileges for the new stations.

Select one or more classification names from the list of **Available** classifications and add them to the **Currently Selected** list to give the selected dialing privileges to this station.

If someone attempts to place a call from a station and the dialed phone number is not supported in one of the phone number classifications for the station, CIC plays a prompt that says that the station does not have sufficient dialing privileges to place the call.
**Stations Appearance Licenses**

Use this page to assign licenses to the station appearance.

**Basic Station License**

This license represents an audio path between CIC and a station. This license is not required, but without it the audio for station will not play. A non-audio station may be used or for non-audio interactions.

Remote Stations must be assigned a Basic Station license. If a user logs into a remote station it will also need to acquire a Client Access license, which delivers the previously defined price list functionality of a “Business User”. If a TUI login is performed against dynamic remote stations, no Client Access license is acquired.

**Client Access License**

Assigning this license to the station allows the client functionality of the CIC clients. Without this license assignment, the CIC clients will not run on this station.

**ACD Access License**

Select this check box if this workstation is an ACD station, then select the type of ACD license. These are the available types of ACD licenses:

- Media 1 - This license allows 1 interaction type at a given time.
- Media 2 - This license allows 2 interaction types at a given time.
- Media 3 Plus - This license allows 3 or more interaction types at a given time.

**Note:** Failure to have a ACD Access License assigned to the station will prevent that station from being ACD active.

**Interaction Process Automation License**

Select the **Interaction Process Automation** check box if this user is an Interaction Process Automation user, and then select the type of license to assign to that user.

These are the available types of Interaction Process Automation licenses:

- **Direct Routed Work Items** (I3_ACCESS_IPA_USER) license: Enables you to launch any process to which you have rights. It also enables you to receive Work Items that are directly routed to you.
- **Group Routed Work Items** (I3_ACCESS_IPA_USER_ACD) license: Enables you to receive Work Items that are either routed to you directly or as a member of a workgroup (similar to an ACD queue).
- **Process Monitor** (I3_ACCESS_IPA_MONITOR) license: Enables you to view process status and details in the Process Monitor or to use Process Reporting in IC Business Manager Applications.
• **Process Designer** (I3_ACCESS_IPA_DESIGNER) license: Enables you to use the Process Designer to create and modify Interaction Process Automation processes.

**Note:** Each license in this list enables you to **use the Interaction Process Automation features included in all the previous licenses in the list**. That is, the Group Routed Work Items license includes the Direct Routed Work Items license. The Process Monitor license includes both of the Routed Work Items licenses. The Process Designer license includes all the other licenses.

For more information about designing processes, refer to the *Interaction Process Automation Technical Reference* and the Process Designer online help.

**License List**

This list displays additional licenses that are available. Select the licenses you wish to assign to this station.

**Note:** For specific license information on each type of license, see *IC Licensing Overview Technical Reference* in the CIC Documentation Library.

Click **Next**.

**License Allocation Results**

Use this page to view license allocation results. License errors can occur if the total license count is exceeded. If this occurs, or if different licenses need to be specified, use the license allocation page to make changes.

Click on **Review** to display any licensing errors.

**Complete the Managed IP Phone Assistant**

The Managed IP Phone Assistant process is now complete. Click **Finish** to exit the assistant.

In the **Managed IP Phone** container, notice the new managed IP phones listed in the right-hand pane:

- The new managed IP phones will have a Status of "Not registered". Their status will become “Up-to-date” on the phones’ next SIP registration.
- If you did not supply the Address attribute for one or more managed IP phones in your CSV Managed IP Phone list, they will have a status of “Not provisioned”. Their status
will become “Up-to-date” once you provision them using the Polycom phone or SIP Soft Phone provisioning IVR.

In the Stations container, notice the SIP station appearances associated with the new IP phones:

The SIP stations associated with managed IP phones are of the type Managed Workstation or Managed Stand-alone Phone.

**Tip:** To make sure the list of managed IP phones is up-to-date at any time, click F5 to refresh the screen.

Information on migration

**Created Managed IP Phones by Migrating**

**Select Default Model**

Use this page to select the default phone model that should be used if the model cannot be derived from the stations on the phones being migrated.

For example, SIP stations associated with a Polycom configuration file may not have a manufacturer or model set in Interaction Administrator. By selecting a default model, the Managed IP Phone Assistant knows what settings to use for the migration.

The Polycom models available are:

- IP300
- IP301
- IP320
- IP321
- IP330
- IP331
- IP335
- IP4000
- IP430
- IP450
- IP500
- IP501
- IP550
- IP560
- IP600
- IP6000
- IP601
- IP650
- IP670
- IP7000
Select the default model on the pull-down menu, and click **Next** to go to the New Phone Naming page.

**New Phone Naming**

Use this page to specify a format string that specifies the name for the assistant to use for the migration item. The assistant also creates an associated SIP station with the same name. There are two different substitution strings that can also be used with a name format to create phone names.

**Phone Name Format**

This is the name of the first private station display name that is added to the migration item. Use a format string to define the phone’s name when created. Use one or more substitution strings with a format string, so that every phone created will have meaningful and unique name.

There are two different substitution strings:

- `$FirstPrivateStation$` - This is the name of the first private station display name as defined in the reg.x.displayName attribute found in the SIP phone's .cfg file.) that is added to the migration item. (For more information on .cfg file attributes, click here.)
- `$MAC$` - This is the MAC address of the phone being migrated.

By default, the assistant uses the `$FirstPrivateStation$` substitution string. A substitution string can be used separately, in combination with the other substitution string, in combination with a format string, or a format string can be used alone. For example:

- `$FirstPrivateStation$
- `$MAC$
- `$FirstPrivateStation$-$MAC$-SecondFloor$
- `SecondFloorPhone` – Using just text, the assistant appends the text with _1, _2, and so on after naming the first IP phone and associated SIP station.

If a single format string of ManagedPhone is used without a substitution string, then all new phone names created would be named "ManagedPhone_1", "ManagedPhone_2", etc. If the
substitution string $MAC$ is used together with the format string of ManagedPhone, such as ManagedPhone - $MAC$, then the MAC address for each phone would be substituted in the new name, i.e., "ManagedPhone - 0004f2008100".

Note: The substitution strings are case-sensitive manner. For example, if Phone - $mac$ is specified, $mac$ will not resolve to the MAC address. The string must be entered as Phone - $MAC$ for proper MAC address resolution.

Sample Phone Name

The sample phone name field shows how the phone name format field will resolve.

Click **Show Available Substitution Strings** to view the substitution strings.

Click **Next** to go to the **Phone Configuration File Directory** page.

Phone Configuration File Directory

Enter the directory or click **Browse** to select the directory where the existing IP phone configuration (.cfg) files are located. The Managed IP Phone Assistant searches this directory for .cfg files and displays a list of files found in the next page. **Select the Items to Migrate**. The assistant uses the settings in the selected .cfg files to create managed IP phone objects.

Note: For the assistant to recognize a phone configuration file, the file must:

- Be in the XXXXXXXXXXXX.cfg format, where XXXXXXXXXXXX is a 12 character alpha-numeric MAC address
- Contain an APPLICATION XML element at the root that has a CONFIG_FILES XML attribute that specifies the other phone configuration files

Each .cfg file that meets this criteria will be displayed as a selectable item to migrate. The assistant must have read access to the phone configuration directory specified. See Frequently Asked Questions for more information on .cfg files and the Managed IP Phone Assistant.

About the Managed IP Phone Assistant's Migration of Polycom Configuration Files

The assistant reviews the data in the .cfg files, and bases the migration items that it will build on the settings that are known in Interaction Administrator. The assistant displays migration item details, including any errors, in migration information. For the best and most error-free migration process, it is recommended to use the IP Phone Configurator utility to generate the SIP stations and SIP phone configuration files. (See **IP Phone Configurator** in the **Technical Reference Documents** section in the CIC Documentation Library on the IC server.)

Not all settings, such as custom settings in Polycom configuration files (and where the configuration files have been set up manually instead of using the IP Phone Configurator), may be recognized by the assistant. Settings that are not recognized may not be written to the new managed IP phone's configuration file when provisioning.
Select the Items to Migrate

Use this page to select the items to migrate by moving the items from the Available list to the Selected list. The items displayed in the Available list are the Polycom configuration files that the assistant found in the directory specified in the previous page, Phone Configuration File Directory.

Select the items to migrate, and click Next to go to the Build Migration Items page. At least one item must be selected to continue.

Build Migration Items

This page shows that the migration process is going to begin building migration items, and it lists the number of migration items that will be included in the process.

Click Next to begin the process of building migration items, and to go to the next page, Current State of Migration Items.

Current State of Migration Items

Use this page to view summary information of the migration items that have built. The page displays items with errors, items with warnings, and items with no errors or warnings.

- Items with errors: The assistant can not create a managed IP phone from these items.
- Items with warnings: These items are candidates for migration at the current state, and the assistant may be able to create a managed IP phone from these items.
- Items with no errors or warnings: These items are good candidates for migration at the current state, and the assistant will most likely be able to create a managed IP phone from these items.

Note: Please review the migration item details. The assistant may have detected warnings while building the migration items, but some warnings may not impact whether an item is a candidate for migration and creation of a managed IP phone. For example:

A Polycom configuration file selected for migration has two registrations specified in it. The assistant matches the first registration to a SIP station in Interaction Administrator, but does not match the second registration to a SIP station or shared appearance. In this migration item's current state, the assistant can still create a managed IP phone from it, because it does recognize the one station (first registration) which would be the private station, and therefore there are not any true errors.
It is strongly recommended to review migration item details by clicking Show Item Details to display the migration information. Item details show what happened during the building of the migration items, and shows why an item may have a warning or an error.

After reviewing the item details, click OK to go to the next page, Backup Directory Services.

Note: After clicking OK, the assistant displays a prompt that it will not create managed IP phones from migration items with errors. Clicking Continue will go to the next step in the migration process: Backup Directory Services.

Backup Directory Services

It is strongly recommended to perform a Directory Services backup. This is the final step in the migration process before the Managed IP Phone Assistant begins creating the managed IP phones based on the migration items.

Click Backup Directory Services to perform the backup. The Directory Services backup may take several minutes. There is a timeout set at 40 minutes. If the timeout is reached, the assistant displays "The Interaction Center server was unable to perform a backup of Directory Services." Either click Try Again to attempt another backup, or click Continue without making a backup.

Note: It is strongly recommended to make a backup of directory services. In the event that a restoration of directory services is necessary, click here for instructions.

When the backup is complete, the dialog will show the location of the backup file. Please note the location.

Click Next to begin the migration and go to the next page, Migration Results. The migration process begins, and the assistant creates IP phones from the migration items. This process may take several minutes.

For detailed information in the migration process, click here.

Migration Results

This page shows the number of IP phones that have been created in the migration process, and shows the number of IP phones that have not been created.

Click Show Detailed Migration Results to view each step that was taken during the migration.
Complete the Managed IP Phone Assistant

The Managed IP Phone Assistant process is now complete. Click Finish to exit the assistant.

In the Managed IP Phone container, notice the new managed IP phones listed in the right-hand pane:

- The new managed IP phones will have a Status of "Not registered". Their status will become “Up-to-date” on the phones’ next SIP registration.
- If you did not supply the Address attribute for one or more managed IP phones in your CSV Managed IP Phone list, they will have a status of “Not provisioned”. Their status will become “Up-to-date” once you provision them using the Polycom phone or SIP Soft Phone provisioning IVR.

In the Stations container, notice the SIP station appearances associated with the new IP phones:

The SIP stations associated with managed IP phones are of the type Managed Workstation or Managed Stand-alone Phone.

Tip: To make sure the list of managed IP phones is up-to-date at any time, click F5 to refresh the screen.

Information on migration

IC Server

Server Configuration

Review the IP configuration of your IC server

To review the IP configuration of your IC server

1. In the <IC Server> container, in the list view window, double-click Configuration. The Server Configuration dialog box appears. The boxes on the IP Configuration tab are automatically completed for you. For more information, see IP configuration options.

WARNING: Do not modify the boxes on this tab unless you know what changes need to be made, or you have been instructed to modify the settings by an Interactive Intelligence Support representative.

If you get an event log message stating that some handlers did not run immediately because the thread pool limit was reached, contact Interactive Intelligence Support. A Support representative will advise you if it is necessary to increase the number of available threads.

Related topics

IP configuration options

Overview of IC server configuration
The following table describes the options on the **IP Configuration** tab.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting Number of Threads in Thread Pool</td>
<td>Each handler runs in a separate thread. This box shows how many threads are available. If this box is set to 0, then there are 100 starting threads in the thread pool. To gain a small amount of efficiency when IP starts, increase the value to a number closer to the Maximum Number of Threads in Thread Pool. <strong>Note:</strong> The maximum number of threads is 5,000.</td>
<td>0</td>
</tr>
<tr>
<td>Maximum Number of Threads in Thread Pool</td>
<td>This number indicates the maximum number of threads that you want your system to create to run handlers. If this box is set to 0, then a maximum of 5,000 threads will be created to run handlers. <strong>Note:</strong> The maximum number of threads is 5,000.</td>
<td>0</td>
</tr>
</tbody>
</table>

**Related options**

- [Review the IP configuration of your IC server](#)  
- [Overview of IC server configuration](#)  
- [Configure your IC server](#)
Configure your server using the tabs in this dialog box. For complete instructions, click the links below.

**Related topics**

**Server configuration concepts**
- [Review the IP configuration of your IC server](#)

**Handlers concepts**
- [Select the handlers for your IC server](#)

**Monitor handlers concepts**
- [Select the monitor handlers for your IC server](#)

**Accumulators concepts**
- [Select the accumulators for your IC server](#)

**CPU load detection concepts**
- [Configure CPU load detection for your IC server](#)

**Report log purging concepts**
- [Configure report log purging for your IC server](#)

**Configure reports concepts**
- [Configure reports for your IC server](#)

**Audio compression concepts**
- [Configure audio compression for your IC server](#)

**Telephony parameters concepts**
- [Configure general telephony parameters for your IC server](#)
- [General telephony parameters reference](#)
- [Configure SIP telephony parameters for your IC server](#)
- [SIP telephony parameters reference](#)

**Recording beep tones concepts**
Configure recording beep tones for your IC server

Define a recording beep tone

Handlers

Select the handlers for your IC server

<IC Server> > Configuration > Server Configuration > Handlers

The handlers that are listed in the Active Handlers list run on your IC server. Do one of the following:

- To activate handlers, select them in the Inactive Handlers list and then click Add.
- To deactivate handlers, select them in the Active Handlers list and then click Remove.

Note: When an Interaction Designer user modifies and re-publishes an active handler, Interaction Processor automatically detects the new version of the handler. It uses the new handler for all new interactions that require it. Any interaction that is uses the older version of the handler finishes its processing with the old version of the handler.

Related topics

Overview of handlers

Configure your IC server

Monitor handlers

Select the monitor handlers for your IC server

<IC Server> > Configuration > Server Configuration > Monitor Handlers

The monitor handlers that are listed in the Active Monitor Handlers list run on your IC server. Do one of the following:

- To activate monitor handlers, select them in the Inactive Handlers list and then click Add.
- To deactivate monitor handlers, select them in the Active Monitor Handlers list and then click Remove.

Note: When an Interaction Designer user modifies and re-publishes an active monitor handler, Interaction Processor automatically detects the new version of the monitor handler. It uses the new monitor handler for all new interactions that require it. Any interaction that is uses the older version of the monitor handler finishes its processing with the old version of the monitor handler.

Related topics
Overview of monitor handlers

Configure your IC server

Accumulators

Select the accumulators for your IC server

<IC Server> > Configuration > Server Configuration > Accumulators

The accumulators that are listed in the Currently Selected Accumulators list run on your IC server. Do one of the following:

- To activate accumulators, select them in the Available Accumulators list and then click Add.
- To deactivate accumulators, select them in the Currently Selected Accumulators list and then click Remove.

Related topics

Overview of accumulators

Configure your IC server

CPU load detection

Configure CPU load detection for your IC server

<IC Server> > Configuration > Server Configuration > CPU Load Detection

1. In the High Watermark field, select the number of milliseconds that indicates high load conditions. The default value is 200.
2. In the Low Watermark field, select the number of milliseconds that indicates normal (or low) load conditions. The default value is 200.
3. In the Sample Period(s), select the period of time over which the CIC system determines the average time of a test ping. The default value is 5 seconds.
4. Click OK.

Related topics

Overview of CPU load detection

Configure your IC server
Configure report log purging for your IC server

**Note:** Data in the Enhanced Interaction Administrator change log is purged based automatically on the setting of this field. For more information, see *About the Enhanced Interaction Administrator change log*.

<IC Server> > Configuration > Server Configuration > Report Log Purging

1. Use the **Reference Time** fields to select the hour, minute, and second when you want expired logs to be purged.
2. Use the **Run Every** fields to select the days, hours, and minutes between each purge.
3. Click **OK**. The **Purge will occur at** list displays the dates and times when the purge will occur.

**Related topics**

Overview of report log purging

Configure your IC server

About the Enhanced Interaction Administrator Change Notification Log

Reports configuration

Configure reports for your IC server

<IC Server> > Configuration > Server Configuration > Report Configuration

**Options**

- To activate DNIS reporting data in the Queue Period Statistics data, select the **Generate DNIS reporting data** check box. When this feature is activated, the report group for calls is DNIS-{Dnis} and all calls are put into a statistics group called DNIS. You can generate the DNIS reports that are included with CIC.
- To activate reporting by media type, select the **Generate media type reporting data** check box.
- The **Display report version in reports** check box is not currently used.

**Reporting intervals**

- To change the interval during which CIC collects report data, in the **Queue/IVR reporting interval (min)** field, use the up and down arrow keys to set the number of minutes to collect data in a reporting interval. The default value is 30 minutes.
  
  **Note:** The minimum allowable interval is 15 minutes. If you specify an smaller interval, then CIC automatically uses 15 minutes.
To change the report log interval period for the line and line group data, in the **Line reporting interval (min)** field, use the up and down arrow keys to set the length in minutes of the report log interval. The default value is 30 minutes.

**Proxy enabled reporting**

The values in this section allow you to set limits on the amount of time your users wait for **Internet enabled reports** before they time-out.

*Note: The default settings are appropriate for most customers. Do not change these values unless your access to reports is critical, or you run a significant number of reports. These settings are per session manager.***

- **Maximum Reporting Proxy Client Connections**: This is the highest number of IC clients that can simultaneously access reports through the proxy.
- **Maximum Proxied Report Run Time (min)**: This is the highest run time (in minutes) allowed for a report running through the proxy.
- **Reporting Proxy Client Timeout (sec)**: This is the amount of time (in seconds) that a report running through the proxy can be inactive.

For information about running Internet-based reports, see **Report Connection Configuration** and the **CIC Reporting Technical Reference** in the CIC Documentation Library.

**Related topics**

Overview of report configuration

Configure your IC server

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**Audio compression**

Configure audio compression for your IC server

<IC Server> > Configuration > Server Configuration > Audio Compression

1. In the **Total Number of Compression Threads** field, enter the number of compression threads for audio compression. By default the system uses 3 compression threads.

2. In the **Local Compression Thread Priority** field, select **Below Normal**, **Normal**, or **Above Normal**. This value represents the thread priority of compression threads running on the IC server.

3. Click **OK**.

**Related topics**

Overview of audio compression

Configure your IC server
Telephony parameters

Configure general telephony parameters for your IC server

<IC Server> > Configuration > Server Configuration > Telephony Parameters

1. In the list, select **General**. The general telephony parameter options appear in the right side of the tab.

2. Select the check boxes for the parameters that you want to enable. For information, see General telephony parameters.

3. As necessary, specify any additional values.

4. Click **OK**.

Related topics

General telephony parameters

Overview of telephony parameters

Configure your IC server

General telephony parameters

The following table describes the general telephony parameters. For information on how to set these parameters, see Configure general telephony parameters for your IC server.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allow Recording of External Transfers</td>
<td>Determines whether a call can be recorded when an agent transfers it to an external number. If you do not select this option, a call is not recorded if it is transferred to an external party and only external parties are involved. If you do select this option, the call recording continues after the transfer occurs.</td>
<td>Not selected</td>
</tr>
<tr>
<td>Append SIP Call-ID to CallLog</td>
<td>Determines whether the call log includes the SIP call ID.</td>
<td></td>
</tr>
<tr>
<td>Auto Disconnect Last Party</td>
<td>Determines whether the CIC system automatically disconnects the last party in a conference.</td>
<td>Selected</td>
</tr>
<tr>
<td>Block All External Transfers</td>
<td>Blocks all consult and blind transfers to external parties and remote numbers. This option works with the Disconnect Conferences with Only External Parties option to help prevent toll fraud.</td>
<td>Not selected</td>
</tr>
<tr>
<td>Board Event Window Limit</td>
<td>Specifies the maximum number of allowable digital board events.</td>
<td>20</td>
</tr>
</tbody>
</table>
| **Board Event Window Time (ms)** | Excessive board events can generate in-sync/out-of-sync errors from a bad board or a bad digital line. This option prevents bad equipment (such as T-1, ISDN, and other digital lines) from causing excessive errors and slowing down CIC.

**Note:** If board events are disabled on a board, the board remains registered as active. However, events are disabled for the amount of time specified for the **Event Recovery Time** option.

If more than this number of digital events is counted during the **Board Event Window Time**, then digital events are disabled on the board. The minimum number of events is 5.

| **Call Analysis Diagnostic Record** | Specifies the number of consecutive milliseconds during which digital board events are counted. The minimum number is 10000 ms (10 seconds).

**Note:** If 20 events occur within 60 seconds, CIC disables the board that generated the events.

See also **Board Event Window Limit**.

| **Keyword Spotting Diagnostic Recording** | Enables diagnostic recordings for keyword spotting. Interaction Analyzer uses diagnostic recordings to help determine accuracy in keyword spotting. For more information, see **Interaction Analyzer Technical Reference** in the CIC Documentation Library on the IC server.

| **Fetch Diagnostic Recordings from Media Server** | Retrives all diagnostic recordings from the Media Server and from the [drive]:[IC installation folder]/logs/diagnostics.

| **Confirm Station Connection** | Sends an **eCallEvent_StationConnectionConfirmation** event. This event can be intercepted and handled by the ConfirmStationConnection initiator and the StationConnectionConfirmation tool step. This allows the user to intercept a remote client connection call and change the behavior via a handler.

| **Diagnostic Recording** | Sets the time (in seconds) that a diagnostic recording will be extended beyond the completion of the call analysis operation. Support Services may increase this period to 3 seconds.

| **Board Event Window Time (ms)** | Specifications for consecutive milliseconds during which digital board events are counted. The minimum number is 10000 ms (10 seconds).

**Note:** If 20 events occur within 60 seconds, CIC disables the board that generated the events.

| **Call Analysis Diagnostic Record** | Enables diagnostic call recordings for call analysis. Diagnostic records are 8k, mono, 8bit unsigned PCM.

**Note:** If Media Servers are not used for advanced operations, diagnostic recordings are placed in the default Recordings directory and have the following naming convention: DR_<callid>.pcm.

If Media Servers are used for advanced operations, diagnostic recordings are stored on each Media Server with the following naming convention:

```
%inin_trace_root%\<date>\diagnostics\\lastTwoDigitsOfCallId\<callId>_<16RandomCharacters>\ca.wav
```

Diagnostic recordings stored on Media Servers are automatically deleted after seven days.

| **Keyword Spotting Diagnostic Recording** | Enables diagnostic recordings for keyword spotting. Interaction Analyzer uses diagnostic recordings to help determine accuracy in keyword spotting. For more information, see **Interaction Analyzer Technical Reference** in the CIC Documentation Library on the IC server.

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| **Board Event Window Limit** | Specifies the number of consecutive milliseconds during which digital board events are counted. The minimum number is 10000 ms (10 seconds).

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See also **Board Event Window Limit**.

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| **Fetch Diagnostic Recordings from Media Server** | Retrives all diagnostic recordings from the Media Server and from the [drive]:[IC installation folder]/logs/diagnostics.

| **Confirm Station Connection** | Sends an **eCallEvent_StationConnectionConfirmation** event. This event can be intercepted and handled by the ConfirmStationConnection initiator and the StationConnectionConfirmation tool step. This allows the user to intercept a remote client connection call and change the behavior via a handler.

| **Diagnostic Recording** | Sets the time (in seconds) that a diagnostic recording will be extended beyond the completion of the call analysis operation. Support Services may increase this period to 3 seconds.

| **Board Event Window Limit** | Specifies the number of consecutive milliseconds during which digital board events are counted. The minimum number is 10000 ms (10 seconds).

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| **Call Analysis Diagnostic Record** | Enables diagnostic call recordings for call analysis. Diagnostic records are 8k, mono, 8bit unsigned PCM.

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| **Diagnostic Recording** | Sets the time (in seconds) that a diagnostic recording will be extended beyond the completion of the call analysis operation. Support Services may increase this period to 3 seconds.
<table>
<thead>
<tr>
<th><strong>Extension Time (sec)</strong></th>
<th>troubleshoot call analysis result issues in order to thoroughly analyze the audio. The acceptable values are 3 through 30.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disconnect Conferences with Only External Parties</strong></td>
<td>Disconnects conferences in which the only members are external parties and remote numbers. If all internal parties leave a conference, and only external parties remain on the call, the conference is disconnected. This option works with the Block all External Transfers parameter to help prevent toll fraud.</td>
</tr>
<tr>
<td><strong>Enable Call Analysis for Conference Add Party</strong></td>
<td>Enables the ability to add a party to a conference immediately or to perform call analysis before adding the party to the conference.</td>
</tr>
<tr>
<td><strong>Enable Secure Input feature</strong></td>
<td>Activates the Secure Input feature, which separates and encrypts data to protect it from theft or misuse. When this parameter is elected, you can create and configure secure input forms in the Secure Input Forms container. You can then assign individual secure input forms to different workgroups in the Workgroup container.</td>
</tr>
</tbody>
</table>
| **Extension Dialing Analysis Type** | Used with extension dialing. When CIC uses extension dialing to place a call, and the number dialed includes /xxx where xxx is an IVR entry or extension number, CIC attempts to detect if the dialed number is answered by a human voice or an answering machine or an IVR script. The acceptable values are:  
  - **Voice**: CIC waits for the dialed number to answer and then automatically sends the DTMF tones for the extension. This has the advantage that you can always be certain that the DTMF will be sent. The disadvantage is that when a human answers the call, the DTMF will play in that person's ear.  
  - **Answering Machine**: CIC attempts to recognize an IVR or automated voice before sending the DTMF tones. If it does not detect an automated voice, it assumes a human voice answered and does not send the DTMF extension digits. This kind of detection is less reliable than voice detection. |
| **Global No Connection Timeout (min)** | Sets a timer on all calls made on the CIC system. The CIC system disconnects a call if the call does not enter a connected state before the expiration of this timer. |
| **Held Call Timeout (seconds)** | Specifies the number of seconds a call can remain on hold. When the timer elapses, the call flow proceeds to a menu to present the caller with options. This menu is generated by the System_HeldInteractionTimer handler. You can modify the call flow behavior in the CustomHeldInteractionTimer handler. The default value is **900 seconds (15 minutes)**. The minimum value is 2 seconds.  
  **Note**: If you change this parameter, you do not need to restart CIC in order for it to take effect. |
<p>| <strong>Honor No Answer Timeout</strong> | Sets CIC to honor the no answer value presented to it by the caller, which is usually the client or handler tool step. |</p>
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inband Dial Delay (ms)</td>
<td>Sets the time in milliseconds that the system waits before dialing in-band digits to the external party of a call. In-band dial digits are most commonly used for extension dialing and account code dialing.</td>
<td>500 ms</td>
</tr>
<tr>
<td>Intercom Calls ASR Enabled</td>
<td>Allows a user to toggle permissions for allowing ASR enabled intercom calls on the system, as well as set a threshold for concurrent intercom ASR enabled sessions. The acceptable values are: On, Off, 0.</td>
<td>On</td>
</tr>
<tr>
<td>Line Event Window Limit</td>
<td>Disables line events if a digital line starts generating abnormal numbers of events and degrades CIC performance. Such events can generate in-sync/out-of-sync errors from a bad board or bad digital line. This safety mechanism prevents bad equipment (such as T-1, ISDN, and other digital lines) from causing excessive errors and dragging down CIC. The event and shutdown threshold is configurable with three parameters: Line Event Window Limit, Line Event Window Time, and Event Recovery Time. Enter the maximum number of digital line events to detect within the Line Event Window Time window before disabling digital events on the excessive board. If a digital line exceeds this limit, CIC disables events from that line for the specified Event Recovery Time. The minimum event limit is 5. The board remains registered as active, but events are disabled for the specified time. Note: Not all lines implement this option.</td>
<td>20 events</td>
</tr>
<tr>
<td>Line Event Window Time</td>
<td>Specifies the number of consecutive milliseconds during which digital line events are counted. The minimum window is 10000 ms (10 seconds). Notes: If 20 events occur within 60 seconds, CIC disables the line that generated the events. Not all lines implement this option.</td>
<td>60000 ms (60 seconds)</td>
</tr>
<tr>
<td>Maximum ASR Session Limit</td>
<td>Sets a maximum value of resources that are expected to be used concurrently at any given time in the system for ASR sessions. Specify any integer. Note: CIC derives a proper value if you do not provide one.</td>
<td>0</td>
</tr>
<tr>
<td>Maximum Number of Calls per Station</td>
<td>Sets the maximum number of outgoing calls originating from a single station that are allowed to exist. When an outgoing call is made, TsServer checks a map of Call IDs to Station IDs and, if the station has the specified number of outgoing calls still active, the new call attempt will fail. If not, an entry should be placed in the map. When the call disconnects, the entry is removed from the map.</td>
<td>5</td>
</tr>
<tr>
<td>Minimum ASR Session Limit</td>
<td>Sets a minimum value of resources that are expected to be available to the system for any ASR session (for a minimum level of resources that should not be fixed to any line, and therefore available to all sessions).</td>
<td>0</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>Optimize Audio for Conferences</td>
<td>This option applies only to conferences. If you select this option, CIC automatically identifies the dominant speaker and mutes all of the other calls on the conference. Conference calls hosted by Interaction Media Server include features such as dominant speaker detection with echo cancellation (muting errant noises from other callers), automatic level control (volume), support for Interactive Voice Response (IVR) input, and other optimizations. <strong>Note:</strong> This parameter globally controls dominant speaker detection with echo cancellation for conference calls. If you experience audio issues when this parameter is enabled, you can enter the <code>ConferenceTypeDominantSpeakerDiagnosticRecording</code> property through the Media Servers container in Interaction Administrator and set the value to <code>true</code>. This property creates diagnostic recordings that you can send to an Interactive Intelligence Support representative for analysis.</td>
<td></td>
</tr>
<tr>
<td>Perform Call Analysis</td>
<td>Contact your authorized Interactive Intelligence Support representative for information on this setting. For more information, see the <em>Interaction Media Server Technical Reference</em> document in the CIC Documentation Library.</td>
<td></td>
</tr>
<tr>
<td>Play Digits Tone Specification</td>
<td>Sets the number duration of the on or off time between DTMF tones. By default Telephony Services uses DTMF tones of 100ms in duration with 50ms off time between tones at vendor-specific levels. In some circumstances it may be necessary to adjust the duration on or off time so that the receiving system can correctly detect different tones. This parameter applies to all DTMF played using the Play Digits tool step. The acceptable values are X:Y, where X=on time (ms) and Y=off time (ms).</td>
<td></td>
</tr>
<tr>
<td>Recording Silence Time</td>
<td>Sets the duration (milliseconds) of silence that is required to disconnect a call that is in voice mail. This parameter is valid only for calls that are on the system, such as station-to-station calls, as opposed to physical external lines. External lines have the same configuration option, which is available on that line’s configuration page in Interaction Administrator.</td>
<td></td>
</tr>
<tr>
<td>Remote Station Timeout Override</td>
<td>This parameter should be modified only with the direction of an Interactive Intelligence Support representative. Any modifications to the value can have a significant impact on the accuracy of call progress analysis, and those changes will be noted in the appropriate log files. Modifying this parameter without explicit instruction from Interactive Intelligence Support could result in a billable support incident to restore functionality.</td>
<td></td>
</tr>
<tr>
<td>Ringback Silence Detection Time</td>
<td><strong>Dialogic and Aculab:</strong> Adjusts the maximum period of silence allowed before call analysis will detect no ringback. If unspecified, TS defaults to 11 seconds for connection calls (calls to a remote station), and 20 seconds for all other outbound calls. The minimum value allowed is 8 seconds. <strong>Note:</strong> This setting has no effect if Media Servers are used for advanced operations.</td>
<td></td>
</tr>
</tbody>
</table>

The acceptable values are:
- **0:** Indicates that no minimum level is required
- **Any integer**
<table>
<thead>
<tr>
<th>Parameter Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ringback File</strong></td>
<td>Specifies the .wav file that is played to the caller during alerting to the destination user or station. .wav files are located in the resource directory: <code>Ringback.wav?playlocation=mediaserver</code> <strong>Caution:</strong> If you replace the <code>RingBack.wav</code> file in the Resources directory with your own customized file, then this file will be overwritten when you update to a newer release. If you have replaced this file in the Resources directory, back up your customized file before you begin the update process. Then restore the file after the upgrade is complete. This applies to the files on IC servers and on Media Servers.</td>
</tr>
<tr>
<td><strong>Telephony Supported IP Versions</strong></td>
<td>This parameter is available if the appropriate server parameter is selected. Specifies the type of protocol address family that is supported by the IC server. For more information, see <a href="#">SIP Line Transport</a> and <a href="#">SIP Station Transport</a>. <strong>Note:</strong> If this parameter is set to IPv4, then all lines and stations that specify the Address Family as IPv6, or the Media Address Family as IPv6, are unusable and shown as &quot;Unusable&quot; in the Status column. If this parameter is set to IPv6, then all lines and stations that specify the Address Family as IPv4, or the Media Address Family as IPv4, are unusable and shown as “Unusable” in the Status column. For more information, contact your authorized Interactive Intelligence Support representative.</td>
</tr>
<tr>
<td><strong>Ts Consult Transfer To Intercom Move All Queues Active</strong></td>
<td>Specifies that when a call is consult transferred to an intercom call, the transferring call is placed on ALL queues of the replaced intercom call.</td>
</tr>
<tr>
<td><strong>Waiting Call Indication</strong></td>
<td>Enables call waiting. If this parameter is not selected, call waiting is globally disabled for all alert types.</td>
</tr>
<tr>
<td><strong>Use Voice Buffer Input</strong></td>
<td>Specifies whether the voice buffer input is activated. If you enable this parameter, it decreases the usage of voice and conference resources. If you do not enable this parameter, there is no timeout.</td>
</tr>
<tr>
<td><strong>Timeout (seconds)</strong></td>
<td>Sets the number of seconds to wait before freeing up the resource after a play switches to the VoiceBufferInput role. Acceptable values are 5-20000 seconds.</td>
</tr>
<tr>
<td><strong>Warm Down Time (ms)</strong></td>
<td>Specifies the duration in milliseconds that the audio remains in Interaction Center after a user plays a digit(s).</td>
</tr>
<tr>
<td><strong>Zone Page Delay</strong></td>
<td>Sets the maximum time in milliseconds that the IC server should wait for the stations beingpaged to respond to a page request. Stations that take longer than this timeout to respond are be included in the page. If all stations respond before this timeout is reached, the page begins to load immediately.</td>
</tr>
</tbody>
</table>

**Related topics**
Configure general telephony parameters for your IC server

Secure input

SIP line transport

Overview of telephony parameters

Configure your IC server

Configure SIP telephony parameters for your IC server

<IC Server> > Configuration > Server Configuration > Telephony Parameters

1. In the list, select SIP. The SIP telephony parameter options appear in the right side of the tab.

2. Specify the values for the parameters that you want to enable. For more information, see SIP telephony parameters.

3. Click OK.

Related topics

SIP telephony parameters

Overview of telephony parameters

Configure your IC server

SIP telephony parameters

The following table describes the SIP telephony parameters. For information on how to set these parameters, see Configure SIP telephony parameters for your IC server.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broken RTP Disconnect Time</td>
<td>Determines the amount of time (in seconds) that a VoIP call remains active after audio has been disrupted before the call is automatically disconnected. Audio is considered disrupted if no RTP, no RTCP, and no comfort noise packet is received from the remote device.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 0 - Disables this feature. Calls will not be monitored or disconnected.</td>
<td>30 seconds</td>
</tr>
<tr>
<td></td>
<td>• 1 - Number of seconds before a disrupted call is disconnected</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> By default, CIC disconnects a call when both endpoints are in the idle state (no RTP packets). If you want CIC to disconnect calls where only one endpoint has entered the idle state, you should set the value of this parameter to 1.</td>
<td></td>
</tr>
<tr>
<td>Setting</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Default Display String</td>
<td>Sets the SIP display string in the FROM header when calls are made to persistent SIP managed stations and to any SIP managed station when the CIC client MakeCall button is pressed. This display string appears on the From field on the phone TUI display. The acceptable values are any string.</td>
<td></td>
</tr>
</tbody>
</table>
| Managed Phone Shortcut       | Specifies the main IVR number that is given to managed phones. This number is typically an "*". Configure your network to route calls that are generated by managed phones to use this number to reach the Interaction Center. The acceptable values are:  
  - SIP  
  - None  
  - Any number |
| Message Button               | Specifies the number to retrieve voice mail over the IP phone when the user presses the Message button. Configure the voice mail button of the phone to call this number when it is pressed. Do not enter spaces. The acceptable values are:  
  - None  
  - Any number. Spaces are not allowed.  
  **Note**: When this option is not set, the message button dials "stationname" when it connects to voice mail. |
| Voicemail Direct             | Sends calls directly to voice mail for unmanaged phones. Voice mail for managed phones is already handled. Configure your network to send calls that are destined for voice mail to this number. The acceptable values are:  
  - None  
  - Any number |
| Lineside Transcode Preference| For more information, see the IC 4.0 SIP Application Note on the Product Information site.                                                                                                           |
| Initial Contact Expiration   | Specifies the time that is used to expire a station contact address on system startup.                                                                                                                     |
This parameter is used only if all of the following are true:
- The station allows registrations to update its contact address.
- The station sent a REGISTER message that had not expired before the CIC reboot.
- The station has NOT sent a REGISTER message after the CIC reboot.

For example, a station is registered with an IC server. The IC server is rebooted. If the contact address that the phone sent before the reboot was suppose to expire before Initial Contact Expiration seconds after the reboot, it will not expire.

Related topics

Configure SIP telephony parameters for your IC server
TreatEndpointIdleAsFullIdle server parameter
Overview of telephony parameters
Configure your IC server

Recording beep tones

Configure recording beep tones for your IC server

1. Do one of the following:
   - To add a recording beep tone, click Add. The Add Recording Beep Tone dialog box appears.
   - To edit a recording beep tone, select the tone and then click Edit. The Edit Recording Beep Tone dialog box appears.
   - To delete a recording beep tone, select the tone and then click Remove.

2. Complete the options on the dialog box. For more information, see Recording beep tone options.
3. Click OK.

Related topics
The following table describes the options for recording beep tones. For information on how to set these options, see *Configure recording beep tones* for your IC server.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>A meaningful name for the beep tone.</td>
<td>New Beep Tone</td>
</tr>
<tr>
<td>Duration (ms)</td>
<td>The time in milliseconds that the actual beep sound lasts.</td>
<td>200 ms</td>
</tr>
<tr>
<td>Interval</td>
<td>The time in seconds between the beeps. This is the time between the start of one beep and the start of the next beep.</td>
<td>12 seconds</td>
</tr>
<tr>
<td>Tone Type</td>
<td>The type of tone for the beep. You can set the beep as a single tone, or dual tone (having two tones). If you select <strong>Dual</strong> as the type, the <strong>Frequency 2 (Hz)</strong> and <strong>Amplitude 2 (dB)</strong> fields are available.</td>
<td>Single</td>
</tr>
<tr>
<td>Frequency (Hz)</td>
<td>The beep tone frequency in Hertz.</td>
<td>1400Hz</td>
</tr>
<tr>
<td>Amplitude (dB)</td>
<td>The beep tone volume in decibels.</td>
<td>-24dB</td>
</tr>
<tr>
<td>Frequency 2 (Hz)</td>
<td>The frequency of the second part of the tone and is available when the beep tone type is dual.</td>
<td>1400Hz</td>
</tr>
<tr>
<td>Amplitude 2 (dB)</td>
<td>the amplitude of the second part of the tone and is available when the beep tone type is dual. The acceptable range is -33dB is through 0.</td>
<td>-24dB</td>
</tr>
</tbody>
</table>

**Related topics**
Configure recording beep tones for your IC server

Overview of recording beep tones

Configure your IC server

---

**History**

This page provides a way to manually document configuration changes and when they occurred. Changes made in Interaction Administrator are also automatically logged in the Interaction Administrator Change Notification Log (Log ID 7). Later, authorized users can run reports against this log to summarize all configuration changes.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes to the History page in the User Configuration dialog box and the Workgroup Configuration dialog box are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

**Last Modified**

This date is automatically updated each time you click the **OK** button, presumably after you make changes to the configuration. To avoid updating this date, exit the page by clicking the **Cancel** button.

**Note:** If you click **Cancel**, none of the changes made to this page will be preserved.

In addition, the history is updated when changes are made to the record elsewhere in Interaction Administrator. For example, when a user change his or her password, the **Last Modified** date is updated.

**Note:** Changes to the licenses for a user or a station do not update the Last Modified date.

**Date Created**

This date is automatically set when the user creates the initial configuration for this page. If the page was initially created during setup, the date could be blank.

**Notes**
Type notes about configuration settings and changes. If you change the configuration page and click **OK**, the **Last Modified** date is updated.

You must manually enter the date beside each entry in the **Notes** field to identify the date of each note.

To create a new line in the **Notes** field, press Enter.

---

**Lines**

**SIP lines concepts**

You use Interaction Administrator to configure your SIP interface. CIC enables SIP by default; you do not need to set any server parameters in order to use the SIP-related features. However, you must configure each SIP line you want to use with CIC.

You can associate a SIP line with one, many, or all stations that are connected to the IC server. For example, you can associate a SIP line with a workstation, fax machine, stand-alone phone, and so on. A single SIP line can handle multiple calls.

**Note:** You configure stations in the **Stations** container.

CIC uses SIP lines and their associated stations for inbound and outbound calls. SIP lines allow the IC server to communicate with the SIP boards.

**Note:** IC Setup Assistant automatically creates three permanent SIP station lines for different transport protocols: `<Stations-TCP>`, `<Stations-UDP>`, and `<Stations-TLS>`. These lines are used for station-to-station calls. You cannot delete them.

Many of the configuration options for a SIP station that is associated with a SIP line are similar to the configuration options for SIP lines. The settings for a SIP **station** configuration always override the settings for the same configuration options for the SIP **line** configuration.

In general, when you set or change the configuration of a SIP line, your settings take effect immediately. No restart is required.

**Note:** If you change the transport protocol for a line, you must deactivate the line and then reactivate it in order for the change to take effect.

---

**Related topics**

- **Overview of creating SIP lines**
- **Configure a SIP line**
Overview of adding and configuring SIP lines

The process of setting up SIP lines involves multiple containers in Interaction Administrator:

1. In the **Lines** container, add a SIP line.
2. Configure the SIP line. For more information, see *Configure a SIP line*.
3. In the **Server** container, define the global configuration for SIP stations.
4. Configure the SIP workstations.

For more information, see the *SIP Application Note Installation and Reference Guide* for Interaction Center in the CIC Documentation Library.

For additional information on SIP, see these additional *Application Notes*, which are available in the CIC Documentation Library on the IC server:

- *SIP Topology and Call Flows Application Note* Topology, Call Flows, and Configuration Guide for Interaction Center
- *SIP 3rd Party Component Configurations Application Note* Installation and Reference Guide for Interaction Center

For the most current version of these documents, see the Product Information site.

Related topics

*SIP lines concepts*

*Configure a SIP line*
Add a SIP line

To add a SIP line

1. In the `<IC_Server>` container, double-click the Lines container.
2. In the list view window, right-click and then click New. The Entry Name dialog box appears.
3. Type the line name and then click OK.
4. Configure the SIP line.

Related topics

Configure a SIP line

Configure a SIP line

To configure a SIP line

1. In the `<IC_Server>` container, double-click the Lines container.
2. In the list view window, double-click a line.
3. In the list of options, click Identity (Out).
4. Specify the Outbound Identity of the line.
5. In the list of options, click Access.
6. Verify that the access type does not conflict with other SIP lines in the same port.

7. As necessary, click the other options in the list and the other tabs in the Line Configuration dialog box to specify additional configuration details. For more information on these options, use the links under Related topics.

8. Click OK.

Related topics

SIP line options
SIP line identity (In) options
SIP line identity (Out) options
SIP line audio options
SIP line transport options
SIP line session options
SIP line authentication options
SIP line proxy options
SIP line registrar options
SIP line headers options
SIP line access options
SIP line region options
SIP line recorder options
SIP Line TLS Security options (only if the line's transport protocol is TLS)

Call putback options

Custom attributes

History

Lines concepts
The Custom Attributes page allows you to add customized attributes so that you can reference your own variables and settings through the IceLib interface.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes to the Custom attributes page in the User Configuration dialog box and the Workgroup Configuration dialog box dialog box are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

The page contains a list for the attributes and displays a **Name** and a **Value** column, and has the following buttons:

**Add**

Click **Add** and select an existing custom attribute from the pull-down list, enter a new custom attribute. If creating a new attribute, use a unique name, otherwise the existing attribute will be overwritten.

**Edit**

Click **Edit** to change the value of an existing custom attribute.

**Delete**

Click **Delete** to delete an existing custom attribute.

**Manage Attributes**

Click **Manage Attributes** to open a dialog box that displays a list of custom attributes. Click **Add** or **Delete** to manage the appearance of the custom attributes in the pull-down list.

The custom attributes are saved in the path of the root container. This **Path** is displayed at the bottom of the dialog box.

**Note:** For more information on the Interaction Center Extension Library (IceLib), see The System APIs section in the CIC Documentation Library on the IC server.

**History**

This page provides a way to manually document configuration changes and when they occurred. Changes made in Interaction Administrator are also automatically logged in the Interaction
Administrator Change Notification Log (Log ID 7). Later, authorized users can run reports against this log to summarize all configuration changes.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes to the History page in the User Configuration dialog box and the Workgroup Configuration dialog box dialog box are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

**Last Modified**

This date is automatically updated each time you click the **OK** button, presumably after you make changes to the configuration. To avoid updating this date, exit the page by clicking the **Cancel** button.

**Note:** If you click **Cancel**, none of the changes made to this page will be preserved.

In addition, the history is updated when changes are made to the record elsewhere in Interaction Administrator. For example, when a user change his or her password, the **Last Modified** date is updated.

**Note:** Changes to the licenses for a user or a station do not update the Last Modified date.

**Date Created**

This date is automatically set when the user creates the initial configuration for this page. If the page was initially created during setup, the date could be blank.

**Notes**

Type notes about configuration settings and changes. If you change the configuration page and click **OK**, the **Last Modified** date is updated.

You must manually enter the date beside each entry in the **Notes** field to identify the date of each note.

To create a new line in the **Notes** field, press Enter.

**Line**

**SIP line options**

The following table describes the general options that you can use to configure a SIP line. For information on how to access these options, see *Configure a SIP line.*
Changes to all of the options on this dialog box take effect immediately.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Active</strong></td>
<td>Activates or deactivates the line in the CIC system. You cannot deactivate a line if any calls are on the line. If you change line configuration parameters or to perform other line maintenance, you may have to deactivate a line and then reactivate it in order for the changes to take effect. For example, if you change the SIP line transport protocol.</td>
<td>Active</td>
</tr>
<tr>
<td><strong>Line Usage</strong></td>
<td>Designates the usage of the line. The options are:</td>
<td>General Purpose</td>
</tr>
<tr>
<td></td>
<td>• General Purpose</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Microsoft Lync</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Station Connections</td>
<td></td>
</tr>
<tr>
<td><strong>Domain Name</strong></td>
<td>Specifies the domain name that is used to formulate SIP-URLs for CIC users and phone numbers. This domain name is automatically appended to all REGISTER requests that are sent by the Interaction Center. This value is used in the &quot;From&quot; header in outbound SIP calls.</td>
<td>Varies</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> You can set additional identity settings by click Identity (In) and Identity (Out) in the options list.</td>
<td></td>
</tr>
<tr>
<td><strong>Maximum Number of Calls</strong></td>
<td>Designates the maximum limit number of calls that the SIP line processes. When the number of calls is reached, this line processes no more calls. The options are Combined or Inbound/Outbound:</td>
<td>No limit</td>
</tr>
<tr>
<td></td>
<td>• Combined means that the maximum number is the sum of both inbound calls and outbound calls.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Inbound/Outbound means that the values specified for each type of call count towards the maximum number of calls.</td>
<td></td>
</tr>
<tr>
<td><strong>Fax Protocol</strong></td>
<td>The <strong>No Limit</strong> check box indicates whether there is a maximum limit. If <strong>No Limit</strong> is not selected, then you must set a maximum number of calls.</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
</tbody>
</table>
| **Indicates the fax protocol to use.** | The options are:  
• T30 only  
• T38 only  
• **T38 then T30**: If you select this option, CIC tries the T38 fax protocol first. If the recipient endpoint does not support this protocol, then CIC tries the T30 fax protocol. |
| **Enable Fax Detection** | Indicates whether fax tones are detected when the Allow Deferred Answer check box is selected.  
To determine whether to play the fax detection prompt or not, the system evaluates this check box:  
• If this check box is selected, then the system **overrides** the user’s setting.  
• If this option is not selected, then the system uses the user’s setting.  
If you select a Fax Protocol, then this check box is also automatically selected. If the Fax Protocol check box is set to **None**, then this check box is not available. |
| **Maximum Number of Faxes** | Designates the maximum limit number of faxes that the SIP line processes. When the number of faxes is reached, this line processes no more faxes.  
The options are **Combined** or **Inbound/Outbound**:  
• **Combined** means that the maximum number is the sum of both inbound faxes and outbound faxes.  
• **Inbound/Outbound** means that the values specified for each type of fax count towards the maximum number of faxes.  
The **No Limit** check box indicates whether there is a maximum limit. If **No Limit** is not selected, then you must set a maximum number of faxes. |
| **Auto Disconnect when Silence Detected in Voice Mail** | Designates whether CIC automatically disconnects a call that is in voice mail after a certain number of seconds of silence.  
This option is important if your CO (public exchange switch) does not send a disconnect signal (a forward disconnect notice) when a caller disconnects a call. |
<table>
<thead>
<tr>
<th><strong>Call Analysis Type</strong></th>
<th>Indicates the call analysis type for this SIP line. The options are:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Media Server</strong>: The Media server listens to the RTP stream and performs call analysis. Use this option with a third-party gateway.</td>
</tr>
<tr>
<td></td>
<td><strong>Interaction Gateway (Gen2 only; not recommended for new deployments)</strong>: The CIC server defers to the Interaction Gateway, which listens to the TDM (ISDN) lines and returns the results via SIP messages. Do not use this option with Interaction Gateway.</td>
</tr>
<tr>
<td></td>
<td><strong>Media Server to Interaction Gateway</strong>: Interaction Gateway and Media Server are both used; the Media Server performs call analysis. This is the preferred setting to use with Interaction Gateway and Interaction Gateway Gen2. Do not use this option with any third-party gateway.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Allow Deferred Answer</strong></th>
<th>Indicates whether to delay answering an incoming call until an agent is reached or an IVR system is entered. This gives callers time to disconnect the call without being charged by their telecommunications provider.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Note</strong>: Deferred answer is not used with ACD calls. If a call is placed to the DID of an ACD workgroup, interactions are immediately answered before alerting occurs.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Playback Early Media to Inbound Calls</strong></th>
<th>Indicates whether to use early media (when the remote party sends SDP before the call is answered in a 183 response) instead of ringback on an inbound call. This option does not apply to ACD calls on this line.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Note</strong>: This option works only if either of the following conditions exist:</td>
</tr>
<tr>
<td></td>
<td>*The IC server receives an INVITE with SDP.</td>
</tr>
<tr>
<td></td>
<td>*The IC server receives an INVITE with no SDP but with 100rel in the Supported: header.</td>
</tr>
</tbody>
</table>
Additionally, this option requires both of the following conditions:

- IC must get an SDP from the remote.
- The IC server must have the INVITE and a PRACK to get an SDP before answering. (PRACK requires 100rel).

| Enable SIP Prack/Update for Early Media Support | This option indicates whether the system tells the SIP line to enable PRACK in the outbound and inbound registration. | Not selected |
| Max Probation Time (s) | This is the maximum time in seconds for probation on a failed line. To improve query times, the query for line selection ignores lines that are on probation. | 600 seconds |

**Related topics**

- Configure a SIP line
- SIP lines concepts
- SIP line Identity (In) options
- SIP line identity (Out) options
- Transport protocol
- Media Server Fax
- Fax configuration
- SIP line proxy options
- SIP line registrar options

**Identity In**

- SIP line identity (in) options
The following table describes the options that you can use to configure inbound identity options for a SIP line. For information on how to access these options, see *Configure a SIP line*.

Changes to all of the options on this dialog box take effect immediately.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use only numeric portion</strong></td>
<td>Determines whether only the numeric portion of the caller ID is displayed. If this option is selected, then all other information is removed.</td>
<td>Selected</td>
</tr>
<tr>
<td></td>
<td>For example:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- If this check box is selected, the caller ID appears as <strong>3178723000</strong>.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- If this check box is not selected, the caller ID appears as sip:3178723000@123.45.67.89.</td>
<td></td>
</tr>
<tr>
<td><strong>Notes</strong>: If you do not select this check box, then CIC's telephony services do not change the inbound address and extension before the dial plan standardizes the address. The address appears in this format: sip:8723000;ext=<a href="mailto:999@inin.com">999@inin.com</a>.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>If you do select this check box</strong>, then CIC's telephony services changes the inbound address and extension before the dial plan standardizes the address. The address appears in this format: (317) 872-3000 ^ 999.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>If you do select this check box, and if the user portion of the SIP address is not numeric</strong>, then the entire SIP address is used as the caller ID.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Called Address</strong></td>
<td>Designates the <em>local</em> selection method.</td>
<td>Use Request URI</td>
</tr>
<tr>
<td></td>
<td>The options are:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- <strong>Use Request URI</strong>: displays the destination address in the form <a href="">sip:counsel@acme.com</a>.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- <strong>Use 'To' header</strong>: displays the &quot;To&quot; field in the SIP header as the called address (the destination address).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- If the field contains both a URI and a display name, then both of these items are displayed. For example, &quot;Patty Johnson&quot; <a href="">sip:counsel@acme.com</a>.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- If the field contains only a display name, then it is displayed alone. For example, &quot;Patty Johnson.&quot;</td>
<td></td>
</tr>
<tr>
<td><strong>Use this diversion info if present</strong></td>
<td>Displays the diversion information, such as the original or most recent line value. This information is contained in the URI address field in the SIP message.</td>
<td>Not selected</td>
</tr>
<tr>
<td></td>
<td>When this option is enabled, you can select the following values:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Use most recent</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Use original</td>
<td></td>
</tr>
<tr>
<td><strong>Calling Address</strong></td>
<td>Designates the <em>remote</em> selection method.</td>
<td>Use 'P-Asserted-Identity' header</td>
</tr>
</tbody>
</table>
P-Asserted-Identity is a header field in a SIP message that contains a URI and display name (optional). For example, "Patty Johnson" <sip:counsel@acme.com>.

The options are:

- Use 'From' header only: displays only the "From" field in the SIP header as the calling address (the origination address).
  - If the field contains both a URI and a display name, then both of these items are displayed. For example, "Patty Johnson" <sip:counsel@acme.com>.
  - If the field contains only a display name, then it is displayed alone. For example, "Patty Johnson."
- Use 'P-Asserted-Identity' header only: displays only the authenticated sender origination information from the SIP message. If the "P-Asserted-Identity" header information is not available and no value is set in the header, then the number appears as "Private number," and the name appears as "Unknown Name."
- Use 'P-Asserted-Identity' header then 'From' header (default): displays the authenticated sender information from the SIP message.
  - If the "P-Asserted-Identity" header is known, then that value is used and then the "From" header information is used.
  - If the "P-Asserted-Identity" header is unknown, then only the "From" header information is used.

<table>
<thead>
<tr>
<th>Ignore address if user portion is not numeric</th>
<th>if the address is not numeric (for example, <a href="">sip:counsel@acme.com</a>), then this option sets the From field to “Unknown.”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not selected</td>
<td>You can optionally use this option with the <strong>Use only numeric portion</strong> check box. Either way, the CIC client displays the call as “Private Number.”</td>
</tr>
</tbody>
</table>

**Related topics**

- [Configure a SIP line](#)
- [Dial plan](#)
- [Line options reference](#)
- [SIP line identity (in) concepts](#)
- [Lines concepts](#)
**Identity Out**

### SIP line identity (out) options

The following table describes the options that you can use to configure outbound identity options for a SIP line. For information on how to access these options, see *Configure a SIP line*.

Changes to all of the options on this dialog box take effect immediately.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use 'sips:' scheme</strong></td>
<td>Converts the SIP address in the &quot;From&quot; header to use SIPS instead of SIP. SIPS is a secure transmission that uses the URI format. For example: <code>&lt;sips:+13178723000@ICServer:5061&gt;</code>. If you do not select this option, CIC converts all SIPS to SIP.</td>
<td>Not selected</td>
</tr>
<tr>
<td><strong>Called Address:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Keep 'tel:' scheme when using a proxy</strong></td>
<td>Note: This option is available only if one or more proxy addresses are configured. It is available for all three line protocols. Determines whether CIC uses the telephone format (tel:NNNNNNNNNNN) for the remote address. If you do not select this option, CIC converts the phone and phone number to the SIP format (SIP:NNNNNNNN@ipaddress).</td>
<td>Not selected</td>
</tr>
<tr>
<td><strong>Called Address:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Send Extension</strong></td>
<td>Determines whether CIC dials an extension if one is passed. If this option is selected, then CIC dials it after &quot;/.&quot; The options are: • <strong>None</strong>: CIC does not include the extension in the SIP message. • <strong>Use 'ext='</strong> • <strong>Post Connect</strong>: After the call connects, CIC sends the extension as DTMF tones.</td>
<td>Post Connect</td>
</tr>
<tr>
<td><strong>Calling Address: Line Value 1</strong></td>
<td>Sets the first calling address. After you set the value here, you can select it for the <strong>Calling Address</strong> options below. For more information, see <em>SIP Line Options</em> and <em>Configure a line value</em>.</td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Calling Address: Line Value 2</strong></td>
<td>Sets the second calling address. After you set the value here, you can select it for the <strong>Calling Address</strong> options below. For more information, see <em>SIP Line Options</em> and <em>Configure a line value</em>.</td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Calling Address: Diversion Method</strong></td>
<td>Sets how an outbound call on this line is indicated to the network. For more information, see <em>SIP Line Options</em> and <em>Configure a line value</em>.</td>
<td>Use 'Diversion' Header</td>
</tr>
</tbody>
</table>
The **Use 'Diversion' Header** setting causes the line to use a header with diversion information, such as the origination address or the most recent address.

### Calling Address (Normal Calls): From Header Address

Sets the value that appears as the local address in an outbound SIP interaction that is not diverted or redirected.

The options are:

- **Use line value 1**: displays the value in the Line Value 1 field.
- **Use line value 2**: displays the value in the Line Value 2 field.
- **Use passed value if present**: displays the CIC user's outbound ANI. For example, "Name if present" <sip:+13178723000@ICServer.ININ.com>.
- **None**: displays only the address value.

### Calling Address (Normal Calls): From Header Name

Sets the value that appears as the local name in an outbound SIP interaction that is not diverted or redirected.

The options are:

- **Use line value 1**: displays the value in the Line Value 1 field.
- **Use line value 2**: displays the value in the Line Value 2 field.
- **Use passed value if present**: displays the name value that the handlers pass. If the handlers do not pass a value, and if the CIC user's outbound ANI is configured, then CIC uses the CIC user's display name. For example, "CIC User's Display Name" <sip:+13178723000@ICServer.ININ.com>.
- **None**: displays only the address value.

### Calling Address (Normal Calls): 'P-Asserted-Identity' Header Address

Sets the value that appears as the authenticated local address in the outbound SIP interaction that is not diverted or redirected.

The options are:

- **Use line value 1**: displays the value in the Line Value 1 field.
- **Use line value 2**: displays the value in the Line Value 2 field.
- **Use passed value if present**: displays the address value that the handlers pass. If the handlers do not pass a value, then CIC displays the CIC user's outbound ANI. For example, "Name if present" <sip:+13178723000@ICServer.ININ.com>.
- **None**: displays neither the address nor the name.

### Calling Address (Normal Calls): 'P-Asserted-Identity' Header Name

Sets the value that appears as the authenticated local name in the outbound SIP interaction that is not diverted or redirected.

The options are:

- **Use line value 1**: displays the value in the Line Value 1 field.
- **Use line value 2**: displays the value in the Line Value 2 field.
- **Use passed value if present**: displays the name value that the handlers pass. If the handlers do not pass a value, and if the CIC
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>User's Display Name</td>
<td>For example, &quot;CIC User's Display Name&quot; <a href="">sip:+13178723000@ICServer.ININ.com</a>.</td>
<td>- None: displays neither the address nor the name.</td>
</tr>
<tr>
<td>Diverted Header Address</td>
<td>Sets the value that appears as the destination address in the diversion header for the outbound SIP interaction.</td>
<td>None</td>
</tr>
<tr>
<td>Diverted Header Name</td>
<td>Sets the value that appears as the destination name in the diversion header for an outbound SIP interaction.</td>
<td>None</td>
</tr>
<tr>
<td>From Header Address</td>
<td>Sets the value that appears as the local address in an outbound SIP interaction that is redirected. This is typically a follow-me or forwarded interaction.</td>
<td>Use passed value if present</td>
</tr>
</tbody>
</table>

**Note:** This option is not available if 'P-Asserted-Identity' Header Address is set to None.

**Note:** This setting is not available if Diversion Header Address is set to None.

**Note:** For external to follow-me interactions and forwarded interactions, CIC displays the From address of the external device.
### Calling Address (Diverted Calls): 'From' Header Name

- **Use diverted value**: displays the CIC user 2 outbound ANI. For example, "User 2 Name if Present" <sip:+13178723000@ICServer.ININ.com>.

**Sets the value that appears as the local name in an outbound SIP interaction that is redirected. This is typically a follow-me or forwarded interaction.**

**The options are:**

- **Use line value 1**: displays the value in the **Line Value 1** field.
- **Use line value 2**: displays the value in the **Line Value 2** field.
- **Use passed value if present**: displays the CIC calling user 1 display name, if the user’s outbound ANI is configured. For example, "CIC User 1 display name" <sip:+13178723000@ICServer.ININ.com>. For external to follow-me interactions and forwarded interactions, CIC displays the **From** name of the external device.
- **Use diverted value**: displays the CIC user 2 display name if the user’s outbound ANI is configured. For example, "CIC User 2 display name" <sip:+13178723000@ICServer.ININ.com>.
- **None**: displays the address only.

### Calling Address (Diverted Calls): 'P-Asserted-Identity' Address

- **Use passed value if present**: displays the CIC calling user 1 outbound ANI. For example, "User 1 Name if Present" <sip:+13178723000@ICServer.ININ.com>. For external to follow-me interactions or forwarded interactions, CIC displays the authenticated **From** address of the external device.

**Sets the value that appears as the authenticated local address in an outbound SIP interaction that is redirected. This is typically a follow-me interaction or a forwarded interaction.**

**The options are:**

- **Use line value 1**: displays the value in the **Line Value 1** field.
- **Use line value 2**: displays the value in the **Line Value 2** field.
- **Use passed value if present**: displays the CIC calling user 1 outbound ANI. For example, "User 1 Name if Present" <sip:+13178723000@ICServer.ININ.com>. For external to follow-me interactions or forwarded interactions, CIC displays the authenticated **From** address of the external device.
- **Use diverted value**: displays the CIC user 2 outbound ANI. For example, "User 2 Name if present" <sip:+13178723000@ICServer.ININ.com>.
- **None**: displays neither the address nor the name.

### Calling Address (Diverted Calls): 'P-Asserted-Identity' Name

- **Use passed value if present**: displays the name value that the handlers pass. If the handlers do not pass a value, then CIC displays the user’s outbound ANI, if it is configured. For example, "CIC user’s Outbound ANI" <sip:+13178723000@ICServer.ININ.com>. For external to follow-
me interactions or forward interactions, CIC displays the authenticated From name of the external device.

- **Use diverted value**: displays the CIC user 1 display name if the user’s outbound ANI is configured. For example, “CIC User 1 display name” <sip:+13178723000@ICServer.ININ.com>.
- **None**: displays the address only.

**Note**: This option is unavailable if ‘P-Asserted-Identity’ Address is set to None.

Sets the value that appears as the destination address in the diversion header for an outbound SIP interaction that is redirected. This is typically a follow-me interaction or forwarded interaction.

The options are:

- **Use line value 1**: displays the value in the Line Value 1 field.
- **Use line value 2**: displays the value in the Line Value 2 field.
- **Use diverted value**: displays the address value that the handlers pass. If the handlers do not pass a value then CIC displays the CIC user 1 outbound ANI, if it is configured. For example, “CIC User 1 Outbound ANI” <sip:+13178723000@ICServer.ININ.com>.
- **None**: displays the address only.

**Calling Address (Diverted Calls): Diverted Header Address**

Sets the value that appears as the destination name in the diversion header for an outbound SIP interaction that is redirected. This is typically a follow-me or forwarded interaction.

The options are:

- **Use line value 1**: displays the value in the Line Value 1 field.
- **Use line value 2**: displays the value in the Line Value 2 field.
- **Select “Use passed value if present”**: displays the name value that the handlers pass. If the handlers do not pass a value then CIC displays the CIC user 1 display name, if the user’s outbound ANI is configured. For example, “CIC User 1 display name” <sip:+13178723000@ICServer.ININ.com>.
- **Use diverted value**: displays the CIC user 1 display name if the user’s outbound ANI is configured. For example, “CIC User 1 display name” <sip:+13178723000@ICServer.ININ.com>.
- **None**: displays neither the address nor the name.

**Note**: This setting is unavailable if Diversion Header Address is set to None.
**Related topics**

SIP line identity (out) concepts

Configure a SIP line

Configure a line value

User outbound ANI configuration

Lines concepts

---

**Configure a SIP line value**

You can configure the appearance of an outbound SIP line. You then select a line appearance (value) for each **Calling Address** option when you configure the identity (out) options for a SIP line.

For more information on configuring the outbound identity of a SIP line, see *Configure a line* and *Identity (out) options*.

**To configure a line value**

1. In the `<IC_Server>` container, double-click the Lines container.
2. Do one of the following:
   - To add a new line, in the list view window, right-click and then click **New**. The **Entry Name** dialog box appears.
     Type the line name and then click **OK**.
   - To edit an existing line, in the list view window, double-click a line
3. In the **Line Configuration** dialog box, in the list of options, click **Identity (Out)**.
4. In the **Calling Address** section, next to the **Line Value 1** field or the **Line Value 2** field, click ...
The **Configure Line Value** dialog box appears.
5. To display non-specific information for the outbound line identification, select the **Use Anonymous** values check box. This option displays: Address = "sip:anonymous@anonymous.invalid," Name = "Anonymous."
6. In the **Name** box, type the SIP phone name (or line name). CIC automatically displays this information. Additionally, this information appears in the **From** header in outbound SIP calls.
   If you select **Use Anonymous**, then "Anonymous" appears in the **From** header. Alternatively, a handler can set a name value.
7. In the **Address** box, type the SIP phone number (or line number). CIC automatically displays this information. Additionally, this information appears in the **From** header in outbound SIP calls.
If you select **Use Anonymous**, then "sip:anonymous@anonymous.invalid" appears in the **From** header. Alternatively, a handler can set an address value.

8. The **Display** value box displays the actual value as it appears in CIC.
9. Click **OK**.

**Related topics**

- **Identity (out) options**
- **Configure a SIP line**
- **Lines concepts**

**Audio**

**SIP line audio options**

The following table describes the options that you can use to configure audio options for a SIP line. For information on how to access these options, see *Configure a SIP line*.

Changes to all of the options on this dialog box take effect immediately.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio Path</td>
<td>For information on the available options, see the following resources on the Product Information site:</td>
<td>Dynamic</td>
</tr>
<tr>
<td></td>
<td>- <em>SIP Application Note</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- <em>Telephony Applications Note</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- <em>Interaction Media Server document</em></td>
<td></td>
</tr>
<tr>
<td>DTMF Type</td>
<td>Sets the Dual Tone Multi-Frequency (DTMF) type for the station.</td>
<td>RFC2833 if supported, otherwise inband</td>
</tr>
<tr>
<td></td>
<td>The options are:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Do not use RFC2833 inband only</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- <strong>RFC2833 if supported, otherwise inband</strong> (default)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- RFC2833 only.</td>
<td></td>
</tr>
<tr>
<td>DTMF Payload</td>
<td>Sets the value that is used for the DTMF Real-time Transport Protocol (RTP) payload value.</td>
<td>101</td>
</tr>
<tr>
<td></td>
<td>The acceptable values are 96-127.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The vendor-specific values are: 100, 102-105. Vendor-specific values should not be used for AudioCodes stations.</td>
<td></td>
</tr>
<tr>
<td><strong>Voice Activation Detection (VAD)</strong></td>
<td>Determines whether packets are sent for silence.</td>
<td>18 (24, 011000) CS53</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-----------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td><strong>When Voice Activation Detection is selected, no packets are sent for silence. This option saves bandwidth on your network. However, like compression, there is some loss of voice quality.</strong></td>
<td><strong>Not selected</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Echo Cancellation</strong></td>
<td>Determines whether echo cancellation is used.</td>
<td><strong>Selected</strong></td>
</tr>
<tr>
<td></td>
<td>Echo cancellation removes echoes from voice communication to improve the sound quality.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Allow Multiple Codecs in Outbound SDP Offer</strong></td>
<td>This option indicates whether CIC delivers all of the available Codecs to the recipient endpoint when a user makes an outbound call. The recipient endpoint can then select which Codec it recognizes.</td>
</tr>
<tr>
<td></td>
<td>You set up Codecs in the Locations container.</td>
<td><strong>Not Selected</strong></td>
</tr>
</tbody>
</table>

**Related topics**

Configure a SIP line

Lines concepts

**Transport**

**SIP line transport concepts**

You can configure the SIP line transport options to specify secure protocols to encrypt SIP messages and audio streams, define security indicator behavior for the CIC clients, and specify encryption cipher suites and authentication certificates for each SIP line.

You can also set some of these configuration options at the station level. Station-level settings override the corresponding line-level settings.

The transport protocol corresponds to Layer 4 in the Open Systems Interconnection (OSI) reference model. The protocol that you use depends on the features that your devices support.

**Related topics**

SIP line transport options

Configure a SIP line

Lines concepts
### SIP line transport options

The following table describes the options that you can use to configure transport options for a SIP line. For information on how to access these options, see *Configure a SIP line*.

Changes to *most* of the options on this dialog box take effect immediately.

**Note:** The protocol and port settings on this page are static. You must restart the IC server in order for changes to these settings to take effect.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
</table>
| Transport Protocol | Sets the transport protocol. Your selection depends on the protocols that are supported by your SIP-enabled devices (gateway, phones, and so on). The options are:  
  - **TCP** (Transmission Control Protocol). The TCP station line is available if needed. Most new IP phones support TCP.  
  - **TLS** (Transport Layer Security or SSL). This option requires the Advanced Security feature license. After you select it, the TLS Security configuration option appears.  
  - **UDP** (User Datagram Protocol). Nearly all IP phones support UDP.  

**Note:** If you change the transport protocol, you must deactivate and reactivate the line in order for the change to take effect. The line cannot be deactivated if any calls are active on it.

When a line is deactivated, no calls can be taken. Therefore, after you deactivate the line, reactivate it and then verify that it can take calls.

The other available options on this dialog box depend on the transport protocol that you select.
<table>
<thead>
<tr>
<th><strong>Audio Protocol</strong></th>
<th>Indicates whether the audio stream is unencrypted or encrypted.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The options are:</td>
</tr>
<tr>
<td></td>
<td>• <strong>RTP</strong> (Real Time Protocol): The audio stream is unencrypted.</td>
</tr>
<tr>
<td></td>
<td>• <strong>SRTP</strong> (Secure RTP): The audio stream is encrypted.</td>
</tr>
<tr>
<td></td>
<td>This option is available only if you select the <strong>TLS</strong> transport protocol. Select <strong>SRTP</strong> only if the endpoint(s) on this line support SRTP. If you select <strong>SRTP</strong>, the <strong>Security</strong> option is also available. Calls between devices that transmit and receive SIP TLS messages and SRTP audio are completely secure.</td>
</tr>
<tr>
<td><strong>RTP (unencrypted)</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Security</strong></th>
<th>The <strong>Security</strong> setting determines, in part, whether the security lock icon appears in the CIC clients when a user places or receives an insecure call on this SIP line.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The <strong>Security</strong> option is available only when you select the <strong>SRTP</strong> audio protocol.</td>
</tr>
<tr>
<td></td>
<td>In an CIC system environment, some devices may be configured to use SRTP while others do not. When two devices that use SRTP connect directly, both Interaction Clients display the lock icon to indicate that the call is secure from &quot;end to end.&quot; The display of this lock icon is automatic and is not configurable.</td>
</tr>
<tr>
<td></td>
<td>If one device uses SRTP and another device does not, then at least one segment of a call between these devices is insecure. The audio between these devices needs to be transcrypted (converted) between SRTP and RTP via an intermediate device such as the Interaction Media Server.</td>
</tr>
<tr>
<td></td>
<td>If a SIP line handles insecure calls, you can configure the display of an open-lock icon to inform CIC client users that the call is not secure.</td>
</tr>
<tr>
<td></td>
<td>The options are:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Minimal</strong>: hides the display of the open-lock icon on non-secure calls.</td>
</tr>
</tbody>
</table>
If you select this option, completely secure calls always show the lock icon and all other calls show no lock icon. If a secure call creates a conference that includes a non-secure call, the lock icon disappears to indicate that the call is no longer secure.

- **End-to-Edge**: displays the open-lock icon when a call, or at least one segment of a call in the CIC system domain is or becomes non-secure. End-to-edge means from one end of the call in the CIC system up to the edge of the CIC system (a gateway connected to the PSTN). It does not indicate security conditions on the PSTN or service provider outside of the IC domain.

### Adapter Name
Determines the local server IP address. The name of the adapter appears below the list.
This setting was formerly **Address to Use**.
For more information, see the latest version of *SIP Application Note* on the Product Information site.

The actual name of your network adapter.
This value is typically *Local Area Connection* because that is the default network adapter name that Windows uses.

### Usable Addresses
CIC displays the list of IP addresses assigned for the chosen adaptor.
This option is available only if the **EnableIPv6** server parameter is set to 1 (true).

Not specified.

### Address Family
Sets the family of addresses to which CIC listens. CIC listens to all IP address assigned to each family.
The default setting uses the order returned from a DNS query. If there are multiple IP addresses, CIC uses the first IP address in that range.
This option is available only if the **EnableIPv6** server parameter is set to 1 (true).

The options are:

- IPv4
- IPv6
- **Telephony Default (IPv4 and IPv6)**. The host name resolves to both IPv4 and IPv6.

---

**Media Address Family**

Specifies the media address family to which CIC should listen.

This option is available only if the **EnableIPv6** server parameter is set to 1 (true).

The options are:

- IPv4
- IPv6
- **Telephony Default (IPv4 and IPv6)**. The host name resolves to both IPv4 and IPv6. This option is typically used when CIC offers media, but it also helps to determine an answer when CIC receives identical media types and transport protocols for IPv4 and IPv6 information in the session description protocol (SDP).

---

**UDP, TCP, and TLS**:

This option sets the port number for which the CIC SIP engine services requests.

The valid values are 1024 to 65535.

TLS runs on top of TCP. There is a conflict if TCP is set on the same port or the same protocol.

A new SIP line cannot have the same port and the same protocol as an existing SIP line. However, a new line may use the same port of an existing line if it uses a different protocol.

For more information, see *Interaction Center Security Concepts* in the CIC Documentation Library.

The default is **5060**.

For TLS, this is set to 5061.
| **Connect Timer** | **TCP and TLS only:** Sets the timer value in milliseconds for TCP connections on the SIP Line.  
The valid values are 500 to 2000 (milliseconds). | 2000 |
| **T1 Timer (ms)** | **UDP only:** Sets the timer value in milliseconds that represents the initial incremental delay between packet retransmission.  
The valid values are 500 to T2 (milliseconds). | 500 |
| **T2 Timer (ms)** | **UDP only:** Sets the timer value in milliseconds that represents the maximum incremental delay between packet retransmissions.  
The valid values are any values greater than or equal to 1000 (milliseconds). | 1000 |
| **Maximum Packet Retry** | **UDP only:** Sets the maximum number of packet retry attempts for requests.  
Valid values are from 0 to 10. | 4 |
| **Maximum Invite Retry** | **UDP only:** Sets the maximum number of packet retry attempts for INVITE and ACK requests.  
Valid values are from 0 to 6. | 3 |
| **Reinvite Delay (ms)** | **UDP only:** Sets the reinvite delay in milliseconds.  
For more information, see the latest version of *SIP Application Note* on the Product Information site. | 50 |
| **Retryable Reason Codes** | Defines the list of valid SIP reason codes. If this line is part of a line group, and an outbound call that is made on this line returns a valid SIP reason code, then CIC retries the call on the next line in the line group.  
Separate reason codes or ranges of reason codes with commas. For example:  
"500-599"  
Or...  
"401, 480, 490-495, 500-599" | 480, 500-599 |
<table>
<thead>
<tr>
<th><strong>Note:</strong> &quot;480&quot; is not available on lines that are enabled for Microsoft Lync.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Retryable Cause Codes</strong></td>
</tr>
<tr>
<td><strong>SIP DSCP Value</strong></td>
</tr>
<tr>
<td><strong>Inbound Progress Timer (ms)</strong></td>
</tr>
<tr>
<td><strong>No Inbound Progress Timer</strong></td>
</tr>
<tr>
<td><strong>SIP Answer Delay (ms)</strong></td>
</tr>
</tbody>
</table>
The following table describes the options that you can use to configure session options for a SIP line. For information on how to access these options, see Configure a SIP line.

Changes to all options on this dialog box take effect immediately.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use SIP Session Timer</strong></td>
<td>Determines whether a recurring OPTIONS message is sent to the remote device. If the remote device does not respond to the OPTIONS message, the call is disconnected.</td>
<td>Not selected</td>
</tr>
<tr>
<td><strong>SIP Session Timeout</strong></td>
<td>The recurrence interval of the OPTIONS message that is sent when the Use SIP Session Timer check box is selected.</td>
<td>60 seconds</td>
</tr>
<tr>
<td><strong>Disconnect on Broken RTP</strong></td>
<td>Determines if a VoIP call remains active if the audio is disrupted. Audio is considered disrupted if no RTP, RTCP, and no comfort noise packet is received from the remote device.</td>
<td>Not selected</td>
</tr>
<tr>
<td><strong>Media Timing</strong></td>
<td>For information on this option, see the latest version of SIP Application Note on the Product Information site.</td>
<td>Normal</td>
</tr>
<tr>
<td>The options are:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Normal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Delayed</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Media reINVITE Timing</strong></td>
<td>Specifies if the media attempts to add media streams to the session immediately or if the timing is delayed when it receives a reINVITE.</td>
<td>Normal</td>
</tr>
<tr>
<td>The options are:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Normal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Delayed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Terminate Analysis On Connect | Terminates the call analysis procedure when a SIP connection indication from the network is received.

For example, Interaction Center makes its PSTN call via SIP calls through a SIP/ISDN gateway. In this example, the SIP/ISDN gateway sends only a SIP connect message back to Interaction Center after the remote party answers the call. If call analysis is used, you would want to select **Terminate Analysis On Connect**, so that call analysis terminates when the SIP connect message is received.

For example, Interaction Center makes its PSTN call via SIP calls through a SIP/Analog gateway. In this example, the SIP/Analog gateway always sends a SIP connect message back to Interaction Center prematurely, before the remote party answers the call. If call analysis is used, you would want to deselect **Terminate Analysis On Connect**, so that call analysis continues after the SIP connect message is received.

If the connection is to a station, the **Terminate Analysis On Connect** configured in the station is used.

**Notes:** Beginning in IC 4.0 SU3, CIC terminates call analysis when it connects to **remote stations**. This decreases the time it takes to connect the caller to the agent at the remote station. If you want to restore the previous functionality of using call analysis when connecting to remote stations, create the Remote Station Call Analysis Answer Supervision Interaction Center server parameter, and set it to **False**.

You should always enable the **Terminate Analysis on Connect** option for a standalone fax station. Otherwise outbound faxing could fail.

| Disable Media Server Passthru | Determines whether the media server rewrites the SSRC header. | Not selected |
| ASR Enabled | Determines whether ASR (Automatic Speech Recognition) resources are allocated for this SIP line. | Selected |

**Related topics**

- [Configure a SIP line](#)
- [Interactive Intelligence Support site](#)
- [Optional general server parameters](#)
- [Media server general configuration](#)
- [Lines concepts](#)
Authentication

SIP line authentication concepts

Authentication credentials on the SIP line apply only to outbound calls that are made from the Interaction Center.

SIP line authentication is only used when a proxy “challenges” an outbound call.

A SIP line is typically used to send a call to an external party through a SIP gateway or proxy. If the gateway or proxy challenges the call with a 401 or 407 response code, then the User Name and Password that are defined in the Authentication options in the SIP Line Configuration dialog box on the are used to authenticate the call.

The digest access algorithm is used as defined in RFC 2617 HTTP Authentication: Basic and Digest Access Authentication.

Related topics

SIP line authentication options

Configure a SIP line

Lines concepts

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authentication</td>
<td>Determines whether authentication is enabled for this SIP line.</td>
<td>Not selected</td>
</tr>
<tr>
<td>User Name</td>
<td>Specifies the User Name that is used in the authentication process.</td>
<td>Not specified</td>
</tr>
</tbody>
</table>
If you enable authentication for the SIP line, you must specify a user name.

<table>
<thead>
<tr>
<th>Table Heading</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Password</td>
<td>Specifies the <strong>Password</strong> that is used in the authentication process.</td>
<td>Not specified</td>
</tr>
<tr>
<td>Confirm Password</td>
<td>Confirms the <strong>Password</strong> that is used in the authentication process.</td>
<td>Not specified</td>
</tr>
</tbody>
</table>

**Related topics**

[SIP line authentication concepts](#)

[Configure a SIP line](#)

[Lines concepts](#)

[Proxy](#)

**SIP line proxy concepts**

If you configure an outbound proxy, then all SIP messages are sent to it for transmission. For each proxy you can specify one or more proxy addresses.

The list of proxy addresses indicates the order in which they are tried. All messages are sent to the **first** proxy address in this list. The remaining proxy addresses are used only if the first proxy address is not operational. "Not operational" means that CIC did not receive any response from the proxy and the request timed out.

If any response is received from the proxy then the proxy selection operation is considered complete, regardless of the response value.

This proxy list is intended to be used only when the proxies are considered to be “cold-standbys” of each other, meaning that only one is operational at a time.

If you intend to use the proxies as “hot-standbys” or N+1 configurations, then use SIP lines and line groups instead.

For example:

1. Assign one proxy per SIP line. Assign multiple SIP lines into one line group. This method orders proxies alphabetically by line name. It enables the use of different hunt selection methods.
2. Assign one proxy per SIP line. Assign one SIP line into one line group. You can then arrange the line group list in Dial Plan Dial Group List. This method allows the selection of one proxy as the main proxy regardless of the line name.

Each SIP line contains a configurable list of response codes that can be retried. The response codes can be used to determine when or if the next SIP line or line group is attempted.

**Related topics**

[Configure proxy addresses](#)
SIP line proxy options

Configure a SIP line

Lines concepts

The following table describes the options that you can use to configure proxy options for a SIP line. For more information, see SIP line proxy concepts and Configure proxy addresses.

Changes to most of the options on this dialog box take effect immediately.

**Note:** If you change the port number of a proxy address, then you must restart the IC server in order for the change to take effect.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
</table>
| Prioritized list of Proxy addresses | Displays the a prioritized list of outbound proxy addresses that are available to CIC. All messages are sent to the first proxy address in this list. The remaining proxy addresses are used only if the first proxy address is not operational. “Not operational” means that CIC did not receive any response from the proxy and the request timed out.  
  
  For each IP address, specify the port number at which the proxy services requests.  
  
  Valid port numbers are 1024 to 65535. | The default proxy port number for a line that uses TLS is 5061.  
  
  The default proxy port number for all other protocols (TCP and UDP) is 5060. |
| DNS SRV                    | Dynamically requests a list of proxy servers from a DNS server.                                                                                                                                              | Not selected                                                          |

Related topics

Configure proxy addresses

SIP line proxy concepts
Configure proxy addresses

To configure proxy addresses

1. Open the Proxy tab of the Line Configuration dialog box.
2. In the list of options, click Proxy.
3. To request a list of proxy servers from a DNS server, select the DNS SRV check box. You can then add an occurrence of a proxy server into the prioritized list.
4. To add a proxy address, click Add. Specify the proxy address and port number. Click OK.
5. To edit a proxy address, select the address. Click Edit. Make your changes. Click OK.

**Note:** If you change the port number of a proxy address, then you must restart the IC server in order for the change to take effect.

6. To delete a proxy address, select the address. Click Delete.
7. To change the priority order of a proxy address, select the address. Then use the Up and Down buttons to change its position in the list.
8. To save your changes, click OK.

Related topics

SIP line proxy concepts

SIP line proxy options

Configure a SIP line

Lines concepts
Registrar

SIP line registrar concepts

In SIP, a registrar is a logical entity that stores information about where to contact a user when someone dials that user's number. In CIC, a registrar represents a SIP carrier. Before service is granted, the SIP carrier usually requires CIC to register the SIP line, which is done by TS sending a SIP REGISTER message to the carrier. The registration tells the SIP carrier that if it receives calls for CIC's DID (Direct Inward Dial)s, then those calls should be sent to CIC.

Related topics

SIP line registrar options

Configure a SIP line

Lines concepts

---

SIP line registrar options

The following table describes the options that you can use to configure registrar options for a SIP line. For information on how to access these options, see Configure a SIP line.

Changes to all of the options on this dialog box take effect immediately.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>External List of Telephone Numbers</td>
<td>This is a list of <strong>External Phone Numbers</strong> that are not configured in CIC but that need to be directed to the IC server when they are encountered. Therefore, CIC (via TS) must register these external phone numbers with the registrar. Typically, these are numbers that are provisioned on the PSTN interface but that are not provisioned in the CIC system, such as a 1-800 number.</td>
<td>Not specified</td>
</tr>
<tr>
<td>Prioritized List of Registrar addresses</td>
<td>This is a list of registrars in order of priority that are available for contact registration by CIC. If a registrar is configured, then all CIC contacts are sent to that registrar. The default for a line that uses TLS is 5061.</td>
<td>The default for a line that uses TLS is 5061.</td>
</tr>
</tbody>
</table>
to it in a SIP REGISTER message by TS. The SIP engine attempts to register the given telephone numbers to every host in the registrar list.

Each entry in the list must be either an IP address in the IPv4 dotted-notation or a fully qualified domain name.

For each IP address there should be a port. The port number identifies the port at which the registrar will be servicing requests.

Valid port values are from 1024 to 65535.

For each IP address, you must also specify the registration time in seconds. The value for the registration time must be an integer between 0 and 360000 (100 hours) inclusive.

The default for all other protocols (TCP and UDP) is 5060.

<table>
<thead>
<tr>
<th>Related topics</th>
<th>Configure a SIP line</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SIP line registrar concepts</td>
</tr>
<tr>
<td></td>
<td>Lines concepts</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Headers</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SIP line headers concepts</td>
<td></td>
</tr>
</tbody>
</table>

On a SIP line, headers are collected on inbound SIP messages. Based on header type, the header information is sent to stations or converted into CIC attributes. The header information is not always transferred: the phone receiving the partner call may not have a use for the header.

**Example**

An external call to GeorgeB is inbound on DID number 317.555.1212. The call, referred to as **0001**, comes into CIC through the gateway, and is assigned to line **SIP_ININ_GW**.

The **Transferred Headers** for this line have been configured for **call-info** and **inin-special**.
CIC retains these headers for call 0001. The information may or may not be needed.

GeorgeB’s station is 8182, so another call, 0002, is created to contact his station. This 'connection' call 0002 is now a partner with call 0001, since they need to collaborate.

The outbound call 0002 is assigned line Stations-TCP, which has inin-special defined as a transferred header. Call 0002 now has the inin-special header information, but not the call-info header information from call 0001, and it is passed to GeorgeB’s station 8182.

In this case, only the transferred headers at the intersection of the inbound line SIP_ININ_GW and the outbound line Station-TCP defines what information is transferred.

**Related topics**

- [Optional general server parameters](#)
- [SIP line headers options](#)
- [Configure a SIP line](#)
- [Lines concepts](#)

..................................................................................................................

**SIP line headers options**
The following table describes the options that you can use to configure header options for a SIP line. For information on how to access these options, see *Configure a SIP line*.

Changes to all of the options on this dialog box take effect immediately.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
</table>
| Transferred Headers     | Specifies the headers that are collected from the initial inbound INVITE message and transferred to the outbound INVITE message to the partner or connection call. Define the header for use by both the inbound line and the outbound line. Valid entries in the list must contain a string of the following characters:  
- lowercase "a" through "z"
- uppercase "A" through "Z"
- digits "0" through "9"
- "_"  
- "-"  
- "!"  
- "@"  
- "#"  
- "$"  
- "%"  
- "^"  
- "&"  
- "*"  
- "(`"  
- "'"  
- "~" | Not specified |
| Call Attribute Headers  | Specifies the headers that are collected on inbound SIP messages. These headers are converted into CIC attributes for use by the IC subsystems. Each entry in the list must contain a string of the following characters:  
- lowercase "a" through "z"
- uppercase "A" through "Z"
- digits "0" through "9"
- "_"  
- "-"  
- "!"  
- "@"  
- "#"  
- "$"  
- "%"  
- "^"  
- "&"  
- "*"  
- "(`"  
- "'"  
- "~" | Not specified |
<table>
<thead>
<tr>
<th><strong>User-to-User Settings</strong></th>
<th>Determines the exchange of user-to-user information (UUI) data when a SIP session is initiated.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Header</strong></td>
<td>Selects the type of UUI header information. The options are:</td>
</tr>
<tr>
<td></td>
<td>• <strong>X-UserToUser</strong>: This parameter format is the Audiocodes proprietary header.</td>
</tr>
<tr>
<td></td>
<td>It does not use the protocol discriminator (PD). The length limit of the data is</td>
</tr>
<tr>
<td></td>
<td>129 bytes (129*2 hex digits).</td>
</tr>
<tr>
<td></td>
<td>• <strong>User-to-User</strong>: This is the general parameter that includes the PD in the format</td>
</tr>
<tr>
<td></td>
<td>User-to-User: XXhexdata;encoding=hex, where the XX is the PD. The length limit is</td>
</tr>
<tr>
<td></td>
<td>129 bytes including the PD (129*2 hex digits).</td>
</tr>
<tr>
<td></td>
<td>• <strong>User-to-User PD Attribute</strong>: This is the parameter that some gateways use where</td>
</tr>
<tr>
<td></td>
<td>the PD is specified separately in the format User-to-User:</td>
</tr>
<tr>
<td></td>
<td>hexdata;pd=XX;encoding=hex.</td>
</tr>
<tr>
<td><strong>Protocol Discriminator</strong></td>
<td>Describes the user protocol message being transferred.</td>
</tr>
<tr>
<td></td>
<td>You can specify any integers, lowercase letters from a-f, and uppercase letters from A-F.</td>
</tr>
</tbody>
</table>
If the X-UserToUser header is used, this option is not applicable.

<table>
<thead>
<tr>
<th>Attribute Format</th>
<th>Selects the encoding format for the header.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The options are:</td>
</tr>
<tr>
<td></td>
<td>• Hex</td>
</tr>
<tr>
<td></td>
<td>• Ascii</td>
</tr>
<tr>
<td></td>
<td>• Extended Ascii</td>
</tr>
</tbody>
</table>

Hex

Related topics

Configure a SIP line

Optional general server parameters

SIP line headers concepts

Lines concepts

Access

SIP line access concepts

You can protect the SIP line against denial of server (DoS) attacks. A DoS attack occurs when a website or other resource is overwhelmed is intentionally overwhelmed with bogus requests for service. As a result, legitimate customers are deprived of the services that the resource provides.

To protect the SIP line, you enter the SIP address restrictions by doing either of the following:

- **Grant Access** to all computers and then enter the exceptions for the computers to which you want to deny access.
- **Deny Access** to all computers, and then enter the exceptions for the computers to which you want to grant access.

Related topics

SIP line access options
Configure exceptions to the default SIP line access level

Configure a SIP line

Lines concepts

SIP line access options

The following table describes the options that you can use to configure access options for a SIP line. For more information, see Configure a SIP line and Configure exceptions to the default SIP line access level.

Changes to all of the options on this dialog box take effect immediately.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>All computers will be:</td>
<td>Indicates the default access level for all computers.</td>
<td></td>
</tr>
<tr>
<td>Granted Access</td>
<td></td>
<td>Granted Access</td>
</tr>
<tr>
<td>Denied Access</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exceptions</td>
<td>Lists the computers that are exceptions to the default access level.</td>
<td>Not specified</td>
</tr>
</tbody>
</table>

Related topics

Configure a SIP line

Configure exceptions to the default SIP line access level

Lines concepts

Configure exceptions to the default SIP line access level

To configure exceptions to the default SIP line access level

1. Open the SIP Line Configuration tab of the Line Configuration dialog box.
2. Do any of the following:

   - To add an exception, click Add. The Grant <Exception Type> On dialog box appears.
   - To edit an exception, select it in the Exceptions list and then click Edit. The Grant <Exception Type> On dialog box appears.
   - To delete an, select it in the Exceptions list and then click Delete.
2. In the **Type** group, select **Single Computer** or **Group of Computers**.

3. In the **Validate access using** list, select which IP address is checked against the access list of a sip line. Select one of the following:
   - Select **Last hop's IP Address**
   - Select **Originator's IP Address**

4. Complete the **Address** field:
   - If you selected **Single Computer**, do one of the following:
     - Enter an address string using IPv4 dotted notation (for example, 172.16.1.25).
     - Enter an address string using IPv6 dotted notation.
     - Click the **DNS Lookup...** button. Then type a fully qualified domain name and click **OK**.
   - If you selected **Group of Computers**, enter the beginning IP address for the range of addresses in the **Network ID field**. Then in the **Subnet prefix length** box, type the ending IP address for the range of addresses. If you use the IPv4 dotted notation, the **Subnet mask length:** defaults to 24. If you select IPv6 protocol, the **Subnet mask length:** defaults to 48.

   **Note:** Only one SIP line per port per protocol can grant all access. IP address entries must be unique per port per protocol.

5. Do one of the following:
   - Click **OK** to close the dialog box.
   - Click **Apply** to save your changes and continue with the configuration process.

**Related topics**

- [SIP line access concepts](#)
- [SIP line access options](#)
- [Configure a SIP line](#)
- [Lines concepts](#)

**Region**

- [SIP line region concepts](#)

A region defines areas where SIP stations and lines are physically interconnected. Within a region, a specific dial plan may be required depending on the central office or switching
A location represents the area where devices are considered to be in the same physical place. This location defines a set of endpoints that can share a common dial plan. The stations and lines that are members of a location are utilized by the dial plan entries that apply to the locale in which they are operating. The location also defines the codec communications and the ability to communicate between devices and locations.

**Related topics**

- [SIP line region options](#)
- [Configure a SIP line](#)
- [Lines concepts](#)

---

### SIP line region options

The following table describes the options that you can use to configure region options for a SIP line. For information on how to access these options, see *Configure a SIP line*.

Changes to all of the options on this dialog box take effect immediately.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Sets a location for this SIP line.</td>
<td>Default Location</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> The locations that appear in the Location list are defined in the Regionalization container.</td>
<td></td>
</tr>
</tbody>
</table>
Regionalization

Recorder

The following table describes the options that you can use to configure Interaction Recorder options for a SIP line. For information on how to access these options, see Configure a SIP line.

Changes to all of the options on this dialog box take effect immediately.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Proactive</td>
<td>Determines whether IC starts recording as soon as audio starts on a call and continues that recording until the call disconnects.</td>
<td>Not selected</td>
</tr>
</tbody>
</table>
| Recording             | Note: Not all proactive recordings are stored. CIC retains proactive recordings only when all of the following occur:  
* The recording is run through Recorder Policies.  
* Tracker data is stored. |             |
| Encrypt Recordings    | Determines whether the recordings are encrypted.  
This option is available only if the Use Proactive Recording option is selected. | Not selected|
|                       | Note: This setting overrides the Encrypt the Recording setting in an initiation policy.  
For example, if Encrypt the Recordings setting is not selected in an initiation policy, and both the Use Proactive Recording and Encrypt Recordings settings are selected here, then the recording is encrypted.  
If Encrypt the Recording setting is selected in an initiation policy, and the Use Proactive Recording setting is selected, but the Encrypt Recordings setting is not selected here, then the recording is not encrypted. |             |
In the event of a conflicting record call request, a Configuration Error warning message is logged in the Application log.

<table>
<thead>
<tr>
<th>Include Hold Music</th>
<th>Determines whether the recordings include hold music.</th>
<th>Not selected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This option is available only if the <strong>Use Proactive Recording</strong> option is selected.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Include Early Audio (IVR and ACD Wait)</th>
<th>Determines whether the recordings include IVR and ACD Wait audio.</th>
<th>Not selected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Note:</strong> This check box is available only if you have the appropriate license.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This option is available only if the <strong>Use Proactive Recording</strong> option is selected.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> The default compression format for a new SIP line with Proactive Recording selected is &quot;µ-law.&quot; The compression format can be changed for this SIP line by configuring Interaction Recorder’s recording processing.</td>
<td></td>
</tr>
</tbody>
</table>

**Related topics**

- Configure a SIP line
- Configure Interaction Recorder’s recording processing
- Lines concepts

**TLS Security**

If a SIP device (that is, some AudioCodes Mediant gateways) using this line does not support the stronger AES (Advanced Encryption Standard) cipher suites used by default in CIC, click the **Modify Cipher Suites** button to select one or more additional cipher suites to add to the list of TLS Cipher Suites to use. The cipher suites are listed in order of strongest to weakest. CIC will
negotiate with each SIP device and agree to use the strongest cipher suite common between the device and the IC server.

Related topics

**TLS line certificate concepts**

Configure TLS line certificates

**TLS authority certificate concepts**

Configure TLS authority certificates

**TLS port-to-certificate mapping concepts**

Configure TLS port-to-certificate mappings

**Third-party certificate signing concepts**

Sign third-party certificates

**Import a certificate**

**Configure a SIP line**

**SIP lines concepts**

**SIP line TLS security options**

The following table describes the options that you can use to configure TLS security options for a SIP line. The behavior of TLS communication depends on the capabilities of the devices that use this SIP line.

For information on how to access these options, see *Configure a SIP line.*
Note: The **TLS Security** options are available only if you select TLS as the transport protocol on the **Transport** dialog box.

Changes to all of the options on this dialog box take effect immediately.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TLS Options</strong></td>
<td>Determines whether the IC server requests a certificate from the SIP device and authenticates it.</td>
<td></td>
</tr>
<tr>
<td><strong>Require mutual authentication</strong></td>
<td>The SIP device then requests a certificate from the IC server, validates it, and establishes a secure TLS connection. This one-way authentication of the server is sufficient to ensure the SIP device is connecting to the proper IC server.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>By default, a SIP device using TLS to connect to the IC server must contain the CIC line certificate authority (CA) certificate in order to authenticate the IC server when it connects.</td>
<td>Not selected</td>
</tr>
<tr>
<td><strong>Certificates</strong></td>
<td>Displays the list of authority certificates that are selected for this SIP line. You can select additional authority certificates if you plan to use an external third-party certificate authority to sign line certificates.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>For more information, see Select certificate authorities for a SIP line.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Click <strong>Configure certificates and port mappings...</strong> to open the <strong>SIP/TLS Configuration</strong> dialog box.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> For more information, see Interaction Center Security Concepts in the Technical Reference Documents section of the CIC Documentation Library.</td>
<td></td>
</tr>
</tbody>
</table>
Modify TLS cipher suites

You can specify which cipher suites to use for encrypting SIP messages when using TLS on the SIP lines. You can enable weaker SIP/TLS ciphers if your network has SIP/TLS devices that do not support CIC’s stronger, default AES ciphers.

The IC server uses the activated TLS cipher suites in the order in which they appear.

To modify the TLS cipher suites

1. Open the TLS Security tab of the Line Configuration dialog box.
   
   **Note:** In order to access the TLS Security tab, you just first select TLS as the transport protocol on the Transport tab.

2. Click Modify Cipher Suites.
   The TLS Cipher Suites dialog box appears.

3. Do any of the following:
   
   - To activate a cipher suite, select its check box.
   - To deactivate a cipher suite, deselect its check box.
   - Use the Move Up and Move Down buttons to change the order of the cipher suites.
   - Click Default to restore the default cipher suites settings.

4. Click OK.
Select certificate authorities for a SIP line

CIC provides a default line authority certificate for use with every SIP line. You can select additional certificate authorities if you plan to use an external third-party certificate authority to sign line certificates.

The third-party certificate authority files must be generated and copied to the IC server before you can select them for a SIP line.

To select certificate authorities for a SIP line

1. Open the TLS Security tab of the Line Configuration dialog box.

   **Note:** In order to access the TLS Security tab, you just first select TLS as the transport protocol on the Transport tab.

2. Click Modify.
   The Select the certificate authorities for this line dialog box appears.

3. To select a certificate authority, select it in the Available list and then click Add.

4. To deselect a certificate authority, select it in the Currently Selected list and then click Remove.

5. Click OK.

Related topics

SIP line TLS security options

Modify TLS cipher suites
Configure a SIP line

Related topics

Configure TLS line certificates

Configure TLS authority certificates

Configure TLS port-to-certificate mappings
Third-party certificate signing concepts

Sign third-party certificates

Import a certificate

Configure a SIP line

SIP lines concepts

TLS line certificate concepts

You can configure the certificates that enable secure connections over SIP TLS lines.

TLS line certificates are signed by the IC server's root certificate authority (CA) or a third-party CA. They are used to identify the IC server when it connects to remote SIP devices via TLS.

In a switchover pair environment, you must import, on each switchover server, a special certificate that contains the domain name and a DHCP service record (SRV) so Polycom phones can be authenticated against both IC servers. This special certificate is created by Setup Assistant and stored in the `\server\ic\certificates\Lines` folder.

A `<Default Line Certificate>` is automatically installed for you. The `<Default Line Certificate>` is signed by the CIC `<Default Line Authority>` CA. By default, this line certificate is used on single IC servers that use the CIC certificate authority.

**Note:** You can optionally include a third-party certificate in a Windows certificate store in order to enable Windows to recognize that the certificate is trusted. If you do not include the certificate in a Windows certificate store, the certificate status in CIC indicates that the certificate is not trusted by Windows. However, this status does not affect the security of the CIC system.

Related topics

Configure TLS line certificates

TLS security concepts
To configure TLS line certificates

1. Use one of these paths:
   - System Configuration > Configuration > Certificate Management > SIP/TLS Certificates
   - Configuration > Modify > Line Certificates
   - IC Server > Lines > Line Configuration > TLS Security > Configure certificates and port mappings > Line Certificates

   **Note:** In order to access the **TLS Security** tab, you just first select **TLS** as the transport protocol on the **Transport** tab.

2. To load line certificates to use with a third-party certificate authority, click **Import**.

3. To view the general and detailed information about the issuer, valid dates, and descriptive details for a certificate in the list, select it and then click **View**.

4. To delete a certificate, select it and then click **Delete**.

5. Click **Close**.

**Related topics**

- Import a certificate
- TLS line certificate concepts
- SIP lines concepts
- Configure a SIP line

You can configure the certificate authority files that are used to validate devices connecting to the IC server over SIP TLS lines. This is typically used when mutual authentication is required.

A <Default Line Authority Certificate> is automatically installed for you. The <Default Line Authority Certificate> is equivalent to the root certificate authority for lines. It is responsible for signing the default CIC line certificates.

In a switchover pair environment, the <Default Line Authority> certificate file is automatically replicated on the backup server as soon as the primary IC server and the resident switchover
service is started. If you import any new authority certificates on this tab, they are automatically replicated to the backup switchover server, if one is available.

**Note:** You can optionally include a third-party authority certificate in a Windows certificate store in order to enable Windows to recognize that the certificate is trusted. If you do not include the certificate in a Windows certificate store, the certificate status in CIC indicates that the certificate is not trusted by Windows. However, this status does not affect the security of the CIC system.

**Related topics**

- [Configure TLS line certificates](#)
- [TLS security concepts](#)

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**To configure TLS authority certificates**

1. Use one of these paths:
   - **System Configuration > Configuration > Certificate Management > SIP/TLS Certificates**
   - **Configuration > Modify > Authority Certificates**
   - **IC Server > Lines > Line Configuration > TLS Security > Configure certificates and port mappings > Authority Certificates**

**Note:** In order to access the **TLS Security** tab, you just first select **TLS** as the transport protocol on the **Transport** tab.

2. To load authority certificates, click **Import**.
3. To view information about the issuer, valid dates, and descriptive details for an authority certificate, select it and then click **View**.
4. To delete an authority certificate, select it and then click **Delete**.
5. Click **Close**.

**Related topics**
SIP/TLS lines can use only one line certificate per port. Therefore, if you have multiple SIP/TLS lines and one of the lines requires a different certificate for its connection (for example, to a gateway, SIP Proxy server, and so on), you must map a port number to the line certificate to use for that connection. The port for each line is specified on the SIP line's **Transport** tab, in the **Receive Port** box.

By default, when only the default line certificate is being used, all TLS line ports maps to that certificate and no mappings appear or are required in the **Port-To-Certificate Mappings** tab.

When you use a pair of switchover servers, you must assign a port number to the domain certificate in the **Line Certificate** list and then add it to the **Port-To-Certificate Mappings** list. The default port number for all SIP/TLS lines is 5062. Interactive Intelligence recommends using port 8062 for the SIP/TLS line and certificate map to the domain certificate.
To configure TLS port-to-certificate mappings

1. Use one of these paths:
   - System Configuration > Configuration > Certificate Management > SIP/TLS Certificates
     Configuration > Modify > Port-To-Certificate Mappings
   - IC Server > Lines > Line Configuration > TLS Security > Configure certificates and port mappings > Port-To-Certificate Mappings

   **Note:** In order to access the TLS Security tab, you just first select TLS as the transport protocol on the Transport tab.

2. To add a mapping, do the following:
   - In the Line Certificate list, select the certificate that you want to map to a port number.
     **Note:** To import an existing certificate that does not appear in this list, click the Import New Line Certificate... link.
   - In the Port field, select the port number. The port number must match the receive port number on the SIP/TLS line that you want to use with the certificate.
   - Click Add.

3. To remove a mapping, select it in the Port-To-Certificate Mappings list and then click Remove.

4. Click Close.

Related topics

- [TLS authority certificate concepts](#)
- [TLS security concepts](#)
- [SIP lines concepts](#)
- Configure a SIP line

- [Third-party certificate signing concepts](#)

You can sign a certificate from a third-party device (for example an Audiocodes Mediant gateway) that uses the CIC authority certificate.
This is necessary when you configure a SIP line that uses TLS to connect to a third-party device that supports TLS. The connection between the IC server and the third-party device needs to be authenticated when it establishes a connection that uses mutually authenticated certificates. If the device's certificate is not signed by the CIC line authority certificate, the connection will not be authenticated.

**Note:** Use the Third Party Certificate Signing tab only if you use the IC line authority certificates. Do not use it if you have your own third-party certificate authority.

If you use your own third-party certificate authority and line certificates, then you must use your own certificate signing utility to sign the third-party device certificate.

### Related topics

- [Sign third-party certificates](#)
- [TLS security concepts](#)

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### To sign a third-party certificate

1. On the remote device to which you want to connect, generate the text for a Certificate Signing Request (CSR). Copy that text to the clipboard on the IC server or copy it in a text file that you can access on the IC server.

2. Use one of these paths:
   - System Configuration > Configuration > Certificate Management > SIP/TLS Certificates Configuration > Modify > Third Party Certificate Signing
   - IC Server > Lines > Line Configuration > TLS Security > Configure certificates and port mappings > Third Party Certificate Signing

   **Note:** In order to access the TLS Security tab, you just first select TLS as the transport protocol on the Transport tab.

3. For the Digest Algorithm option, select either SHA-1 or SHA-256 as your preferred secure hash algorithm.

4. Paste the CSR text from step 1 into the Certificate Request To Sign box.
5. Click Sign button. The signed certificate and the signing authority certificate are generated. They appear in the Generated Certificates fields on the tab.

6. Under the field that displays the signed certificate, click Save As.

7. Specify the directory and file name for this certificate.

   **Tip:** Include the name of the third-party device in the name.

8. Under the field that displays the signing authority certificate, click Save As.

9. Specify the directory and file name for this certificate.

   **Tip:** Use a name that distinguishes this certificate from the signed certificate.

   **Note:** Some third-party interfaces may let you paste the signed certificate or signed authority certificate data directly into their interface, or you may wish to copy and paste this certificate text into your own file. In this case, use the Clipboard button to select and copy the signed certificate text to the clipboard for pasting into another application.

10. Copy the saved signed certificate and the saved CIC default line authority certificate to a USB flash drive. Then import them on the third-party device and continue the configuration there.

**Related topics**

- [SIP lines concepts](#)
- [Configure a SIP line](#)
- [Import a certificate](#)

**Import a certificate**

Identify the location and format of your own corporate (or third-party) line certificate and line private key or a line authority certificate you wish to use on this IC server. You do not normally need to use this dialog if you use the CIC Default line authority and CIC Default Line certificates provided with Interaction Center.

This dialog is also used in Setup Assistant to import your own server group certificate and private key on a pair of switchover IC servers. See the IC Setup Assistant help for more information about server group certificates.

**Using your own line certificate, private key and authority certificate**

If your company has already established its own root certificate authority and manages its own certificates, you can choose to use your own authority certificate, line certificate and private key for the IC server instead of the default IC-generated certificate authority and line certificates.

If you are using your own certificates, you must also specify the **Type** and **Format** information, and whether the private key is password protected.
Switchover server pair considerations

In the case where you have two IC servers in a switchover pair, certificate authority files (e.g., YourLinesAuthorityCertificate.cer) are automatically replicated to the backup switchover server as soon as both servers are running and the switchover service is enabled. This is to ensure that the same certificate authority file and public key is always resident on both servers. The private key is not copied over the network, to avoid a potential security breach.

Each switchover server must have its own unique line certificate and private key, which are generated for each server by your root certificate authority (CA). Once the line certificates are generated, you can manually copy the line certificates via a USB flash drive to install the line certificates on each IC server, then use the Import dialog on the Line Certificates page to import the certificates. See Transferring certificate files for a recommended secure procedure for transferring certificates via a USB flash drive.

**Note:** Even though it is technically possible to use the Import dialog to browse and directly import a certificate over the network, we strongly recommend against this. If the network is already compromised and a network packet sniffer is in use, the certificate and its private key could be intercepted, which defeats the purpose of enabling security on the lines.

**Name:**

Enter a descriptive name for this line or authority certificate. This name appears in the Line Certificates or Authority Certificates page. It also appears on the Line Configuration page.

**Certificate Path**

Browse to the directory location of the certificate (e.g., YourLineCertificate.cer or YourCertificateAuthority.cer) you wish to use for this IC server.

**Certificate Type**

**Note:** This field is applicable if you are using your own line certificate/private key or certificate authority. Otherwise, use the default selection.

Select one of the following CIC-supported certificate file format storage types:

- **X.509:** Standard specification for public key certificates, in either DER or PEM format.
- **PKCS 7:** Contains one or more certificates in either DER or PEM format.
- **PKCS 12:** Defines a file format to store keys and certificates in either DER or PEM format.

**Certificate Format**

**Note:** This field is applicable if you are using your own line certificate/private key or certificate authority. Otherwise, use the default selection.
Select one of the following CIC-supported certificate file encoding formats:

- **DER** – Binary encoding
- **PEM** – Base64 encoding

**Private Key Path**

Browse to the directory location of the line certificate private key file (e.g., YourLinesPrivateKey.bin) you wish to use.

**Private Key Format**

**Note:** This field is applicable if you are using your own line certificate private key certificate. Otherwise, use the default selection.

Select one of the following IC-supported key file encoding formats:

- **DER** – Binary encoding
- **PEM** – Base64 encoding

**My private key is password protected**

**Note:** This field is applicable if you are using your own certificate/private key. Otherwise, use the default selection.

Select this check box if a password is attached to the private key file.

**Password**

Enter the private key password.

**Transferring certificate files**

When transferring a line certificate from one server to another, use the following procedure.

1. Insert a USB flash drive in the source server, where the certificate was generated.
2. Browse to the directory on the source server that contains the original certificate to be transferred.
3. Copy the Line Certificate file (e.g., ICSrvOneLineCertificate.cer) and its Private Key file (e.g., ICSrvOneLinePrivateKey.bin) to the USB drive.
4. Eject the USB drive from the source server.
5. Insert the USB drive in the destination IC server, where you want to copy the certificate.
6. From the SIP/TLS Line Certificates Configuration page in Interaction Administrator, click the Import... button to open the Import Certificate dialog.
7. In the Import Certificate dialog on the destination server, browse to the locations of the certificate and private key files on the USB drive in the Certificate Path and Private Key Path fields, for example, F:\ICSrvOneLineCertificate.cer and F:\ICSrvOneLinePrivateKey.bin.
8. Click OK and you will see the newly generated certificate listed on the SIP/TLS Line Certificates Configuration page.

9. Delete the certificate and private key files on the USB drive.

10. Eject the USB drive from the destination server.

11. Repeat this process for any additional IC servers, using a uniquely generated line certificate for each IC server.

12. (Recommended) As an additional security procedure, re-format the USB drive:
   - Open My Computer on the desktop
   - Right-click USB Drive and select Format...
   - In the Format USB Drive dialog, select Start.

Call putback

Call putback options

The following table describes the options that you can use to configure call putback options for a SIP line. For information on how to access these options, see Configure a SIP line.

Changes to all of the options on this dialog box take effect immediately.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable sending SIP REFER messages</td>
<td>Determines whether CIC can do the following items without tying up two CIC lines (one for the original call and one for the call to the destination): 1. Receive a call from the PSTN or a PBX. 2. Perform some processing on the call. 3. Transfer the call to a non-CIC destination (a PBX station or a remote number).</td>
<td>Not selected</td>
</tr>
<tr>
<td>Enable sending SIP REFER messages to Lines in other Lines Groups</td>
<td>Determines whether IC can send SIP REFER messages to lines in other line groups. This option is available only if Enable sending SIP REFER messages is selected.</td>
<td>Not selected</td>
</tr>
<tr>
<td>Enable Processing of Received SIP REFER Messages</td>
<td>Determines whether CIC allows the party sending the REFER to be notified of the outcome of the received request. This option is typically set on lines going to internal gateways or IC servers.</td>
<td>Not selected</td>
</tr>
</tbody>
</table>

Notes: Because this option can be used to enable other applications including call transfer, it can create additional calls and carrier charges.
Related topics

SIP lines concepts

Configure a SIP line

Line Groups

Overview of line groups

The **Line Groups** container allows you to create line groups and specify membership.

**Purpose**

A line group identifies a group of one or more lines that are reserved for specific uses, such as long distance calls, local calls, and so on. A line group can also reserve a group of lines for calls for an individual user or a workgroup. The DialPlanEx handler determines if an outgoing call uses the next available line (default behavior), or a specific line group.

**Call selection sequence**

CIC's Telephony Services subsystem attempts to minimize line conflicts between inbound and outbound calls. Specifically when the DialPlanEx handler sends Telephony Services a line group to use for an outbound call, Telephony Services sorts the lines in the line group in alphabetical order. When a call is placed, Telephony Services selects the next line in the line group.

**Eligible lines**

Any SIP line can be part of a line group. You can include individual lines in multiple line groups.

**Reporting considerations**

*Note:* To ensure accuracy in reporting, do not generate reports on line groups that contain the same lines.

**Related topics**

Line Group Configuration

Line Group Members
**Add a line group**

**To add a line group**

1. In the `<IC server>` container, click the **Line Groups** subcontainer.
2. In the list view, right-click and then click **New**.
3. In the **Entry Name** box, type the line group name and click **OK**.
4. Complete the **Line Group Configuration** tab and the **Line Group Members** tab. For more information, click the links under **Related topics**.

**Related topics**

- [Line Group Configuration](#)
- [Line Group Members](#)

**Configure a line group**

**To configure a line group**

1. In the `<IC server>` container, click the **Line Groups** subcontainer.
2. In the list view, right-click the line group you want to configure and then click **Properties**.
3. In the **Description** box, type a descriptive name or sentence that describes the purpose of the line group. For example, "Line Group 1 Long Distance" or "This line group is reserved for long distance calls" could be used for a description of a group of lines reserved for long distance calls.
4. To cause CIC to generate trunk group usage statistics for reporting on the lines in this group, select the **Use for Reporting** check box. To keep the statistics clean and the line group reports useful, you must not select this check box on more than one line group that contains the same lines. If you do, Interaction Administrator warns you about the need to have unique lines in each line group that is used for reporting. You may chose to ignore the warning, but the statistics generated for the line group reports will not be reliable. When this check box is clear, CIC does not generate line group usage statistics for the lines in this line group.
5. To use this line group as a dial group when you configure dial plans, select the Use as **Dial Group** check box. Dial plans allow you to automate how certain kinds of calls are routed. For more information, see *Overview of regional dial plans* and *Overview of old*
dial plans. The lines you include in a dial group should have a direction of outbound rather than inbound or both.

6. To use the dial group for a private line assignment, select the **Use for Private Line Assignment** check box. This option is available only when you first select the **Use as Dial Group** check box. For more information, see *Overview of private line assignment.*

7. Under **Hunt Selection Method**, select how CIC selects the line to ring. After you configure the line group, you use the **Members** tab to add lines to it.

- Choose **Descending Sequential** to ring lines one at a time, beginning from bottom of the list on the **Members** tab.
- Choose **Ascending Sequential** to ring lines one at a time, beginning from the top of the list on the **Members** tab. If no a call is not answered, the prompt “No one is available to take your call at this time” is played, and the call is routed back to the IVR System. Lines are distinguished by their name.
- Choose **Round-robin** to have CIC remember the last user who was sent a call. Round Robin works in a loop, repeating the process down through the list, and then the process starts over with the next call.

For example, a line group has three lines (Line1 - Line3), all available for calls and are listed Line1, Line2, Line3, in that order. If Line1 was alerted, then Line2 was alerted, even though both are now available, the next alerting call will go to Line3. Round-robin knows which line has been alerted and goes to the next available line in the list.

8. **Click OK.**

**Related topics**

- [Add a line group](#)
- [Add and remove lines from a line group](#)
- **Overview of dial groups**
- **Overview of regional dial plans**
- **Overview of old dial plans**

**Add and remove lines from a line group**

Line groups define a group of one or more lines that can be reserved for specific uses, such as long distance and local calls. A line group can also reserve a group of lines for calls for an individual user or a workgroup. You can include individual lines in more than one line group, but be careful to not use line groups (containing the same lines) for reporting.

**Notes:** If you combine two or more different types of lines (for example, analog lines and digital channels) in a single line group, be sure to specify the appropriate prefix numbers for the lines.

To add lines to a line group
1. In Interaction Administrator, under the server name, select the **Line Groups** container.

2. Double-click one of the line group names in the **Line Group** column. The **Line Group Configuration** window appears.

3. Select a line name in the **Available Lines** box, and then click **Add**.

4. Click **OK**.

To remove lines from a line group

1. In the **Currently Selected Lines** box, select a line name and then click **Remove**.

2. Click **OK**.

**Related topics**

*Add a line group*

*Configure a SIP line*

*Configure a dial group entry*

*Line selection order*

CIC’s Telephony Services subsystem attempts to minimize line conflicts between inbound and outbound calls. Specifically when the DialPlanEx handler sends Telephony Services a line group to use for an outbound call, Telephony Services sorts the lines in the line group in alphabetical order. When a call is placed, Telephony Services selects the next line in the line group.

**Delete a line group**

*Note:* Before you can delete a line group that is also a dial group, you must first remove the dial group.

Before you can delete a line group that is used in a regional dial plan, you must first remove the line group from the regional dial plan.

To delete a line group

1. In the `<IC server>` container, click the **Line Groups** subcontainer.
2. In the list view, right-click the line group you want to delete and then click **Delete**.

**Related topics**

*Overview of line groups*
Overview of dial groups

A dial group is a group of lines or channels that CIC uses for outbound calls. You define dial groups in the **Line Groups** container.

**Note:** The lines included in a dial group should have a direction of outbound or both rather than inbound to avoid line contention when dialing.

You can use dial groups in your regional dial plan to direct certain kinds of outbound calls (for example, classifications of calls) to specific lines. As an example, international calls may be directed to one dial group and local outbound calls may be directed to another dial group.

**Related topics**

- **Add a line group**
- **Configure a dial group entry**

**Custom attributes**

The Custom Attributes page allows you to add customized attributes so that you can reference your own variables and settings through the IceLib interface.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes to the Custom attributes page in the User Configuration dialog box and the Workgroup Configuration dialog box dialog box are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

The page contains a list for the attributes and displays a **Name** and a **Value** column, and has the following buttons:

**Add**

Click **Add** and select an existing custom attribute from the pull-down list, enter a new custom attribute. If creating a new attribute, use a unique name, otherwise the existing attribute will be overwritten.

**Edit**

Click **Edit** to change the value of an existing custom attribute.

**Delete**
Click **Delete** to delete an existing custom attribute.

**Manage Attributes**

Click **Manage Attributes** to open a dialog box that displays a list of custom attributes. Click **Add** or **Delete** to manage the appearance of the custom attributes in the pull-down list.

The custom attributes are saved in the path of the root container. This **Path** is displayed at the bottom of the dialog box.

**Note:** For more information on the Interaction Center Extension Library (IceLib), see the **System APIs section** in the CIC Documentation Library on the IC server.

**History**

This page provides a way to manually document configuration changes and when they occurred. Changes made in Interaction Administrator are also automatically logged in the Interaction Administrator Change Notification Log (Log ID 7). Later, authorized users can run reports against this log to summarize all configuration changes.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes to the History page in the User Configuration dialog box and the Workgroup Configuration dialog box dialog box are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

**Last Modified**

This date is automatically updated each time you click the **OK** button, presumably after you make changes to the configuration. To avoid updating this date, exit the page by clicking the **Cancel** button.

**Note:** If you click **Cancel**, none of the changes made to this page will be preserved.

In addition, the history is updated when changes are made to the record elsewhere in Interaction Administrator. For example, when a user change his or her password, the **Last Modified** date is updated.

**Note:** Changes to the licenses for a user or a station do not update the Last Modified date.

**Date Created**

This date is automatically set when the user creates the initial configuration for this page. If the page was initially created during setup, the date could be blank.

**Notes**
Type notes about configuration settings and changes. If you change the configuration page and click OK, the Last Modified date is updated.

You must manually enter the date beside each entry in the Notes field to identify the date of each note.

To create a new line in the Notes field, press Enter.

Stations

Overview of stations

A station represents a workstation, remote station, stand-alone fax, stand-alone phone, or unified messaging entity that is not managed by Interactive Intelligence's managed IP phone feature. You configure each station so that CIC can recognize the station and deliver messages to and from it.

Note: For Switch hook stations: If a user is logged into a station, then that user's rights apply and override the station rights. If no user is logged in, the system uses the station rights.

Related topics

Overview of how to add stations
Configure a station
Overview of the default station
Overview of station templates
Overview of station groups

Add stations

Add a station

To add a station

1. In the <IC_Server> container, double-click the Stations container.
2. In the list view window, right-click and then click New. The Entry Name dialog box appears.

3. Do one of the following:
   - In the box, type the station name.
   - Click ⌘ to browse for the station.

4. Select the station type and then click Next.

5. Complete the configuration options. Depending on the type of station you are creating the configuration options vary.

   Note: If you are using a station template, some values may already be completed for you.

Related topics

Station types

Configure a station

4.

Station name

Type the name of a station connected to the network with the IC server. A station can be one of the following kinds of devices:

- Workstation (a PC on the network, such as SUPPORT1PC)
- A phone not directly connected to the CIC (such as a remote employee working at home)
- Fax machine (a stand-alone fax machine, such as HPOfficeJet1)

Browse

Click Browse to select a station from the network. The Browse location defaults to the last open domain.

Hint: Type a descriptive station name to more easily identify the kind of station, its location, the user, or another key attribute that uniquely identifies the station (such as Conference_Room_Phone, Mktg_Fax_Machine, and so on).
**Related topics**

*Add a station*

**Station types**

You can create several types of stations:

<table>
<thead>
<tr>
<th>Station Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Workstation</strong></td>
<td>A PC (with a phone) on the network in the same domain as the IC server.</td>
</tr>
<tr>
<td><strong>Stand-Alone Phone</strong></td>
<td>A telephone that is NOT associated with a PC, but that has an extension number on the Interaction Center server.</td>
</tr>
<tr>
<td><strong>Stand-Alone Fax</strong></td>
<td>An independent fax machine with its own phone line (for example, HP OfficeJet).</td>
</tr>
<tr>
<td><strong>Remote Station</strong></td>
<td>A station assigned to a user or agent who runs a CIC client outside of the network domain of the IC server.</td>
</tr>
<tr>
<td><strong>Unified Messaging</strong></td>
<td>This station type defines the station as a Third Party Unified Messaging provider. This station type is only available when a SIP or a Third Party Unified Messaging license is present.</td>
</tr>
</tbody>
</table>

Once a station entry is complete, the only way to change that station's name is to create a new entry with the new name and configuration attributes and then delete the original station.

**Note:** All stations have dialing Access Controls that determine what kinds (for example, classifications) of phone numbers each station is permitted to dial. This provides a level of dialing security to prevent toll fraud.

**Add Stations Assistant**

**Import SIP Stations from a CSV List**

Use this page to select the CSV file that contains SIP stations and any additional information such as name, type, extension or address.

**Note:** The CSV file must be in UTF-8 format. For more information, see CSV files with non-English column headings.

Click **Browse** to the location of the CSV file.
Note: If you plan to implement managed IP phones, please note that managed IP phones/stations are imported from the Managed IP Phones Assistant in Interaction Administrator, following the CIC installation. Use Add Stations Assistant to create non-managed SIP stations only.

Click Example to view a sample CSV file.

A Microsoft Excel document (CSV SIP Station List.xls) and a sample CSV file (CSV SIP Station List.csv) are available on the CIC products disc in Additional Files...CSV Lists.

The SIP stations CSV file is formatted in two sections; a header section, and a data section. The header is the first row in the file and contains the names of all columns to import. Open a copy of CSV SIP Station List.xls in Excel, and enter the information in the appropriate columns for the SIP stations you wish to create. The following columns are supported:

Name (Required): This is the station name.

Type: The type must be workstation, phone, or fax.

Extension: Enter a unique extension number for the SIP station.

Identification Address: Enter the SIP identification address.

Connection Address: Enter the connection address of the SIP station. If specified, this column will create a static SIP station. If left blank the station will be dynamic.

Manufacturer: Enter Generic, Interactive Intelligence, Cisco, or Polycom.

Model: Enter the specific type of phone model made by the phone manufacturer.

- If Interactive Intelligence is the manufacturer, use “Interaction Client”.
- If Cisco is the manufacturer, use 7905, 7912, 7940, or 7960.
- If Polycom is the manufacturer, use SoundPoint IP 300, SoundPoint IP 500, or SoundPoint IP 600.

MAC Address: Enter the MAC address of the SIP station.

Machine Name: Maps a machine to this station for licensing.

When your additions are complete, save the document as a .CSV file type and download it to a secure location on the IC server. You can open the new .CSV file in any text editor.

For more information, including station attribute descriptions and instructions for importing the CSV SIP Station list in Add Stations Assistant, see Importing CSV Lists in IC Documentation Library.
Review Imported SIP Stations

Use this page to review the stations that you imported from a CSV file.

If this information is not correct, click Back to make changes. Otherwise click Next.

Access control

This page may appear when you run the Add Stations Assistant or the Managed IP Phones Assistant.

Note for the Add Stations Assistant: If you created a dial plan in IC Setup Assistant, select the dial plan classifications for the new stations. If you did not create a dial plan in IC Setup Assistant, no Available classifications appear. After you create the dial plan in Interaction Administrator after installation, run the Add Stations Assistant in Interaction Administrator and specify the outbound dialing privileges for your stations.

Use the Access control page to select the dial plan classifications for new stations. These classifications determine the outbound dialing privileges for the new stations.

Select one or more classification names from the list of Available classifications and add them to the Currently Selected list to give the selected dialing privileges to this station.

If someone attempts to place a call from a station and the dialed phone number is not supported in one of the phone number classifications for the station, CIC plays a prompt that says that the station does not have sufficient dialing privileges to place the call.

Saving SIP Station Data

If you have reviewed your SIP station data and are ready to commit the new station creation, click on the Commit Changes button. After clicking Commit Changes, there is a progress indicator displayed while saving the SIP stations and station configurations that you have created. Depending on how many stations you created, this may take several moments.

Station Licenses

Use this page to assign licenses to the stations you are creating. This page applies to workstations or remote stations.
Basic Station License

This license represents an audio path between CIC and a station. This license is not required, but without it the audio for station does not play. A non-audio station may be used or for non-audio interactions.

Remote stations must be assigned a Basic Station license. If a user logs into a remote station, it also needs a Client Access license. (In previous versions, this was a Business User license.) If a TUI login is performed against dynamic remote stations, no Client Access license is acquired.

Client Access License

To allow the station to run a CIC client, assign this license to the station.

Note: If the user has this license, the user can run any of the CIC clients.

ACD Access License

Select this check box if this workstation is an ACD station. Then select one of the following ACD licenses for the station:

- Media 1 - This license allows 1 interaction type at a given time.
- Media 2 - This license allows 2 interaction types at a given time.
- Media 3 Plus - This license allows 3 or more interaction types at a given time.

Note: A station can receive ACD interactions only if it has the ACD Access License.

Interaction Process Automation License

Select the Interaction Process Automation check box if this user is an Interaction Process Automation user. Then select one of the following Interaction Process Automation licenses for the user:

- Direct Routed Work Items (I3_ACCESS_IPA_USER) license: Enables the user to launch any process to which the user has rights. It also enables the user to receive work items that are directly routed to the user.
- Group Routed Work Items (I3_ACCESS_IPA_USER_ACD) license: Enables the user to receive work items that are either routed to the user directly or as a member of a workgroup (similar to an ACD queue).
- Process Monitor (I3_ACCESS_IPA_MONITOR) license: Enables the user to view process status and details in the Process Monitor or to use Process Reporting in IC Business Manager Applications.
- Process Designer (I3_ACCESS_IPA_DESIGNER) license: Enables the user to use the Process Designer to create and modify Interaction Process Automation processes.

Note: Each license in this list enables the user to use the Interaction Process Automation features included in all the previous licenses in the list. That is, the Group Routed Work Items license includes the Direct Routed Work...
Items license. The Process Monitor license includes both of the Routed Work Items licenses. The Process Designer license includes all the other licenses.

For more information about designing processes, refer to the *Interaction Process Automation Technical Reference* and the Process Designer Help.

**License List**

Select any additional licenses to assign to this station.

**Note:** For specific license information on each type of license, see *IC Licensing Overview Technical Reference* in the CIC Documentation Library.

---

**Complete the Add Stations Assistant**

You have successfully completed the **Add Stations Assistant**. Click **Finish** to save your changes or newly created stations. Select **I want to add additional stations** then click **Next** to run the Add Stations Assistant again.

**Configure a station**

**SIP station addresses settings**

Use this page to configure your SIP station addresses. Depending on whether you are configuring a default Global SIP Station, or a stand-alone fax or phone as a station, some of these options are not available.

**Station Extension (Station configuration only)**

Type a unique extension number for this SIP workstation phone. During the installation of the CIC clients, the Station Extension is created based on the user's input. You can enter any extension number you like (as long as it does not conflict with existing numbers), but it is helpful to preserve a visible relationship between a user's logical extension and his or her default workstation extension.

**Note:** If the **Enable Regional Dialing** option is selected in Regionalization - **Location**, and a change to a station extension creates an extension conflict, a message is displayed listing duplicate extensions. For later reference when resolving conflicts, click **Copy to Clipboard** to copy the listing, and then paste the content to a program that supports CSV (like Microsoft Excel).

**Connection Type (Station configuration only)**

This option is grayed-out and is set to SIP because you have previously selected to create a SIP workstation. Click **Back** to select a different type of workstation if this is not correct.
**Active (Station configuration only)**

Select this check box to activate the station. This enables the station to place and receive calls. Clear the check box to deactivate the station, preventing calls from coming in to or going out from the station.

**Auto Conference (Station, if stand-alone phone, configuration only)**

If this check box is selected, and if a call is already connected or held at the station, a conference is created between the new incoming call and the existing call(s). An announcement of the new call is played to the existing call(s) before the conference is established.

**PIN (Station, if stand-alone phone, configuration only)**

If you enabled auto conference you must enter the Personal Identification Number.

**Identification Address (Station configuration only)**

Click **Edit** to choose a predefined format or use an alternate format for the identification address for this SIP station.

**Connection Settings**

Select **Obtain Settings Automatically** or **Use the Following Settings**.

**Obtain Settings Automatically (Station configuration only)**

This setting allows the station’s **Address** and **Contact Line** information to be dynamically updated where the contact address and the new contact line are set automatically when an IP phone registers (SIP INVITE message or REGISTER message). This option is very useful if SIP stations use DHCP and can change IP addresses frequently.

**Use the Following Settings (Station configuration only)**

_This setting is static where you have to manually specify the contact address and contact line._

**Address**: Enter the User Portion, Host, and Port manually.

**Contact Line**: *(Global SIP Station and Station configuration)*

Select an existing SIP line from the pull-down menu to use that line's settings for registration information. In a new CIC installation, the contact line for the Global SIP Station is `<Stations-UDP>`.
**Note:** If you are configuring a new station and you select "Use Global SIP Station" for the contact line on static (Use the Following Settings) SIP stations, you still need to set a contact line on the default Global SIP Station. Setup Assistant populates the contact line on the Global SIP Station with the default <Stations-UDP> setting.

*Other (Station configuration only)*

To enter other connection address Click **Edit** to choose a predefined format or use an alternate format.

**SIP audio settings**

The following table describes the SIP audio settings for the global SIP station, managed IP phones, and managed IP phones templates.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Global SIP Station Audio Settings (Station Configuration Only)</td>
<td>This option specifies whether stations inherit the values that are defined for the global SIP station.</td>
<td></td>
</tr>
<tr>
<td>Audio Path</td>
<td>See the latest version of <em>SIP Application Note</em> on the Product Information site.</td>
<td>Dynamic</td>
</tr>
<tr>
<td><strong>DTMF Type</strong>*</td>
<td>The options are:&lt;br&gt;• Do not use RFC2833 inband only&lt;br&gt;• RFC2833 if supported, otherwise inband&lt;br&gt;• RFC2833 only</td>
<td>RFC2833 if supported, otherwise inband</td>
</tr>
<tr>
<td><strong>DTMF Payload</strong></td>
<td>This option sets the value that is used for the DTMF RTP payload type.&lt;br&gt;The acceptable values are 96-127. The vendor-specific values are: 100 and 102-105. <strong>Note:</strong> The values 100, 102-105 should not be used for AudioCodes.</td>
<td>101</td>
</tr>
<tr>
<td><strong>RTP DSCP Value</strong></td>
<td>This option sets the Differentiated Services Code Point (DSCP) value of Quality of Service (QoS) in transmitted RTP packets.&lt;br&gt;The values are shown in both hex (00..3F) and related decimal (0..63) formats. Some values are also identified by the binary format, CS6.&lt;br&gt;The range of acceptable values is 00 (0, 000000) through 3F (63, 111111).</td>
<td>18 (24, 011000) CS53</td>
</tr>
</tbody>
</table>
Note: If this is a Polycom, SIP Soft Phone, or Interaction SIP Station managed IP phone, the default value is 2E (46, 101110) EF.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Voice Activation Detection (VAD)</strong></td>
<td>This option indicates whether Voice Activation Detection is enabled on your network. When Voice Activation Detection is used, no packets are sent for silence and bandwidth is saved. However, like compression, there is some loss of voice quality.</td>
<td>Not selected</td>
</tr>
<tr>
<td><strong>Echo Cancellation</strong></td>
<td>This option indicates whether echoes are removed from voice communications to improve the sound quality.</td>
<td>Selected</td>
</tr>
<tr>
<td><strong>Allow Multiple Codecs in Outbound SDP Offer</strong></td>
<td>This option indicates whether CIC delivers all of the available Codecs to the recipient endpoint when a user makes an outbound call. The recipient endpoint can then select which Codec it recognizes. You set up Codecs in the Locations container.</td>
<td>Not selected</td>
</tr>
</tbody>
</table>

**Related topics**

Configure advanced options for managed IP phones and templates

**Codecs**

**SIP transport settings**

The following table describes the SIP transport settings for the global SIP station, managed IP phones, and managed IP phone templates.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use Global SIP Station Transport Settings</strong></td>
<td>This option specifies whether stations inherit the values that are defined for the global SIP station. This option is available for station configurations only.</td>
<td>Selected</td>
</tr>
<tr>
<td><strong>Use Proxy for Station Connections</strong></td>
<td>This option indicates that the proxy list configured in the line configuration in Interaction Administrator should be used to connect stations.</td>
<td>Not selected</td>
</tr>
</tbody>
</table>

Tip: If this option is not selected, CIC contacts the stations directly.
<table>
<thead>
<tr>
<th>Audio Protocol (does not apply to managed IP phones)</th>
<th>The audio stream on this SIP station can be unencrypted using RTP (Real Time Protocol) or encrypted using Secure RTP (SRTP). You must choose TLS as the Transport Protocol to use SRTP. Choose SRTP only if the endpoint(s) on this line support SRTP. If you select SRTP, it enables the Security option (below). Calls between devices transmitting and receiving SIP TLS messages and SRTP audio are completely secure.</th>
</tr>
</thead>
</table>
| Security (does not apply to managed IP phones) | The Security list box is available only when you select SRTP as the Audio Protocol. The Security setting determines, in part, the visibility of the security icons on calls that appear in the CIC clients when placing or receiving calls via this SIP station.  

In an CIC system environment, some devices may support and be configured to use SRTP while other devices do not support SRTP or are not configured to use it. When two devices (e.g., two stations) that support and are configured to use SRTP connect directly, both CIC clients will always display the lock icon because the call uses SRTP from one end to the other and is therefore secure. This secure icon display is automatic and not configurable.  

If one device supports and is configured to use SRTP and another device does not support or use SRTP, then at least one segment of a call between these devices is not secure. That means audio between these devices needs to be transcrypted (i.e., converted) between SRTP and RTP and vice versa via an intermediate device such as the Interaction Media Server. SIP stations that handle calls that are not secure from one end to the other can use the Security list box to control the display of an open-lock icon to inform CIC client users that the call is not secure.  

In the Security list box select Minimal to hide the display of the open-lock icon on non-secure calls. In this case, completely secure calls will always show the lock icon. |
and all other calls will show no lock icon. If a secure call creates a conference and includes a non-secure call, the lock icon will disappear, indicating the call is no longer secure.

Select **End-to-Edge** to display the open-lock icon when a call, or at least one segment of a call in the CIC system domain is or becomes non-secure. End-to-edge means from one end of the call in the CIC system up to the edge of the CIC system (e.g., a gateway connected to the PSTN). It does not indicate security conditions on the PSTN or service provider outside of the CIC domain. In this case, secure calls will always show the lock icon and all other calls that are non-secure will show the open-lock icon. If a secure call creates a conference and includes a non-secure call, all parties in the conference will see the lock icon turn into an open-lock icon. Conversely, if a non-secure conference call becomes secure from all the end points to the edge of the CIC system, the open-lock icons will change to lock icons.

<table>
<thead>
<tr>
<th>Fax Protocol</th>
<th>Indicates the fax protocol to use.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The options are:</td>
</tr>
<tr>
<td></td>
<td>• T30 only</td>
</tr>
<tr>
<td></td>
<td>• T38 only</td>
</tr>
<tr>
<td></td>
<td>• <strong>T38 then T30:</strong> If you select this option, CIC tries the T38 fax protocol first. If the recipient endpoint does not support this protocol, then CIC tries the T30 fax protocol.</td>
</tr>
</tbody>
</table>

| SIP DSCP Value | This option indicates is the Differentiated Services Code Point (DSCP) value of Quality of Service (QoS) in transmitted SIP packets. |
|               | The available values appear in hex (00..3F) and related decimal (0..63) formats. Some values are also identified by the binary format, CS6. The range of values available is 00 (0, 000000) through 3F (63, 111111). |
|               | 18 (24, 011000) CS53               |
Related topics

Configure advanced options for managed IP phones and templates

Interactive Intelligence Support

**SIP session settings**

The following table describes the SIP session settings for the global station, managed IP phones, and managed IP phone templates.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Global SIP Station Session Settings</td>
<td>This option specifies whether stations inherit the values that are defined for the global SIP station. This option is available for station configurations only.</td>
<td></td>
</tr>
<tr>
<td>Use SIP Session Timer and SIP Session Timeout</td>
<td>This setting indicates whether an OPTIONS message is sent to the remote device when a SIP session times out. By default, a timeout occurs after 60 seconds. If the remote device does not respond to the OPTIONS message, the call is disconnected.</td>
<td>Selected</td>
</tr>
<tr>
<td>SIP Register Interval</td>
<td>This setting specifies the amount of time in days, hours, minutes or seconds.</td>
<td>1 day</td>
</tr>
<tr>
<td>Disconnect on Broken RTP</td>
<td>This setting determines if a VoIP call remains active after audio has been disrupted. Audio is considered disrupted if no RTP, RTCP and no comfort noise packet is received from the remote device. By default, this parameter is turned on (checked).</td>
<td>Selected</td>
</tr>
</tbody>
</table>
| Media Timing                                 | This setting specifies the timing on an INVITE request that contains a new media description in the SIP message body in the existing signaling session. The available options are:  
  - Normal  
  - Delayed  
  For more information, see the latest version of SIP Application Note on the Product Information site. | Delayed   |
<p>| Media reINVITE Timing                        | This setting indicates the type of timing on a re-INVITE request that contains a new media description in the SIP message body in the existing signaling session.                                             | Delayed   |</p>
<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terminate Analysis on Connect</td>
<td>This setting indicates whether the call analysis procedure terminates when a SIP connection indication from the network is received.</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td>Interaction Center makes its PSTN call via SIP calls through a SIP/ISDN gateway. This particular SIP/ISDN gateway only sends a SIP connect message back to Interaction Center after the remote party answers the call. If call analysis is used, select this setting so that call analysis terminates when the SIP connect message is received.</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td>Interaction Center makes its PSTN call via SIP calls through a SIP/analog gateway. This particular SIP/Analog gateway always sends a SIP connect message back to Interaction Center prematurely, before the remote party answers the call. If call analysis is used, deselect this setting so that call analysis continues after the SIP connect message is received.</td>
</tr>
<tr>
<td><strong>Tip:</strong></td>
<td>If the connection is to a station, the configuration of this option for the station determines the call analysis behavior.</td>
</tr>
<tr>
<td>Disable Media Server Passthru</td>
<td>This setting stops the media server from rewriting the SSRC header.</td>
</tr>
<tr>
<td>Station Connections are Persistent</td>
<td>This setting determines whether a persistent voice connection to the IC server is maintained. If so, then the audio path does not disconnect until the station initiates the disconnection. If this setting is not selected, when CIC determines that the audio path to the station is no longer needed, CIC initiates the disconnection.</td>
</tr>
<tr>
<td><strong>Recommended settings:</strong></td>
<td>• <strong>Operators—Selected:</strong> If you want to handle more calls than the phone is capable of handling, select this setting. For example</td>
</tr>
<tr>
<td><strong>Connection Call Warm Down Time</strong></td>
<td>This value represents the number of seconds a connection call should remain connected after the regular call is disconnected. Once this timeout is expired, the connection call will be disconnected.</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Note:</strong> This option is not used for persistent connection calls.</td>
<td></td>
</tr>
<tr>
<td><strong>Call Center Agents—Selected</strong></td>
<td>If call center agents use an IP phone with a headset and also uses the CIC clients, select this setting.</td>
</tr>
<tr>
<td><strong>Call Appearances</strong></td>
<td>Select the number of call appearances the phone can handle. CIC will send up to the configured number of calls to the phone. The default value for this option is 1.</td>
</tr>
<tr>
<td><strong>Note:</strong> If <strong>Persistent</strong> is selected, the number of call appearances defaults to 1 and is grayed-out.</td>
<td></td>
</tr>
<tr>
<td><strong>Recommended settings:</strong></td>
<td></td>
</tr>
<tr>
<td>• <strong>General:</strong> This value should be over 1 for experienced phone users only.</td>
<td></td>
</tr>
<tr>
<td>• <strong>Cisco:</strong> The Cisco IP phone 7960 can have up to 6 line appearances (each line appearance is equivalent to a station). Each line appearance has a unique SIP address. <strong>Line</strong> appearances are different than <strong>call</strong> appearances. Each <strong>line</strong> appearance handles 2 <strong>call</strong> appearances. Configure the phone to one line appearance and then this station configuration to 1 or 2 <strong>call</strong> appearances.</td>
<td></td>
</tr>
<tr>
<td>• <strong>Pingtel:</strong> Pingtel Expressa IP phone has one line appearance that handles 4 <strong>call</strong> appearances. Set station configuration to 1, 2, 3, or 4 <strong>call</strong> appearances.</td>
<td></td>
</tr>
<tr>
<td><strong>Enable AutoAnswer</strong></td>
<td>If selected, this option sets the phone's &quot;Enable Talk Event&quot; attribute to yes. This attribute allows the phone to automatically receive phone calls.</td>
</tr>
<tr>
<td><strong>Related topics</strong></td>
<td></td>
</tr>
<tr>
<td><strong>This option does not apply to managed IP phones.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Selected</strong></td>
<td>If this option is not selected, the agent will not be able to pick up calls from the CIC clients or from the toast message.</td>
</tr>
</tbody>
</table>
Configure advanced options for managed IP phones and templates

**SIP station shared appearances**

**SIP authentication settings**

The following table describes the SIP audio settings for the global SIP station, managed IP phones, and managed IP phones templates.

Enabling authentication causes the phone to exchange credentials with the IC server before the IC server processes its requests. SIP station authentication prevents access to Interaction Center resources from unauthorized SIP devices. If authentication fails, then the station will not be able to make outbound calls.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Global SIP Station Authentication Settings</td>
<td>This setting specifies whether stations inherit the values that are defined for the global SIP station. This setting is available for station configurations only.</td>
<td></td>
</tr>
<tr>
<td>Authentication</td>
<td>This setting activates or deactivates the authentication process for this SIP station. <strong>Note:</strong> In the Managed IP Phone container, only the <strong>Authentication</strong> setting appears because the user name and password are automatically generated. When <strong>Authentication</strong> is selected for a managed IP phone, authentication is encrypted.</td>
<td>Selected</td>
</tr>
<tr>
<td>User Name</td>
<td>This setting is the <strong>User Name</strong> to be used in the authentication process. This name should match the user name configured in the SIP device being authenticated. This setting is available for station configurations only.</td>
<td></td>
</tr>
<tr>
<td>Password</td>
<td>This setting is the <strong>Password</strong> to be used in the authentication process. This password should match</td>
<td></td>
</tr>
</tbody>
</table>
the password configured in the SIP device being authenticated.

This setting is available for station configurations only.

**Note:** If you modify the password for a global SIP station, the system checks all SIP stations that are CE Phone enabled (that have a data source and a user association). If a match is found, the data source Desired Values and the Active Directory entries are updated with the new values. For more information, see *CE Phone Administration*.

| Confirm Password | This setting is confirms the **Password**. This setting is available for station configurations only. |

**Note:** The **Use SIP Station Authentication Defaults** setting appears on the **Station Configuration** dialog box when the **SIP Station Authentication** setting is selected on the **Server Configuration** dialog box. Select this setting to inherit the defaults selected under **Authentication** on the **Sip Station Authentication** page of the **Server Configuration** dialog box. SIP station defaults are inherited by all SIP stations and can be overridden for a specific individual station.

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**Related topics**

Configure advanced options for managed IP phones and templates

[Interactive Intelligence Support](#)

**CE Phone Administration**

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**SIP station phone settings**

Use this page to configure your SIP station manufacturer and model.
Use Global SIP Station Phone Information Settings (Station Configuration Only)

Select this check box to inherit the values defined at the Global SIP Station level.

Manufacturer

Select the manufacturer of the phone for this SIP station. Possible values are Polycom (default for Global SIP Station), Cisco, Generic, Aastra, Microsoft Lync or free-text entry.

Model

Enter the SIP phone model.

For more information on configuring SIP stations for Zone Paging, see Configuration of IC Phone Features for Polycom Phones Technical Reference in the CIC Documentation Library.

SIP station appearances settings

This page is not available when setting options for a Global SIP Station.

CIC’s shared appearances feature allows SIP stations to use boss-assistant (primary-secondary) settings and group extensions settings to define relationships between the stations. By configuring stations to use a shared appearance, users have the following abilities:

- All members of a shared appearance group are alerted when a call alerts for the primary number.
- All members of a shared appearance group can determine that the primary number is in use.
- Users of secondary appearances can answer calls as if they are using the primary number.
- Users of secondary appearances can place calls as if they are using the primary number.

Notes: This feature applies to Polycom phone models IP301, IP430, IP501, IP550, IP601, IP650 only. Similar functionality is available via the features of the CIC clients. For more information on configuring SIP Station shared appearances, see Managed IP Phone Configuration - General. Also see Configuration of IC Phone Features for Polycom Phones Technical Reference in the CIC Documentation Library.

Use this page to add appearances to SIP stations. A station can have one or more shared appearance entries, where each shared appearance has:

- The name of the other station on which the Primary Station is appearing
- **A Number of Call Appearances** setting (similar to the existing SIP station, but is a separate setting for the shared line appearance itself)
- **An Identification Address** setting (similar to the existing SIP station, but it is a separate setting for the shared line appearance itself)
- **A Connection Address** setting (similar to the existing SIP station, but it is a separate setting for the shared line appearance itself)

**Note:** You can create a maximum of 20 appearances per station.

The page contains two lists, **Appearance For:** and **Appearance On:**. The **Appearance For** list contains the stations that will appear on the current station being edited. The **Appearance On** list contains the stations on which the current station will appear.

Select the list in which you wish to add an entry and click **Add**.

**Buttons**

Use the **Up** and **Down** buttons to arrange the order of the entries in the **Appearances For** list. This order specifies the way shared line appearance buttons appear in Interaction Client.

Click **Modify** to edit settings for an existing entry or click **Delete** to remove an entry.

**SIP station region settings**

A region defines areas where SIP stations and lines are physically interconnected and within this region a specific dial plan may be required based on the central office or switching fabric it may be connected to.

CIC uses locations to define the bandwidth requirements and endpoints (stations and lines) for a region.

Use this page to set a location for this SIP station. *This page is not available when setting options for a Global SIP Station.*

**Location**

Choose the **Location** from the pull-down menu for this SIP station.

The location represents an area where devices are considered to be in the same physical place. This location defines a set of endpoints that can share a common dial plan. The stations and lines that are members of a Location are utilized by the dial plan entries that are applicable to a locale they are operating in. The location also defines the codec communications and the ability to communicate between devices and locations.
Station licensing settings

Use this page to assign licenses to the station or station template. This page applies to Workstations or Remote Stations.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then changes to station licenses are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

**Licensed Machine Name**

You can associate a station with a specific machine. Typically the **Licensed Machine Name** is the station name, but you can select the check box to override this setting. Click ... to select the machine name.

The machine name cannot be a duplicate of an already **Licensed Machine Name**. This is a required field used for licensing only, and it cannot be blank.

When you log in to ICBM, use the machine name that is associated with the station. You will not be logged off the client to which you are currently logged on.

If a module requires station audio, the module will check to see if there is a logged in station that supports audio. If there is not a station that supports audio, the audio functionality will be disabled.

**Basic Station License**

This license represents an audio path between CIC and a station. This license is not required, but without it the audio for station will not play, and there will be no dial tone. A non-audio station may be used or for non-audio interactions.

Remote Stations must be assigned a Basic Station license.

**Client Access License**

Assigning this license to the station allows the client functionality of the CIC clients. Without this license assignment, no CIC client will not run on this station.

**ACD Access License**
Select this check box if this workstation is an ACD station, then select the type of ACD license. These are the available types of ACD licenses:

- Media 1 - This license allows 1 interaction type at a given time.
- Media 2 - This license allows 2 interaction types at a given time.
- Media 3 Plus - This license allows 3 or more interaction types at a given time.

If Media 1 or Media 2 type of ACD licenses is selected, you can click Interaction Types and select the type of interaction from the list to apply to the license. Interaction Types is grayed-out and not available if Media 3 Plus is selected.

**Notes:** Failure to have a ACD Access License assigned to the station will prevent that station from being ACD active.

If the station (Station A) is assigned a Basic Station license and two different users (User A and User B) each have all other necessary rights (i.e., Client Access) assigned to them, then both users can simultaneously login to that station, (User A and User B can both be logged into Station A at the same time). If the second user to login does not have the necessary licenses assigned, then the second user login will fail.

**Interaction Process Automation License**

Select the **Interaction Process Automation** check box if this station is an Interaction Process Automation station, and then select the type of license to assign to that station.

These are the available types of Interaction Process Automation licenses:

- **Direct Routed Work Items** (I3_ACCESS_IPA_USER) license: Enables you to launch any process to which you have rights. It also enables you to receive Work Items that are directly routed to you.
- **Group Routed Work Items** (I3_ACCESS_IPA_USER_ACD) license: Enables you to receive Work Items that are either routed to you directly or as a member of a workgroup (similar to an ACD queue).

**Note:** The Group Routed Work Items license includes the Direct Routed Work Items license.

For more information about designing processes, refer to the **Interaction Process Automation Technical Reference** and the Process Designer online help.

**License List**

This list displays additional licenses that are available. Select the licenses you wish to assign to this station.

**Enable Licenses**
Select this check box to set the license settings to Active. If unchecked, the licenses settings on this page are ignored by the system. This is a way to turn off licensing for a station, but keep the license settings.

Click OK to save your changes. These license assignments are immediately reflected in the license counts in the Licenses Allocation container list.

Note: For specific license information on each type of license, see IC Licensing Overview Technical Reference in the CIC Documentation Library.

Related topics

Overview of the default station

About Remote Stations

Licensing

Other Station Licenses

Licenses for stand-alone fax and stand-alone phone stations

Note: If you enabled the Enhanced Interaction Administrator Change log, then changes to station licenses are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

Use this page to assign licenses to the station or station template. This page applies to Stand-alone Fax and Stand-alone Phone station types.

Basic Station License

This license represents an audio path between CIC and a station. This license is not required, but without it the audio for station will not play. A non-audio station may be used for non-audio interactions.

A Standalone Fax and Standalone Phone should always be assigned a Basic Station License. A Bus Device Fax station does not use a Basic Station License.

Note: If the station (Station A) is assigned a Basic Station license and two different users (User A and User B) each have all other necessary rights (i.e., Client Access) assigned to them, then both users can simultaneously login to that station. (User A and User B can both be logged into Station A at the same time). If the second user to login does not have the necessary licenses assigned, then the second user login will fail.

Recorder Access License
Assign this license to enable the ability to record on this station.

**Enable Licenses**

Select this check box to set the license settings to Active. If unchecked, the licenses settings on this page are ignored by the system. This is a way to turn off licensing for a station, but keep the license settings.

Click OK to save your changes. These license assignments are immediately reflected in the license counts in the Licenses Allocation container list.

**Note:** For specific license information on each type of license, see the IC Licensing Overview CIC Documentation Library.

**Related topics**

Overview of the default station

---

**Station access control settings**

Station Access Control enables you to specify the outbound dialing privileges for a station, if any.

Select one or more classification names from the list of Available classifications and add them to the Currently Selected list to give the selected dialing privileges to this station. If someone attempts to place a call from this station and the dialed phone number is not supported in one of the phone number classifications for this station, CIC plays a prompt saying that the station does not have sufficient dialing privileges to place the call.

To give this station all dialing privileges, automatically including new classifications added in the future, select the [All*] entry, and then click **Add**.

To prevent a CIC station (such as a stand-alone phone) from having any dialing privileges, leave the Currently Selected list of classifications blank. If someone attempts to place a call from a disabled station, CIC plays a prompt saying that the station does not have sufficient dialing privileges to place the call.

Phone number classifications are defined in the Classifications page and used in the **Dial Plan page** in the Phone Numbers container.
Overview of the default station

**Station options settings**

Use this page to set station options.

**Timeout for Incoming Interactions**

This setting determines the number of seconds an incoming interaction rings at the CIC client station before the interaction quits alerting and proceeds to the next step in the handler (for example, goes to voicemail or changes an ACD agent’s status to ACD-Agent not answering and offers the interaction to another agent). The default value is 15 seconds; entering 0 (zero) also means 15 seconds. The minimum value is 7 seconds, which allows at least one full ring cycle. For North America, the standard ring duration for one ring is six seconds, which includes two seconds of ring and four seconds of pause time.

**Use IC Follow Me (applies only to Exchange - Unified Messaging users)**

Select this option to rely on the IC server instead of the UM platform to perform this function.

**Require Forced Authorization Code**

Select **Require Forced Authorization Code** to require users to enter an extension and a password for certain phone classifications assigned to this station. The phone classifications have been previously set up by the server parameter "Toll Call Classifications." This setting does not apply to UM station types.

**Station has MWI message light (this option is not available on a managed workstation)**

Select **Station has MWI message light** so the system will turn on the message light (on Caller ID and ADSI telephones) whenever a caller leaves a voice message. When the message is picked up, the light is automatically turned off.

**Note:** To fully enable the MWI feature, you must activate MWI at the default station level, the station level, and the user level.

**Outbound ANI**
Enter the ANI/Caller ID for the system to send when making an outbound call from this station.

**Notes:** If a user is logged into the station and makes a call, the user's configuration for the Outbound ANI overrides this setting.

This Outbound ANI option does not override a call placed with a specific Calling Party Number and Calling Party Name. Call Forwarding and Follow-me numbers placed as outbound calls use the Forwarded Parties ANI and Name where allowed.

**Related topics**

Overview of the default station

Activate MWI for the default station

Activate MWI for a user

User's configuration for the Outbound ANI

**Station emergency information settings**

Use this page to set station location options that are used in the event of an emergency.

**Description**

Enter the description of the location of this station. This description is displayed in station group directories in the CIC clients. For example, a description might be "Conference Room 1."

**Emergency Access**

Use this section to enter emergency access information for this station for emergency support.

**Calling Party Number**

Enter the outbound ANI (10 digit numeric) to use for emergency calls from this station. The Automatic Location Identification (ALI) record field is CPN and in "emergency" terminology it is Emergency Location Identification Number (ELIN).

**Location**

Enter the location information (60 digit alpha-numeric) for emergency personnel dispatched (i.e., Building 1, floor 3, north wing, office #26, next to elevator). The ALI record field is LOC.
Enter the name (32 character alpha-numeric) to provide for this station (i.e., John Smith). The ALI record field is NAM.

Related topics

Overview of the default station

Emergency classification

Custom attributes

The Custom Attributes page allows you to add customized attributes so that you can reference your own variables and settings through the IceLib interface.

Note: If you enabled the Enhanced Interaction Administrator Change log, then all of your changes to the Custom attributes page in the User Configuration dialog box and the Workgroup Configuration dialog box dialog box are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

The page contains a list for the attributes and displays a Name and a Value column, and has the following buttons:

Add

Click Add and select an existing custom attribute from the pull-down list, enter a new custom attribute. If creating a new attribute, use a unique name, otherwise the existing attribute will be overwritten.

Edit

Click Edit to change the value of an existing custom attribute.

Delete

Click Delete to delete an existing custom attribute.

Manage Attributes

Click Manage Attributes to open a dialog box that displays a list of custom attributes. Click Add or Delete to manage the appearance of the custom attributes in the pull-down list.
The custom attributes are saved in the path of the root container. This **Path** is displayed at the bottom of the dialog box.

**Note:** For more information on the Interaction Center Extension Library (IceLib), see The **System APIs section** in the CIC Documentation Library on the IC server.

---

**History**

This page provides a way to manually document configuration changes and when they occurred. Changes made in Interaction Administrator are also automatically logged in the Interaction Administrator Change Notification Log (Log ID 7). Later, authorized users can run reports against this log to summarize all configuration changes.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes to the History page in the User Configuration dialog box and the Workgroup Configuration dialog box dialog box are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

---

**Last Modified**

This date is automatically updated each time you click the **OK** button, presumably after you make changes to the configuration. To avoid updating this date, exit the page by clicking the **Cancel** button.

**Note:** If you click **Cancel**, none of the changes made to this page will be preserved.

In addition, the history is updated when changes are made to the record elsewhere in Interaction Administrator. For example, when a user change his or her password, the **Last Modified** date is updated.

**Note:** Changes to the licenses for a user or a station do not update the Last Modified date.

---

**Date Created**

This date is automatically set when the user creates the initial configuration for this page. If the page was initially created during setup, the date could be blank.

---

**Notes**

Type notes about configuration settings and changes. If you change the configuration page and click **OK**, the **Last Modified** date is updated.

You must manually enter the date beside each entry in the **Notes** field to identify the date of each
To create a new line in the Notes field, press Enter.

**Station templates**

**Add a station template**

To add a station template

1. In the `<IC_Server>` container, click the Stations container.
2. Click the Templates subcontainer.
3. In the list view window, right-click and then click New. The Entry Name dialog box appears.
4. Type the template name and then click OK. The Station Type dialog box appears.
5. Select the station type and then click Next. The Information dialog box appears.
6. In the Description box, type a meaningful description and then click Next. The configuration dialog box appears. The configuration options that appear depend on the station type that you selected. Click Next to view additional dialog boxes of configuration options.
7. Complete the configuration. See the links under Related topics for more information.

**Related topics**

**Information**

Addresses

Audio

Transport

Session

Authentication

Phone

**General**

Appearances

Region

Licenses
Remote station configuration template settings

To configure a remote station template, complete the information on the Remote Station Configuration page. For more information on the other pages in this dialog box, click the links under Related topics.

Ring Always

Select this check box if you want the station telephone to always ring when the user receives a call, even if the CIC client is not running or if the Ring Telephone check box is not selected.

Clear this check box to allow the state of the Ring Always check box to determine if a user's default workstation telephone rings when a new interaction arrives for a user.

Use Global Remote Station Settings

Select this check box to use the Station Connections are Persistent and Connection Call Warm Down Time settings as defined in the Default Station configuration for Remote Stations.

- **Station Connections are Persistent**

  Select this check box to maintain a persistent voice connection to the IC server. The audio path will not disconnect until the station initiates the disconnect.

  Clear this check box to indicate when CIC determines that the audio path to the station is no longer needed, and CIC will initiate the disconnection.

- **Connection Timeout (min)**

  If a station connection is persistent, you can configure the timeout in minutes. If you leave a remote station connected, it will stay connected until it is manually disconnected, which could result in additional billing. By setting this parameter to a value in minutes greater than 0, the connection will timeout at the set number of minutes. By default, this setting is 0, meaning it is disabled and the connection will not time out.
This option can be configured here, or in the [remote station configuration](#).

- **Connection Call Warm Down Time**

  This value represents the number of seconds a connection call should remain connected after the regular call is disconnected. Once this timeout expired, the connection call will be disconnected. The default value for this option is 5 seconds.

  **Note:** This option is not used for persistent connection calls.

---

**Related topics**

- **Overview of station templates**
  - Information
  - [Licensing](#)
  - [Access control](#)
  - [Station Options](#)
  - [Custom Attributes](#)
  - [History](#)

**Stand-alone fax template settings**

To configure a stand-alone fax template, complete the information on the **Stand-alone Fax Configuration** page. For more information on the configuration options, click the links under **Related topics**.
To configure a stand-alone SIP phone template, complete the information on the **Stand-alone Phone Configuration** page. For more information on the configuration options, click the links under *Related topics*.

**Preferred Language**

Select the preferred language for the prompts for this station. The default setting is *<System Default>*.

**Auto Conference**

If this check box is selected, and if a call is already connected or held at the station, a conference is created between the new incoming call and the existing call(s). An announcement of the new call is played to the existing call(s) before the conference is established.

**PIN**

If you enabled auto Conference you must enter a **Personal Identification Number**.
Workstation template settings

To configure a stand-alone workstation template, complete the information on the Configuration page. For more information on the configuration options, click the links under Related topics.
Add a station group

To add a station group:

1. In the `<IC_Server>` container, click the Stations container.
2. Click the Groups subcontainer.
3. In the list view window, right-click and then click New. The Entry Name dialog box appears.
4. Type the group name and then click OK. The Station Group Configuration dialog box appears.
5. Complete the configuration. See the links under Related topics for more information.
Configure a station group

Configuration

Use this page to select the configuration options for a station group.

Extension

Type a unique extension for the station group.

**Notes:** See DID/DNIS Routing for information on mapping DID/DNIS to station groups.

If the Enable Regional Dialing option is selected in Regionalization - Location, and a change to a station group extension creates an extension conflict, a message is displayed listing duplicate extensions. For later reference when resolving conflicts, click **Copy to Clipboard** to copy the listing, and then paste the content to a program that supports CSV (like Microsoft Excel).

Type

There are several types of station groups: **Group Ring**, **Sequential**, and **Round-robin**.

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>Simultaneously alerts the members of a Workgroup that a call is available in the queue for that Workgroup. Selecting <strong>Group Ring</strong> disables the Agent Utilization, ACD Skills, and ACD Actions functions (the items on those tabs will not be available). The length of the <strong>Group Ring</strong> is determined by the Workgroup Offering Call Timeout setting. <strong>Note:</strong> There can be a maximum of 20 members (stations or users) in a workgroup that uses group ring.</td>
</tr>
<tr>
<td>Sequential</td>
<td>Alerts individual members of a Workgroup that a new call is available in the queue for that Workgroup. Members are alerted to the call in the order specified in Workgroup Configuration properties &gt; Members page &gt; under Currently Selected Users. For more information on alerting users in Workgroup queues, see Maintain Order in Workgroup Members Help.</td>
</tr>
</tbody>
</table>
Selecting Sequential disables the Agent Utilization, ACD Skills, and ACD Actions functions (the items on those tabs will not be available). The length of the Sequential Ring is determined by the Workgroup Offering Call Timeout setting.

**Round Robin**

Similar to linear hunt groups, CIC's Round Robin remembers the last user who was sent a call. Round Robin works in a loop, repeating the process down the through list, and then the process starts over with the next call.

For example, a workgroup has three users (User1 - User3), all available for workgroup calls and are listed User1, User2, User3, in that order. If User1 received the last call but is available, the next alerting call will go to User2 if available. If User2 is not available, the call will go to User3. The next alerting call after that will go back to User1 if that user is available.

If you select the Maintain Order option (in Workgroup Configuration properties --> Members --> Currently Selected Users), members are alerted to the call in the order specified in the list. For more information on alerting users in Workgroup queues, see Maintain Order in Workgroup Members Help.

Selecting Round Robin disables the Agent Utilization, ACD Skills, and ACD Actions functions (the items on those tabs will not be available).

- Choose **Group Ring** to simultaneously ring the stations in the group. All phones ring until the call times out after 1 minute. At that time, the prompt, "No one is available to take your call at this time" is played. The call is then routed back to the IVR system.

- Choose **Sequential** to ring stations one at a time, in the order specified in Station Group Configuration dialog, in the Currently Selected Stations box on the Members page. In the sequential **Retries** box, type the number of retries for calling each station before timing out. The default is 1. If the number of retries is reached and no one answers, the prompt, "No one is available to take your call at this time" is played and the call is routed back to the IVR System.

- Choose **Round-robin** to have I7C remember the last user who was sent a call. Round Robin works in a loop, repeating the process down through the list, and then the process starts over with the next call.

For example, a station group has three stations (Station1 - Station3), all available for workgroup calls and are listed Station1, Station2, Station3, in that order. If Station1 was alerted, then Station2 was alerted, even though both are now available, the next alerting call will go to Station3. Round-robin knows which station has been alerted and goes to the next available station in the list.

Selecting Round-robin disables the Agent Utilization, ACD Skills, and ACD Actions functions (the items on those tabs will not be available). The length of the Round-robin ring is determined by the Workgroup Offering Call Timeout setting.

**Note:** If you select the Maintain Order option for the workgroup members, then the members are alerted to the call in the order specified in the list. For more information on alerting users in workgroup queues, see Workgroup Members.
Station Timeout (sec)

This is the amount of time in seconds that each individual station will alert using any of the alert types. The default value is 15 seconds.

Must Answer

Select **Must Answer**, for Group Ring or Sequential, for the call to continue ringing. Also, **Must Answer** will only work if stations in the station group are available to be alerted. Selecting this option causes Round-robin and Sequential to try the members of the station group 3000 times.

**Enhanced call routing to station phones**

Station groups can contain station devices only. If a user is logged into a station group phone, a call to the station group will also appear in My Interactions in the user’s CIC client, in the same way as regular calls. Users should always see a call to a station that they are logged into.

Related topics

- [DID/DNIS Routing](#)
- [Workgroup members](#)

**Members**

Use this page to add stations to a station group.

**Available Stations**

In the **Available Stations** box, select the stations to include in the station group, and click **Add**.

**Note:** Stations can be stand-alone phone stations, workstations, or stand-alone fax stations.

Station groups can contain station devices only. If a user is logged into a station group phone, a call to the station group will also appear in My Interactions in the user’s CIC client, in the same way as regular calls. Users should always see a call to a station that they are logged into.

**Currently Selected Stations**

This box displays the stations you have included in the Station Group. To remove a station, select is and click **Remove**.
For more information on adding SIP stations to a station group for Zone Paging, see *Configuration of IC Phone Features for Polycom Phones* document in the CIC Documentation Library.

**Custom attributes**

The Custom Attributes page allows you to add customized attributes so that you can reference your own variables and settings through the IceLib interface.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes to the Custom attributes page in the User Configuration dialog box and the Workgroup Configuration dialog box dialog box are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

The page contains a list for the attributes and displays a **Name** and a **Value** column, and has the following buttons:

*Add*

Click **Add** and select an existing custom attribute from the pull-down list, enter a new custom attribute. If creating a new attribute, use a unique name, otherwise the existing attribute will be overwritten.

*Edit*

Click **Edit** to change the value of an existing custom attribute.

*Delete*

Click **Delete** to delete an existing custom attribute.

*Manage Attributes*

Click **Manage Attributes** to open a dialog box that displays a list of custom attributes. Click **Add** or **Delete** to manage the appearance of the custom attributes in the pull-down list.

The custom attributes are saved in the path of the root container. This **Path** is displayed at the bottom of the dialog box.

**Note:** For more information on the Interaction Center Extension Library (IceLib), see The System APIs section in the CIC Documentation Library on the IC server.
This page provides a way to manually document configuration changes and when they occurred. Changes made in Interaction Administrator are also automatically logged in the Interaction Administrator Change Notification Log (Log ID 7). Later, authorized users can run reports against this log to summarize all configuration changes.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes to the History page in the User Configuration dialog box and the Workgroup Configuration dialog box dialog box are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

**Last Modified**

This date is automatically updated each time you click the OK button, presumably after you make changes to the configuration. To avoid updating this date, exit the page by clicking the Cancel button.

**Note:** If you click Cancel, none of the changes made to this page will be preserved.

In addition, the history is updated when changes are made to the record elsewhere in Interaction Administrator. For example, when a user change his or her password, the Last Modified date is updated.

**Note:** Changes to the licenses for a user or a station do not update the Last Modified date.

**Date Created**

This date is automatically set when the user creates the initial configuration for this page. If the page was initially created during setup, the date could be blank.

**Notes**

Type notes about configuration settings and changes. If you change the configuration page and click OK, the Last Modified date is updated.

You must manually enter the date beside each entry in the Notes field to identify the date of each note.

To create a new line in the Notes field, press Enter.
To configure the default station

1. In the `<IC_Server>` container, double-click the Stations container.
2. Click the Default Station container.
3. In the list view window, double-click Configuration.
4. In the Default Station Configuration dialog box, complete the tabs. For more information about the configuration options on those tabs, click the links under Related topics.

Related topics

Station Options

Global SIP Station

Remote Stations

Stations Auto Extensions

Options for the default station

Use this page to configure settings that affect all stations.

**Notes:** The settings on this page are not inherited when you add a SIP station. A new SIP station inherits only the settings in the Global SIP Station.

To fully enable the MWI feature, you must activate MWI for the default station, for the station that user uses, and for the user.

**MWI**

Use these check boxes to configure Message Waiting Indicator (MWI) behavior for this default station.

**Message Light**

Select this check box to activate message light logic in the Interaction Center for this default station. Disable it to turn this option off.

**Message Light Persistent**

Select this check box to set the message light on the phone associated with this default station to persistent in the on state while any unread voicemails exist.
If you enable Message Light and disable Message Light Persistent it causes the message light on the phone to turn off after the first unread voicemail is read.

**Related topics**

Global SIP Station

Activate MWI for a user

Activate MWI for a station

Global SIP Station

**SIP station addresses settings**

Use this page to configure your SIP station addresses. Depending on whether you are configuring a default Global SIP Station, or a stand-alone fax or phone as a station, some of these options are not available.

*Station Extension* (Station configuration only)

Type a unique extension number for this SIP workstation phone. During the installation of the CIC clients, the Station Extension is created based on the user's input. You can enter any extension number you like (as long as it does not conflict with existing numbers), but it is helpful to preserve a visible relationship between a user's logical extension and his or her default workstation extension.

**Note:** If the Enable Regional Dialing option is selected in Regionalization - Location, and a change to a station extension creates an extension conflict, a message is displayed listing duplicate extensions. For later reference when resolving conflicts, click **Copy to Clipboard** to copy the listing, and then paste the content to a program that supports CSV (like Microsoft Excel).

*Connection Type* (Station configuration only)

This option is grayed-out and is set to SIP because you have previously selected to create a SIP workstation. Click **Back** to select a different type of workstation if this is not correct.

*Active* (Station configuration only)

Select this check box to activate the station. This enables the station to place and receive calls. Clear the check box to deactivate the station, preventing calls from coming in to or going out from the station.
Auto Conference (Station, if stand-alone phone, configuration only)

If this check box is selected, and if a call is already connected or held at the station, a conference is created between the new incoming call and the existing call(s). An announcement of the new call is played to the existing call(s) before the conference is established.

PIN (Station, if stand-alone phone, configuration only)

If you enabled auto conference you must enter the Personal Identification Number.

Identification Address (Station configuration only)

Click Edit to choose a predefined format or use an alternate format for the identification address for this SIP station.

Connection Settings

Select Obtain Settings Automatically or Use the Following Settings.

Obtain Settings Automatically (Station configuration only)

This setting allows the station’s Address and Contact Line information to be dynamically updated where the contact address and the new contact line are set automatically when an IP phone registers (SIP INVITE message or REGISTER message). This option is very useful if SIP stations use DHCP and can change IP addresses frequently.

Use the Following Settings (Station configuration only)

This setting is static where you have to manually specify the contact address and contact line.

Address: Enter the User Portion, Host, and Port manually.

Contact Line: (Global SIP Station and Station configuration)

Select an existing SIP line from the pull-down menu to use that line's settings for registration information. In a new CIC installation, the contact line for the Global SIP Station is <Stations-UDP>.

Note: If you are configuring a new station and you select "Use Global SIP Station" for the contact line on static (Use the Following Settings) SIP stations, you still need to set a contact line on the default Global SIP Station. Setup Assistant populates the contact line on the Global SIP Station with the default <Stations-UDP> setting.

Other (Station configuration only)

To enter other connection address Click Edit to choose a predefined format or use an alternate format.
### SIP audio settings

The following table describes the SIP audio settings for the global SIP station, managed IP phones, and managed IP phones templates.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use Global SIP Station Audio Settings</strong></td>
<td>This option specifies whether stations inherit the values that are defined for the global SIP station.</td>
<td></td>
</tr>
<tr>
<td><strong>Audio Path</strong></td>
<td>See the latest version of <em>SIP Application Note</em> on the Product Information site.</td>
<td>Dynamic</td>
</tr>
</tbody>
</table>
| **DTMF Type**                                | The options are:  
- Do not use RFC2833 inband only  
- RFC2833 if supported, otherwise inband  
- RFC2833 only                                                                                                   | RFC2833 if supported, otherwise inband |
| **DTMF Payload**                             | This option sets the value that is used for the DTMF RTP payload type. The acceptable values are 96-127. The vendor-specific values are: 100 and 102-105.                                                        | 101                            |
| **Note:**                                    | The values 100, 102-105 should not be used for AudioCodes.                                                                                                                                                   |                                |
| **RTP DSCP Value**                           | This option sets the Differentiated Services Code Point (DSCP) value of Quality of Service (QoS) in transmitted RTP packets. The values are shown in both hex (00..3F) and related decimal (0..63) formats. Some values are also identified by the binary format, CS6. The range of acceptable values is 00 (0, 000000) through 3F (63, 111111). | 18 (24, 011000) CS53           |
| **Note:**                                    | If this is a Polycom, SIP Soft Phone, or Interaction SIP Station managed IP phone, the default value is 2E (46, 101110) EF.                                                                                         |                                |
| **Voice Activation Detection (VAD)**         | This option indicates whether Voice Activation Detection is enabled on your network. When Voice Activation Detection is used, no packets are sent for silence and bandwidth is saved. However, like compression, there is some loss of voice quality. | Not selected                   |
| **Echo Cancellation**                        | This option indicates whether echoes are removed from voice communications to improve the sound quality.                                                                                                    | Selected                       |
Allow Multiple Codecs in Outbound SDP Offer

This option indicates whether CIC delivers all of the available Codecs to the recipient endpoint when a user makes an outbound call. The recipient endpoint can then select which Codec it recognizes.

You set up Codecs in the Locations container.

Not selected

Related topics

Configure advanced options for managed IP phones and templates

Codecs

SIP transport settings

The following table describes the SIP transport settings for the global SIP station, managed IP phones, and managed IP phone templates.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Global SIP Station Transport Settings</td>
<td>This option specifies whether stations inherit the values that are defined for the global SIP station. This option is available for station configurations only.</td>
<td>Selected</td>
</tr>
<tr>
<td>Use Proxy for Station Connections</td>
<td>This option indicates that the proxy list configured in the line configuration in Interaction Administrator should be used to connect stations.</td>
<td>Not selected</td>
</tr>
<tr>
<td>Tip: If this option is not selected, CIC contacts the stations directly.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audio Protocol (does not apply to managed IP phones)</td>
<td>The audio stream on this SIP station can be unencrypted using RTP (Real Time Protocol) or encrypted using Secure RTP (SRTP). You must choose TLS as the Transport Protocol to use SRTP. Choose SRTP only if the endpoint(s) on this line support SRTP. If you select SRTP, it enables the Security option (below). Calls between devices transmitting and receiving SIP TLS messages and SRTP audio are completely secure.</td>
<td></td>
</tr>
<tr>
<td>Security (does not apply to managed IP phones)</td>
<td>The Security list box is available only when you select SRTP as the Audio Protocol. The Security setting determines, in part, the visibility of the security icons</td>
<td></td>
</tr>
</tbody>
</table>
on calls that appear in the CIC clients when placing or receiving calls via this SIP station.

In an CIC system environment, some devices may support and be configured to use SRTP while other devices do not support SRTP or are not configured to use it. When two devices (e.g., two stations) that support and are configured to use SRTP connect directly, both CIC clients will always display the lock icon because the call uses SRTP from one end to the other and is therefore secure. This secure icon display is automatic and not configurable.

If one device supports and is configured to use SRTP and another device does not support or use SRTP, then at least one segment of a call between these devices is not secure. That means audio between these devices needs to be transcrypted (i.e., converted) between SRTP and RTP and vice versa via an intermediate device such as the Interaction Media Server. SIP stations that handle calls that are not secure from one end to the other can use the Security list box to control the display of an open-lock icon to inform CIC client users that the call is not secure.

In the Security list box select Minimal to hide the display of the open-lock icon on non-secure calls. In this case, completely secure calls will always show the lock icon and all other calls will show no lock icon. If a secure call creates a conference and includes a non-secure call, the lock icon will disappear, indicating the call is no longer secure.

Select **End-to-Edge** to display the open-lock icon when a call, or at least one segment of a call in the CIC system domain is or becomes non-secure. End-to-edge means from one end of the call in the CIC
system up to the edge of the CIC system (e.g., a gateway connected to the PSTN). It does not indicate security conditions on the PSTN or service provider outside of the CIC domain. In this case, secure calls will always show the lock icon and all other calls that are non-secure will show the open-lock icon. If a secure call creates a conference and includes a non-secure call, all parties in the conference will see the lock icon turn into an open-lock icon. Conversely, if a non-secure conference call becomes secure from all the end points to the edge of the CIC system, the open-lock icons will change to lock icons.

**Fax Protocol**

Indicates the fax protocol to use.

The options are:

- **T30 only**
- **T38 only**
- **T38 then T30**: If you select this option, CIC tries the T38 fax protocol first. If the recipient endpoint does not support this protocol, then CIC tries the T30 fax protocol.

**SIP DSCP Value**

This option indicates is the Differentiated Services Code Point (DSCP) value of Quality of Service (QoS) in transmitted SIP packets.

The available values appear in hex (00..3F) and related decimal (0..63) formats. Some values are also identified by the binary format, CS6. The range of values available is 00 (0, 000000) through 3F (63, 111111).

**Related topics**

Configure advanced options for managed IP phones and templates

[Interactive Intelligence Support](#)
SIP session settings

The following table describes the SIP session settings for the global station, managed IP phones, and managed IP phone templates.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Global SIP Station Session Settings</td>
<td>This option specifies whether stations inherit the values that are defined for the global SIP station. This option is available for station configurations only.</td>
<td></td>
</tr>
<tr>
<td>Use SIP Session Timer and SIP Session Timeout</td>
<td>This setting indicates whether an OPTIONS message is sent to the remote device when a SIP session times out. By default, a timeout occurs after 60 seconds. If the remote device does not respond to the OPTIONS message, the call is disconnected.</td>
<td>Selected</td>
</tr>
<tr>
<td>SIP Register Interval</td>
<td>This setting specifies the amount of time in days, hours, minutes or seconds. 1 day</td>
<td></td>
</tr>
<tr>
<td>Disconnect on Broken RTP</td>
<td>This setting determines if a VoIP call remains active after audio has been disrupted. Audio is considered disrupted if no RTP, RTCP and no comfort noise packet is received from the remote device. By default, this parameter is turned on (checked).</td>
<td>Selected</td>
</tr>
<tr>
<td>Media Timing</td>
<td>This setting specifies the timing on an INVITE request that contains a new media description in the SIP message body in the existing signaling session. The available options are:</td>
<td>Delayed</td>
</tr>
<tr>
<td></td>
<td>• Normal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Delayed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>For more information, see the latest version of SIP Application Note on the Product Information site.</td>
<td></td>
</tr>
<tr>
<td>Media reINVITE Timing</td>
<td>This setting indicates the type of timing on a re-INVITE request that contains a new media description in the SIP message body in the existing signaling session. The available options are:</td>
<td>Delayed</td>
</tr>
<tr>
<td></td>
<td>• Normal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Delayed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>For more information, see the latest version of SIP Application Note on the Product Information site.</td>
<td></td>
</tr>
<tr>
<td>Terminate Analysis on Connect</td>
<td>This setting indicates whether the call analysis procedure terminates when a SIP connection indication from the network is received.  Example: Interaction Center makes its PSTN call via SIP calls through a SIP/ISDN gateway. This particular</td>
<td>Selected</td>
</tr>
</tbody>
</table>
SIP/ISDN gateway only sends a SIP connect message back to Interaction Center after the remote party answers the call. If call analysis is used, select this setting so that call analysis terminates when the SIP connect message is received.

**Example:** Interaction Center makes its PSTN call via SIP calls through a SIP/analog gateway. This particular SIP/Analog gateway always sends a SIP connect message back to Interaction Center prematurely, before the remote party answers the call. If call analysis is used, deselect this setting so that call analysis continues after the SIP connect message is received.

**Tip:** If the connection is to a station, the configuration of this option for the station determines the call analysis behavior.

<table>
<thead>
<tr>
<th>Disable Media Server Passthru</th>
<th>This setting stops the media server from rewriting the SSRC header.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Not selected</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Station Connections are Persistent</th>
<th>This setting determines whether a persistent voice connection to the IC server is maintained. If so, then the audio path does not disconnect until the station initiates the disconnection.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Not selected</strong></td>
<td>If this setting is not selected, when CIC determines that the audio path to the station is no longer needed, CIC initiates the disconnection.</td>
</tr>
</tbody>
</table>

**Recommended settings:**
- **Operators—Selected:** If you want to handle more calls than the phone is capable of handling, select this setting. For example an operator wants to handle up to 20 simultaneous calls.
- **Call Center Agents—Selected:** If call center agents use an IP phone with a headset and also uses the CIC clients, select this setting.

<table>
<thead>
<tr>
<th>Connection Call Warm Down Time</th>
<th>This value represents the number of seconds a connection call should remain connected after the regular call is disconnected. Once this timeout is expired, the connection call will be disconnected.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5 seconds</strong></td>
<td><strong>Note:</strong> This option is not used for persistent connection calls.</td>
</tr>
</tbody>
</table>
### Call Appearances

Select the number of call appearances the phone can handle. CIC will send up to the configured number of calls to the phone. The default value for this option is 1.

**Note:** If Persistent is selected, the number of call appearances defaults to 1 and is grayed-out.

**Recommended settings:**
- **General:** This value should be over 1 for experienced phone users only.
- **Cisco:** The Cisco IP phone 7960 can have up to 6 line appearances (each line appearance is equivalent to a station). Each line appearance has a unique SIP address. Line appearances are different than call appearances. Each line appearance handles 2 call appearances. Configure the phone to one line appearance and then this station configuration to 1 or 2 call appearances.
- **Pingtel:** Pingtel Expressa IP phone has one line appearance that handles 4 call appearances. Set station configuration to 1, 2, 3, or 4 call appearances.

This option does not apply to managed IP phones.

### Enable AutoAnswer

If selected, this option sets the phone’s “Enable Talk Event” attribute to yes. This attribute allows the phone to automatically receive phone calls.

If this option is not selected, the agent will not be able to pick up calls from the CIC clients or from the toast message.

**Selected**

### Related topics

- Media Server General Configuration
- Configure advanced options for managed IP phones and templates
- SIP station shared appearances
- SIP authentication settings

The following table describes the SIP audio settings for the global SIP station, managed IP phones, and managed IP phones templates.
Enabling authentication causes the phone to exchange credentials with the IC server before the IC server processes its requests. SIP station authentication prevents access to Interaction Center resources from unauthorized SIP devices. If authentication fails, then the station will not be able to make outbound calls.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use Global SIP Station Authentication Settings</strong></td>
<td>This setting specifies whether stations inherit the values that are defined for the global SIP station. This setting is available for station configurations only.</td>
<td></td>
</tr>
<tr>
<td><strong>Authentication</strong></td>
<td>This setting activates or deactivates the authentication process for this SIP station.</td>
<td>Selected</td>
</tr>
<tr>
<td><strong>User Name</strong></td>
<td>This setting is the <strong>User Name</strong> to be used in the authentication process. This name should match the user name configured in the SIP device being authenticated. This setting is available for station configurations only.</td>
<td></td>
</tr>
<tr>
<td><strong>Password</strong></td>
<td>This setting is the <strong>Password</strong> to be used in the authentication process. This password should match the password configured in the SIP device being authenticated. This setting is available for station configurations only.</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** In the Managed IP Phone container, only the **Authentication** setting appears because the user name and password are automatically generated.

When **Authentication** is selected for a managed IP phone, authentication is encrypted.

**Note:** If you modify the user name for a global SIP station, the system checks all SIP stations that are CE Phone enabled (that have a data source and a user association). If a match is found, the data source Desired Values and the Active Directory entries are updated with the new values. For more information, see *CE Phone Administration*.
updated with the new values. For more information, see CE Phone Administration.

<table>
<thead>
<tr>
<th>Confirm Password</th>
<th>This setting is confirms the Password.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This setting is available for station configurations only.</td>
</tr>
</tbody>
</table>

**Note:** The **Use SIP Station Authentication Defaults** setting appears on the **Station Configuration** dialog box when the **SIP Station Authentication** setting is selected on the **Server Configuration** dialog box. Select this setting to inherit the defaults selected under **Authentication** on the **Sip Station Authentication** page of the **Server Configuration** dialog box. SIP station defaults are inherited by all SIP stations and can be overridden for a specific individual station.

**Related topics**

Configure advanced options for managed IP phones and templates

Interactive Intelligence Support

**CE Phone Administration**

Use this page to configure your SIP station manufacturer and model.

*Use Global SIP Station Phone Information Settings (Station Configuration Only)*

Select this check box to inherit the values defined at the Global SIP Station level.

**Manufacturer**

Select the manufacturer of the phone for this SIP station. Possible values are **Polycom** (default for Global SIP Station), **Cisco**, **Generic**, **Aastra**, Microsoft Lync or free-text entry.
Enter the SIP phone model.

For more information on configuring SIP stations for Zone Paging, see *Configuration of IC Phone Features for Polycom Phones* Technical Reference in the CIC Documentation Library.

**Configure remote station options**

IC supports remote agents who run CIC clients outside of the network domain of the IC server. Most commonly, these agents have a PC at home with two phone lines (or ISDN, etc.), and access to the IC server via the Internet. These agents can connect CIC clients to the IC server and have incoming company calls routed to them at home. This Remote Station Configuration page allows you to specify a line group to carry calls routed to remote agents.

**Note:** You must create the line group in the Line Group container before you can assign it to carry calls to remote stations.

**Line Group**

Select the (predefined) line group from the drop-down list. When the program routes an incoming call to a remote agent connected to CIC, that call is forwarded to the remote agent using a line in the specified line group. This setting affects agents logged into remote stations and agents logged into remote numbers.

**Disable Automatic Connect on no-ringback / no-answer**

Select this check box to prevent false connections with long PBX delays.

**Station Connections are Persistent**

Select this check box to maintain a persistent voice connection to the IC server. The audio path will not disconnect until the station initiates the disconnection.

Clear this check box to indicate when CIC determines that the audio path to the station is no longer needed, and CIC will initiate the disconnection.

**Connection Timeout (min)**

If a station connection is persistent, you can configure the timeout in minutes. If you leave a remote station connected, it will stay connected until it is manually disconnected, which could
result in additional billing. By setting this parameter to a value in minutes greater than 0, the connection will timeout at the set number of minutes. By default, this setting is 0, meaning it is disabled and the connection will not time out.

This option can be configured here, or in the default remote station configuration.

**Connection Call Warm Down Time**

This value represents the number of seconds a connection call should remain connected after the regular call is disconnected. Once this timeout is expired, the connection call will be disconnected. The default value for this option is 5 seconds.

*Note:* This option is not used for persistent connection calls.

---

Configure how extensions are automatically assigned

Use this page to set the default values for the Automatic Extensions feature.

Each CIC station requires a unique extension. And extension is recommend to be 3 to 6 digits. A station extension cannot start with the digit '0'.

**Starting Extension**

Enter the starting extension number. The default setting is 100.

**Overwrite existing extensions**

Select this check box to change already existing extensions with the new extension numbers. By default, this option is not enabled.

**Next Station Extension**

The next station extension is always the starting extension.

**Custom attributes**

The Custom Attributes page allows you to add customized attributes so that you can reference your own variables and settings through the IceLib interface.
The page contains a list for the attributes and displays a **Name** and a **Value** column, and has the following buttons:

**Add**

Click **Add** and select an existing custom attribute from the pull-down list, enter a new custom attribute. If creating a new attribute, use a unique name, otherwise the existing attribute will be overwritten.

**Edit**

Click **Edit** to change the value of an existing custom attribute.

**Delete**

Click **Delete** to delete an existing custom attribute.

**Manage Attributes**

Click **Manage Attributes** to open a dialog box that displays a list of custom attributes. Click **Add** or **Delete** to manage the appearance of the custom attributes in the pull-down list.

The custom attributes are saved in the path of the root container. This **Path** is displayed at the bottom of the dialog box.

**Note:** For more information on the Interaction Center Extension Library (IceLib), see the [System APIs section](#) in the CIC Documentation Library on the IC server.

**History**

This page provides a way to manually document configuration changes and when they occurred. Changes made in Interaction Administrator are also automatically logged in the Interaction Administrator Change Notification Log (Log ID 7). Later, authorized users can run reports against this log to summarize all configuration changes.
Note: If you enabled the Enhanced Interaction Administrator Change log, then all of your changes to the History page in the User Configuration dialog box and the Workgroup Configuration dialog box dialog box are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

Last Modified

This date is automatically updated each time you click the OK button, presumably after you make changes to the configuration. To avoid updating this date, exit the page by clicking the Cancel button.

Note: If you click Cancel, none of the changes made to this page will be preserved.

In addition, the history is updated when changes are made to the record elsewhere in Interaction Administrator. For example, when a user change his or her password, the Last Modified date is updated.

Note: Changes to the licenses for a user or a station do not update the Last Modified date.

Date Created

This date is automatically set when the user creates the initial configuration for this page. If the page was initially created during setup, the date could be blank.

Notes

Type notes about configuration settings and changes. If you change the configuration page and click OK, the Last Modified date is updated.

You must manually enter the date beside each entry in the Notes field to identify the date of each note.

To create a new line in the Notes field, press Enter.

Station configuration

Use this page to enter a physical extension for the station and complete the configuration options that are specific to the type of station that you are creating.

Station Extension

Type a unique extension number for this workstation's analog (or PC) phone. During the installation of the CIC clients, the Station Extension is created based on the user's input. You can enter any extension number you like (as long as it does not conflict with existing numbers), but it
is helpful to preserve a visible relationship between a user's logical extension and his or her default workstation extension.

The extension can be dialed directly to ring the analog phone at this workstation, regardless of who is logged in to the network at this workstation. The analog phone at this extension also rings if:

A call is sent to a user's queue on his or her default workstation, that user does not have a DND status, and the Ring Always check box is selected. It doesn't matter if a CIC client is running or not when the Ring Always check box is selected.

**Note:** If the **Enable Regional Dialing** option is selected in **Regionalization - Location**, and a change to a user extension creates an extension conflict, a message appears with the duplicate extensions. To streamline the process of resolving the duplicate extensions, click **Copy to Clipboard**. Then paste the content to a program that supports CSV (like Microsoft Excel).

**Active**

Select this check box to activate the station. This enables the station to place and receive calls. Clear the check box to deactivate the station, preventing calls from coming in to or going out from the station.

**Preferred Language**

Select the preferred language for the prompts for this station. The default setting is <System Default>.

**Auto Conference**

If this check box is selected, and if a call is already connected or held at the station, a conference is created between the new incoming call and the existing call(s). An announcement of the new call is played to the existing call(s) before the conference is established.

**PIN**

If you enabled **Auto Conference** you must enter the Personal Identification Number.

**Related topics**

Overview of the default station

**Addresses**
Remote Station Configuration

Use this page to configure the remote station.

Active

Select this check box to activate the station. This enables the station to place and receive calls. Clear the check box to deactivate the station, preventing calls from coming in to or going out from the station.

Connection

Enter the phone number or SIP address for this connection.
**Ring Always**

This check box controls whether or not the telephone associated with a workstation rings when incoming calls alert on that station. The Ring Always check box always overrides the setting in the CIC client. If the station configuration in Interaction Administrator has Ring Always selected, on the Client Configuration page, the "Ring telephone for calls" option is selected and grayed out by default and the user can not override it.

Select this check box if you want the station telephone to always ring when the user receives a call, even if the CIC client is not running or if the Ring Telephone check box is not selected. Clear this check box to allow the state of the Ring telephone for calls check box to determine if a user's default workstation telephone rings when a new interaction arrives for a user.

**Notes:** Selecting Ring Always prevents the agent/user from controlling the telephone ringing - this setting always overrides the CIC client option.

This option must be selected to properly enabled a default workstation for a user.

**Use Global Remote Station Settings**

Select this check box to use the **Station Connections are Persistent, Connection Timeout**, and **Connection Call Warm Down Time** settings as defined in the Default Station Configuration for Remote Stations.

**Station Connections are Persistent**

Select this check box to maintain a persistent voice connection to the IC server. The audio path will not disconnect until the station initiates the disconnection.

Clear this check box to indicate when CIC determines that the audio path to the station is no longer needed, and CIC will initiate the disconnection.

**Connection Timeout (min)**

If a station connection is persistent, you can configure the timeout in minutes. If you leave a remote station connected, it will stay connected until it is manually disconnected, which could result in additional billing. By setting this parameter to a value in minutes greater than 0, the connection will timeout at the set number of minutes. By default, this setting is 0, meaning it is disabled.

This option can be configured here, or in the remote station configuration.

**Connection Call Warm Down Time**
This value represents the number of seconds a connection call should remain connected after the regular call is disconnected. Once this timeout is expired, the connection call will be disconnected. The default value for this option is 5 seconds.

**Note**: This option is not used for persistent connection calls.

**Related topics**

Overview of the default station

---

The Multi-Server Site page appears if the following conditions apply:

- This station is a workstation, a stand-alone phone or a stand-alone fax
- Your release of CIC includes the Multi-Server Administration license

Use this page to select the multi-server site settings.

**Home Site**

Select the **Home Site** using the button which allows the selection of site IDs as defined by the peer sites.

**Current Site**

This is the **Current Site** for this station, and is read-only.

**Multi-Server Home Site Allocation option**

Also available from the right-click menu in the stations container, is the **Multi-Server Home Site Allocation** option. Select this option to open the Site Allocation dialog box and apply random site IDs or specific site IDs to stations. The site ID(s) can be applied to all selected stations, all stations, or all stations without an existing site ID.

**Note**: Site IDs can be applied to Workstation, Stand-alone Phone, or Stand-alone Fax station types only.

**Related topics**
Overview of the default station

Station Licensing

Use this page to assign licenses to the station or station template. This page applies to Workstations or Remote Stations.

Note: If you enabled the Enhanced Interaction Administrator Change log, then changes to station licenses are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

Licensed Machine Name

You can associate a station with a specific machine. Typically the Licensed Machine Name is the station name, but you can select the check box to override this setting. Click ... to select the machine name.

The machine name cannot be a duplicate of an already Licensed Machine Name. This is a required field used for licensing only, and it cannot be blank.

When you log in to ICBM, use the machine name that is associated with the station. You will not be logged off the client to which you are currently logged on.

If a module requires station audio, the module will check to see if there is a logged in station that supports audio. If there is not a station that supports audio, the audio functionality will be disabled.

Basic Station License

This license represents an audio path between CIC and a station. This license is not required, but without it the audio for station will not play, and there will be no dial tone. A non-audio station may be used or for non-audio interactions.

Remote Stations must be assigned a Basic Station license.

Client Access License

Assigning this license to the station allows the client functionality of the CIC clients. Without this license assignment, no CIC client will not run on this station.

ACD Access License
Select this check box if this workstation is an ACD station, then select the type of ACD license. These are the available types of ACD licenses:

- Media 1 - This license allows 1 interaction type at a given time.
- Media 2 - This license allows 2 interaction types at a given time.
- Media 3 Plus - This license allows 3 or more interaction types at a given time.

If Media 1 or Media 2 type of ACD licenses is selected, you can click Interaction Types and select the type of interaction from the list to apply to the license. Interaction Types is grayed-out and not available if Media 3 Plus is selected.

**Notes:** Failure to have a ACD Access License assigned to the station will prevent that station from being ACD active.

If the station (Station A) is assigned a Basic Station license and two different users (User A and User B) each have all other necessary rights (i.e., Client Access) assigned to them, then both users can simultaneously login to that station, (User A and User B can both be logged into Station A at the same time). If the second user to login does not have the necessary licenses assigned, then the second user login will fail.

**Interaction Process Automation License**

Select the Interaction Process Automation check box if this station is an Interaction Process Automation station, and then select the type of license to assign to that station.

These are the available types of Interaction Process Automation licenses:

- **Direct Routed Work Items** (I3_ACCESS_IPA_USER) license: Enables you to launch any process to which you have rights. It also enables you to receive Work Items that are directly routed to you.
- **Group Routed Work Items** (I3_ACCESS_IPA_USER_ACD) license: Enables you to receive Work Items that are either routed to you directly or as a member of a workgroup (similar to an ACD queue).

**Note:** The Group Routed Work Items license includes the Direct Routed Work Items license.

For more information about designing processes, refer to the *Interaction Process Automation Technical Reference* and the Process Designer online help.

**License List**

This list displays additional licenses that are available. Select the licenses you wish to assign to this station.

**Enable Licenses**
Select this check box to set the license settings to Active. If unchecked, the licenses settings on this page are ignored by the system. This is a way to turn off licensing for a station, but keep the license settings.

Click OK to save your changes. These license assignments are immediately reflected in the license counts in the Licenses Allocation container list.

**Note:** For specific license information on each type of license, see IC Licensing Overview Technical Reference in the CIC Documentation Library.

**Related topics**

Overview of the default station

About Remote Stations

Licensing

Other Station Licenses

Licenses for stand-alone fax and stand-alone phone stations

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then changes to station licenses are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

Use this page to assign licenses to the station or station template. This page applies to Stand-alone Fax and Stand-alone Phone station types.

**Basic Station License**

This license represents an audio path between CIC and a station. This license is not required, but without it the audio for station will not play. A non-audio station may be used or for non-audio interactions.

A Standalone Fax and Standalone Phone should always be assigned a Basic Station License. A Bus Device Fax station does not use a Basic Station License.

**Note:** If the station (Station A) is assigned a Basic Station license and two different users (User A and User B) each have all other necessary rights (i.e., Client Access) assigned to them, then both users can simultaneously login to that station. (User A and User B can both be logged into Station A at the same time). If the second user to login does not have the necessary licenses assigned, then the second user login will fail.

**Recorder Access License**
Assign this license to enable the ability to record on this station.

**Enable Licenses**

Select this check box to set the license settings to Active. If unchecked, the licenses settings on this page are ignored by the system. This is a way to turn off licensing for a station, but keep the license settings.

Click OK to save your changes. These license assignments are immediately reflected in the license counts in the Licenses Allocation container list.

**Note:** For specific license information on each type of license, see the IC Licensing Overview CIC Documentation Library.

**Related topics**

Overview of the default station

**Station access control settings**

Station Access Control enables you to specify the outbound dialing privileges for a station, if any.

Select one or more classification names from the list of Available classifications and add them to the Currently Selected list to give the selected dialing privileges to this station. If someone attempts to place a call from this station and the dialed phone number is not supported in one of the phone number classifications for this station, CIC plays a prompt saying that the station does not have sufficient dialing privileges to place the call.

To give this station all dialing privileges, automatically including new classifications added in the future, select the [All*] entry, and then click **Add**.

To prevent a CIC station (such as a stand-alone phone) from having any dialing privileges, leave the Currently Selected list of classifications blank. If someone attempts to place a call from a disabled station, CIC plays a prompt saying that the station does not have sufficient dialing privileges to place the call.

Phone number classifications are defined in the Classifications page and used in the Dial Plan page in the Phone Numbers container.
Related topics

Overview of the default station

Station options settings

Use this page to set station options.

Timeout for Incoming Interactions

This setting determines the number of seconds an incoming interaction rings at the CIC client station before the interaction quits alerting and proceeds to the next step in the handler (for example, goes to voicemail or changes an ACD agent’s status to ACD-Agent not answering and offers the interaction to another agent). The default value is 15 seconds; entering 0 (zero) also means 15 seconds. The minimum value is 7 seconds, which allows at least one full ring cycle. For North America, the standard ring duration for one ring is six seconds, which includes two seconds of ring and four seconds of pause time.

Use IC Follow Me (applies only to Exchange - Unified Messaging users)

Select this option to rely on the IC server instead of the UM platform to perform this function.

Require Forced Authorization Code

Select Require Forced Authorization Code to require users to enter an extension and a password for certain phone classifications assigned to this station. The phone classifications have been previously set up by the server parameter "Toll Call Classifications." This setting does not apply to UM station types.

Station has MWI message light (this option is not available on a managed workstation)

Select Station has MWI message light so the system will turn on the message light (on Caller ID and ADSI telephones) whenever a caller leaves a voice message. When the message is picked up, the light is automatically turned off.

Note: To fully enable the MWI feature, you must activate MWI at the default station level, the station level, and the user level.

Outbound ANI

Enter the ANI/Caller ID for the system to send when making an outbound call from this station.

Notes: If a user is logged into the station and makes a call, the user’s configuration for the Outbound ANI overrides this setting.
This Outbound ANI option does not override a call placed with a specific Calling Party Number and Calling Party Name. Call Forwarding and Follow-me numbers placed as outbound calls use the Forwarded Parties ANI and Name where allowed.

Related topics

Overview of the default station

Activate MWI for the default station

Activate MWI for a user

User's configuration for the Outbound ANI

Station call forwarding options

You can configure this station to forward calls if it is busy or there is no answer.

Forward calls to this extension

Type the extension to forward calls to in the box.

When this station has an active call, forward these calls:

Select this box to forward calls when the station is in use. To select which calls to forward when the line is busy, click the drop-down arrow and:

<table>
<thead>
<tr>
<th>Select</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal</td>
<td>Forward all internal calls.</td>
</tr>
<tr>
<td>External</td>
<td>Forward all external calls.</td>
</tr>
<tr>
<td>Unknown</td>
<td>Forward all calls that cannot be determined if they are internal or external.</td>
</tr>
<tr>
<td>All</td>
<td>Forward internal and external calls.</td>
</tr>
</tbody>
</table>

When calls go unanswered, forward these calls:

Select this box to forward calls that are not answered. To select which calls to forward when the phone rings and there is no answer, click the drop-down arrow and:
## Select

<table>
<thead>
<tr>
<th>Select</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal</td>
<td>Forward all internal calls.</td>
</tr>
<tr>
<td>External</td>
<td>Forward all external calls.</td>
</tr>
<tr>
<td>Unknown</td>
<td>Forward all calls that cannot be determined if they are internal or external.</td>
</tr>
<tr>
<td>All</td>
<td>Forward internal and external calls.</td>
</tr>
</tbody>
</table>

**Note:** You can also configure Client templates to enable additional Call Forwarding and Follow Me features. For more information on client templates, see *Call Coverage* and *Follow Me*.

### Related topics

- Overview of the default station
- *Call Coverage*
- *Follow Me*

### Station emergency information settings

Use this page to set station location options that are used in the event of an emergency.

#### Description

Enter the description of the location of this station. This description is displayed in station group directories in the CIC clients. For example, a description might be "Conference Room 1."

#### Emergency Access

Use this section to enter emergency access information for this station for emergency support.

#### Calling Party Number

Enter the outbound ANI (10 digit numeric) to use for emergency calls from this station. The Automatic Location Identification (ALI) record field is CPN and in "emergency" terminology it is Emergency Location Identification Number (ELIN).
Location

Enter the location information (60 digit alpha-numeric) for emergency personnel dispatched (i.e., Building 1, floor 3, north wing, office #26, next to elevator). The ALI record field is LOC.

Customer Name

Enter the name (32 character alpha-numeric) to provide for this station (i.e., John Smith). The ALI record field is NAM.

Related topics

Overview of the default station

Emergency classification

Managed IP Phones

Add a managed IP phone or template

To add a managed IP phone or template

1. In the <IC_Server> container, do one of the following:
   - To add a managed IP phone, double-click the Managed IP Phones container.
   - To add a managed IP phone template, double-click the Templates container.

2. In the list view window, right-click and then click New.

3. In the Name box, type a unique name. To create a managed IP phone template that is based on an existing workstation, click Browse.

4. If you are adding a managed IP phone and want to use a template, from the Template list, select the template. For more information on templates, see Managed IP phone template concepts.

5. In the Type list, select the appropriate type for the phone.

6. In the Manufacturer list, select the manufacturer.

7. In the Model list, select the model of the phone.

8. The Access Control Group field appears if one or more access control groups have been added in the Access Control Groups subcontainer, which is found in the People container.

9. To associate this IP managed phone with an access control group, click ... and then select the access control group.

10. Click OK. The Managed IP Phone Configuration dialog box appears.
11. Use the tabs in this dialog box to configure the managed IP phone or managed IP template. For complete information on the configuration settings, use the links under Related topics.

Related topics

Overview of configuration settings for managed IP phones and templates

Managed IP phone template concepts

Select access control group

Right-Click Menu Commands

Change multiple IP phones

Change Multiple IP Phones allows you to edit multiple IP phones at one time. To access this feature, select two or more IP phones in the Managed IP Phones container, right-click and select the Change Multiple IP Phones … from the context menu.

You can change settings in the General, Option Values, and Advanced Options tabs.

Note: The Advanced Options tab appears only if one of the selected IP phones has advanced settings.

To change a setting, click on the pull-down menu and select the desired option. If you do not change a value, a grayed-out “Leave unchanged” message is displayed. Optionally, you can right-click on a row and select "Reset" to remove any changes already made. After clicking OK, any changes made are saved and applied to all selected (or highlighted) IP phones. A progress dialog box appears while CIC updates the phones.

You can cancel the application of the new values, but IP phones that have already been modified do not revert to the initial settings. If any errors occur during the process, they are listed on the Errors tab on the progress dialog box.

Configure managed IP phones

Configure managed IP phones or templates

To configure a managed IP phone or template

1. In the <IC_Server> container, do one of the following:
   - To configure a managed IP phone, double-click the Managed IP Phones container.
   - To configure a managed IP phone template, double-click the Templates container.

2. In the list view window, click the item that you want to configure.
3. Use the tabs in this dialog box to configure the managed IP phone or managed IP template. For complete information on the configuration settings, use the links under **Related topics.**

Related topics

**AudioCodes phones**

- General settings
- Options
- Advanced options
- Information

**Interaction SIP stations**

- General settings
- Options
- Advanced options
- Information

**Polycom phones**

- General settings
- Options
- Advanced options
- Information

**Related topics**

- Add a managed IP phone or template
### General settings: AudioCodes phones or templates

The following table describes the general settings for AudioCodes phones and templates. For information on how to access these settings, see Configure managed IP phones or templates.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The name of this IP phone must be unique.</td>
<td>Specified when the phone is added</td>
</tr>
<tr>
<td></td>
<td>Click <strong>Browse</strong> to locate an existing station.</td>
<td></td>
</tr>
<tr>
<td>Active</td>
<td>Inactive phones do not receive calls.</td>
<td>Active</td>
</tr>
<tr>
<td>MAC Address</td>
<td>The MAC address must be in the format xx:xx:xx:xx:xx:xx.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AudioCodes addresses start with 00:90:8f.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> Changing the MAC address will reload a previously registered managed IP phone.</td>
<td></td>
</tr>
<tr>
<td>Registration Group</td>
<td>The default options are:  * Default Registration Group*  * Default Secure Registration Group* You can create other registration groups in the Registration Groups container.</td>
<td>Default Registration Group</td>
</tr>
<tr>
<td>Location</td>
<td>All station appearances are in this same location. Time zone information is read from the location and used to set the phone time, DST settings, and so on.</td>
<td>Default Location</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> If the Enable Regional Dialing option is selected, and a change to this location creates an extension conflict of a managed IP phone, a message is displayed listing duplicate extensions. For later reference when resolving conflicts, click <strong>Copy to Clipboard</strong> to copy the listing, and then paste the</td>
<td></td>
</tr>
<tr>
<td>Setting</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Preferred Language</td>
<td>This option is available only if multiple languages are installed. Select the language for all prompts for this managed IP phone. The available options depend on the installed languages. System Default</td>
<td></td>
</tr>
<tr>
<td>Use Location Time Zone</td>
<td>Determines whether the time zone of the associated location is used to set the date/time. <strong>Note:</strong> You can also configure the time zone on the DHCP server. If you configure the time zone both on the DHCP server and in Interaction Administrator, then the time zone on the DHCP server is used. Selected</td>
<td></td>
</tr>
<tr>
<td>Firmware Version</td>
<td>The available firmware options are listed.</td>
<td></td>
</tr>
</tbody>
</table>
| Audio Protocol           | The audio stream on this IP phone can be unencrypted using RTP (Real Time Protocol) or encrypted using Secure RTP (SRTP).  
  - To use SRTP, you must choose TLS as the Transport Protocol.  
  - Choose SRTP only if the endpoint(s) on this line support SRTP.  
  - If you select SRTP, it enables the Security option (below). Calls between devices transmitting and receiving SIP TLS messages and SRTP audio are completely secure. |
| Time Zone                | The time zones listed are the same as Windows time zones.  
  The managed IP phone will use this time zone to set the daylight saving time information. **Note:** You can also configure the time zone on the DHCP server. If you configure the time zone both on the DHCP server and in Interaction Administrator, then the time zone on the DHCP server is used. (UTC-05:00) Eastern Time (US & Canada) |
| Station Appearances      | This is a regular station appearance. It is the default appearance of this managed IP phone. AudioCode phones do not support shared line appearances. Not specified |
After you add, edit, or remove station appearances, you must reload the phone.

### Related topics

- Configure managed IP phones or templates
- Add Registration
- Registration Group
- SIP Bridge
- SIP Bridges Configuration
- Location
- Enable Regional Dialing option
- Managed IP phone appearance configuration

![Options: AudioCodes phones or templates](image-url)

The following tables describe the options for AudioCodes phones or templates. For information on how to access these settings, see *Configure managed IP phones or templates*.

#### General

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ring Always</td>
<td>When this setting is enabled, the phone will always ring when the user receives a call, even if a CIC client is not running.</td>
<td></td>
</tr>
<tr>
<td>Inband Call Waiting Tone</td>
<td>When this setting is enabled, the phone will emit a tone on an incoming call when another call is active.</td>
<td></td>
</tr>
<tr>
<td>SIP Receive Port</td>
<td>This is the port that the IP phone uses to send and receive SIP signaling packets.</td>
<td>5060</td>
</tr>
</tbody>
</table>
Note: The Interaction SIP Station and the SIP Soft Phone use this setting regardless of the protocol type.

Media Port Start Range

Use this setting for Polycom and Interaction SIP Station phones that need to use a different port range than the default ports for audio traffic. Set this to a valid port number that begins the new range of ports to use for audio. Reasons to use this include phones that are behind a firewall, or that use port forwarding, or that have another reason to specify a different port range.

If Interaction SIP Stations use both RTP and RTCP for the audio stream, a new port number specified in the Media Port Start Range (e.g., 6400) will apply to RTP audio, and RTCP audio will automatically use one port number higher (e.g., 6401). The default port number of 4000/4001 on Interaction SIP Stations works well for most situations.

Depending on the device manufacturer

LAN Port Mode

This is the network speed over the Ethernet for the IP phone through the LAN port.

Acceptable values are:
- 10 Mbps Full-duplex
- 10 Mbps Half-duplex
- 100 Mbps Full-duplex
- 100 Mbps Half-duplex

Automatic

PC Port Mode

This is the network speed over the Ethernet for the IP phone through the PC port.

Acceptable values are:
- 10 Mbps Full-duplex
- 10 Mbps Half-duplex
- 100 Mbps Full-duplex
- 100 Mbps Half-duplex

Automatic

Interface

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ring Volume (0-9)</td>
<td>This value sets the ring volume heard in the agent’s headset. When the phone configuration is reloaded or the device is rebooted (e.g., the network cable is unplugged and reconnected), the phone resets ring volume to this default value.</td>
<td>5</td>
</tr>
</tbody>
</table>
### Emergency Information

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>The description of the location of this IP phone. This description is displayed in station group directories in the CIC clients. For example, a description might be “Conference Room 1”.</td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td>The location information (60 digit alpha-numeric) that is provided to dispatched emergency personnel (for example, Building 1, floor 3, north wing, office #26, next to elevator). The ALI record field is LOC.</td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Calling Party Number</strong></td>
<td>The outbound ANI (10 digit numeric) to use for emergency calls from this IP phone. The Automatic Location Identification (ALI) record field is CPN and in “emergency” terminology it is Emergency Location Identification Number (ELIN).</td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Customer Name</strong></td>
<td>The name (32 character alpha-numeric) to provide for this IP phone (i.e., John Smith). The ALI record field is NAM.</td>
<td>Not specified</td>
</tr>
</tbody>
</table>

### Related topics

- [Configure managed IP phones or templates](#)

### Advanced options: AudioCodes phones or templates

The following tables describe the advanced options for AudioCodes phones or templates. For information on how to access these settings, see [Configure managed IP phones or templates](#).

**Note:** These options are used only for diagnostic and troubleshooting purposes. Do not change them without clear direction from an Interactive Intelligence Support representative.
### Provisioning

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provisioning Method</td>
<td>This setting supports several methods for determining the provisioning server to which the IP phone should connect. The options are <strong>DHCP Options</strong>, <strong>Disabled</strong>, <strong>Static URL</strong>. Depending on which method is selected, the <strong>DHCP Option</strong> or the <strong>Static URL</strong> may be required below.</td>
<td><strong>DHCP Options</strong></td>
</tr>
<tr>
<td>DHCP Option</td>
<td>This setting specifies the Dynamic Host Configuration Protocol (DHCP) option number that identifies the vendor and functionality of a DHCP client. <strong>Note</strong>: For AudioCodes, instead of setting this option, set the <strong>DHCP Option Records 002</strong> in the network configuration. For more information, see <em>IC Managed IP Phones Administrator’s Guide</em> in the Technical Reference Documents section of the CIC Documentation Library.</td>
<td>160</td>
</tr>
<tr>
<td>Static URL</td>
<td>This setting specifies the IC server by entering the host name or IP address. All IP addresses in managed phones configuration are pass-through strings to support IPv6. <strong>Note</strong>: If <strong>Provisioning Method</strong> is set to <strong>Disabled</strong>, the AudioCodes phone does not attempt to connect with the provisioning server. Therefore configuration of firmware is not requested, so that configuration information requires updates through the web interface.</td>
<td>blank or &lt;empty&gt;</td>
</tr>
<tr>
<td>Enable Configuration Web Page</td>
<td>This setting determines whether the phone's configuration web page appears on the AudioCodes phones. By default, this configuration page is visible to users.</td>
<td><strong>On</strong></td>
</tr>
</tbody>
</table>

### Syslog Tracing

The following are all of the Syslog tracing options for AudioCode phones. The available options depend on the model.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting</td>
<td>Description</td>
<td>Default</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Syslog Enabled</td>
<td>This setting enables or disables diagnostic logs for Interaction SIP Stations in the form of Syslog messages. Setting this to <strong>Yes</strong> requires a Syslog Server to be specified. Use this only at the direction of authorized Interactive Intelligence support engineers.</td>
<td>No</td>
</tr>
<tr>
<td>Syslog Server</td>
<td>This setting specifies the IP address of a third party Syslog server used to capture diagnostic logs and error messages generated by the Interaction SIP Station. A valid Syslog server IP address is required if <strong>Syslog Enabled</strong> is set to <strong>Yes</strong>. All IP addresses in managed phones configuration are pass-through strings to support IPv6 in a future release.</td>
<td>The default IP address is 0.0.0.0, which is invalid until set to a valid address.</td>
</tr>
<tr>
<td>Server Port</td>
<td>This setting defines the UDP port of the Syslog Server. The valid range is from 0 to 65,535.</td>
<td>514</td>
</tr>
<tr>
<td>Voip Application</td>
<td>This setting specifies the level at which Syslog messages are generated related to VoIP. Select from the following list: None Emergency Error Warning Notice Info Deb</td>
<td>None</td>
</tr>
<tr>
<td>Control Center</td>
<td>This setting specifies the level at which Syslog messages are generated related to Networking</td>
<td>None</td>
</tr>
<tr>
<td>LCD Display</td>
<td>This setting specifies the level at which Syslog messages are generated related to LCD Display and other keypresses.</td>
<td>None</td>
</tr>
<tr>
<td>Web</td>
<td>This setting specifies the level at which Syslog messages are generated related to phone web server.</td>
<td>None</td>
</tr>
<tr>
<td>Watchdog</td>
<td>This setting specifies the level at which Syslog messages are generated related to the watchdog process, which keeps other processes running.</td>
<td>None</td>
</tr>
<tr>
<td>802.1x</td>
<td>This setting specifies the level at which Syslog messages are generated related to the security protocol.</td>
<td>None</td>
</tr>
<tr>
<td>Kernel</td>
<td>This setting specifies the level at which Syslog messages are generated related to the kernel process of the phone.</td>
<td>None</td>
</tr>
<tr>
<td>DSP</td>
<td>This setting specifies the level at which Syslog messages are generated related to the voice engine of the phone.</td>
<td>None</td>
</tr>
</tbody>
</table>
**Gain**

The microphone settings adjust the volume for the benefit of the caller and the speaker settings adjust the volume for the benefit of the agent. We recommend you talk to authorized Interactive Intelligence technical support engineers if you have problems with audio volume.

Digital settings adjust volume to the line while the analog settings adjust volume to headset. Select the intended value from the drop-down list.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB Headset Digital Microphone Gain</td>
<td>This setting controls the gain of the RTP audio stream sent from the AudioCodes phone to the line (narrow band).</td>
<td>+0 dB</td>
</tr>
<tr>
<td>NB Headset Digital Speaker Gain</td>
<td>This setting controls the gain of the RTP audio stream from the line through the AudioCodes phone and to the headset (narrow band).</td>
<td>+4 dB</td>
</tr>
<tr>
<td>NB Headset Analog Microphone Gain</td>
<td>This setting controls the audio signal gain from the analog headset microphone into the AudioCodes phone (narrow band).</td>
<td>+31.5 dB</td>
</tr>
<tr>
<td>NB Headset Analog Speaker Gain</td>
<td>This setting controls the audio signal gain from the AudioCodes phone to the analog headset (narrow band).</td>
<td>+0 dB</td>
</tr>
<tr>
<td>WB Headset Digital Microphone Gain</td>
<td>This setting controls the gain of the RTP audio stream sent from the AudioCodes phone to the line (wide band).</td>
<td>+0 dB</td>
</tr>
<tr>
<td>WB Headset Digital Speaker Gain</td>
<td>This setting controls the gain of the RTP audio stream from the line through the AudioCodes phone and to the headset (wide band).</td>
<td>-4 dB</td>
</tr>
<tr>
<td>WB Headset Analog Microphone Gain</td>
<td>This setting controls the audio signal gain from the analog headset microphone into the AudioCodes phone (wide band).</td>
<td>+31.5 dB</td>
</tr>
<tr>
<td>WB Headset Analog Speaker Gain</td>
<td>This setting controls the audio signal gain from the AudioCodes phone to the analog headset (wide band).</td>
<td>+0 dB</td>
</tr>
<tr>
<td>Headset Analog Sidetone Gain</td>
<td>This setting controls the sidetone audio signal gain from the AudioCodes phone to the analog headset. The sidetone controls the agents ability to hear their own voice in the headset as they speak.</td>
<td>-12 dB</td>
</tr>
</tbody>
</table>
## VLAN

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
</table>
| **VLAN Discovery Mode**| This setting specifies the method that this AudioCodes phone uses to find its Virtual Local Area Network (VLAN). This setting controls the use of VLAN tagging (802.1Q) for audio streams over a VLAN:  
  - Automatic (CDP+LLDP) – This (default) option uses CDP (Cisco Discovery Protocol) together with LLDP (Link Layer Discovery Protocol) to automatically obtain the VLAN ID assignment. This option allows for discovery using whichever mode is active, and to use VLANs on different switches without changing configuration of the phone.  
  - Automatic (CDP) - This option uses CDP (Cisco Discovery Protocol) to automatically obtain the VLAN ID assignment. Use this option to strictly limit VLAN discovery to Cisco switches.  
  - Automatic (LLDP) - This option uses LLDP (Link Layer Discovery Protocol) to automatically obtain the VLAN ID assignment. Use this option to strictly limit VLAN discovery to non-Cisco switches.  
  - Disabled – This option disables the use of VLANs which stops VLAN tagging for this AudioCodes phone. If you do not have the standard Voice/Data VLAN set up in your network, using this option skips the VLAN discovery mode which causes the IP phone to start-up faster on a reboot.  
  - Manual – This option requires you to specify a VLAN ID in the Manual VLAN ID field. This option allows the IP phone to generate traffic on the specified VLAN without having either CDP or LLDP protocols enabled on the network. |         |
| **Manual VLAN ID**     | If the **VLAN Discovery Mode** field is set to "Manual", you can specify the VLAN ID for this AudioCodes phone in this field by entering the value it will use. Valid values are 1 through 4094.  
**Note:** Important information regarding **Manual VLAN ID**  
If you configure an AudioCodes phone to a **Manual VLAN ID**, the phone will not listen to packets that come into its network port unless the appropriate 802.1q tagging is set in the header. Some network |         |
Switches have been observed to strip away this header before sending the packets to the ISS in the field. If this occurs, and Manual VLAN ID is set on the device, the device will no longer hear any traffic and cannot be accessed. If this occurs, there are only two ways to recover the device:

1. The switch must be changed to not strip the 802.1q header. The simplest way to do this is to configure the switch port as a trunk port. The method for performing this is dependent on your type of switch.

2. The device must be reset to factory defaults to reset/clear the Manual VLAN ID value. This however is only possible if the phone is already running on the 2.0.0.18 version of firmware.

---

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IP Assignment Mode</strong></td>
<td>This setting specifies the method that this AudioCodes phone uses to obtain an IP address:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Automatic (DHCP) – (Default) All network IP settings are provided by the Dynamic Host Control Protocol (DHCP) server in your network.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Static – All network IP settings are specified manually through the remaining fields in the LAN section.</td>
<td></td>
</tr>
<tr>
<td><strong>IP Address</strong></td>
<td>This setting specifies the IP address that this AudioCodes phone will use when it starts. This field is used only if the IP Assignment Mode field is set to Static. All IP addresses in managed phones configuration are pass-through strings to support IPv6.</td>
<td></td>
</tr>
<tr>
<td><strong>Subnet Mask</strong></td>
<td>This setting specifies the appropriate subnet mask for your IP telephony network. The IP address for this AudioCodes phone must fall within the range specified by the subnet mask. All IP addresses in managed phones configuration are pass-through strings to support IPv6.</td>
<td></td>
</tr>
<tr>
<td><strong>Default Gateway</strong></td>
<td>This setting specifies the IP address for the network device that controls the routing of IP packets. This field is used only if the IP Assignment Mode field is set to Static. All IP addresses in managed phones configuration are pass-through strings to support IPv6.</td>
<td></td>
</tr>
</tbody>
</table>
### Configuration Details

- **Primary DNS**: This setting specifies the IP address of the primary Domain Name Server (DNS). Do not enter a URL in this field. This field is used only if the IP Assignment Mode field is set to Static. All IP addresses in managed phones configuration are pass-through strings to support IPv6.

- **Secondary DNS**: This setting specifies the IP address of the secondary DNS. Do not enter a URL in this field. This field is used only if the IP Assignment Mode field is set to Static. All IP addresses in managed phones configuration are pass-through strings to support IPv6.

*Note*: The fields for the IP network settings do not reflect the settings that are assigned by the DHCP server to the AudioCodes phone.

### Audio Quality Diagnostics

These settings are designed to help diagnose audio quality problems by capturing recorded audio packets using a network sniffer utility (for example Wireshark) and analyzing the network traffic and audio packets. Change these settings only at the direction of authorized Interactive Intelligence technical support representatives. Setting these values incorrectly can cause additional audio problems.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Packet Recording Enabled</strong></td>
<td>This option activates the packet recording mechanism.</td>
<td>No</td>
</tr>
<tr>
<td><strong>Packet Recording Remote IP Address</strong></td>
<td>This setting specifies the IP address of the remote computer to capture the recorded packets. The recorded packets should be captured by a network sniffer application. The default IP address is 0.0.0.0. All IP addresses in managed phones configuration are pass-through strings to support IPv6.</td>
<td></td>
</tr>
<tr>
<td><strong>Packet Recording Remote Port</strong></td>
<td>This setting specifies the UDP port on the computer specified in <strong>Packet Recording Remote IP Address</strong>.</td>
<td>5000</td>
</tr>
<tr>
<td><strong>RTP Recording Enabled</strong></td>
<td>This option activates the DSP RTP recording.</td>
<td>No</td>
</tr>
<tr>
<td><strong>Network Recording (To User) Enabled</strong></td>
<td>This option activates the DSP network recording of outgoing audio traffic.</td>
<td>No</td>
</tr>
</tbody>
</table>
### TDM Recording (From User) Enabled
This option activates the DSP TDM recording of incoming audio traffic.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDM Recording (From User) Enabled</td>
<td>This option activates the DSP TDM recording of incoming audio traffic.</td>
<td>No</td>
</tr>
</tbody>
</table>

### Echo Canceller Debug Recording Enabled
This option activates the recording of the echo cancellation activity to debug associated echo problems.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Echo Canceller Debug Recording Enabled</td>
<td>This option activates the recording of the echo cancellation activity to debug associated echo problems.</td>
<td>No</td>
</tr>
</tbody>
</table>

### Related topics

- Configure managed IP phones or templates
- Support Site special notices

---

**SIP settings overview: AudioCodes phones or templates**

SIP settings are organized into categories, as shown under Related topics.

For information on how to access the SIP settings, see Configure advanced options for managed IP phones or templates.

Related topics
SIP audio settings

SIP transport settings

SIP session settings

SIP authentication settings

Configure advanced options for managed IP phones or templates

Information: AudioCodes phones or templates

The following table describes the information that is shown for AudioCodes phones or templates. This information is automatically updated when the IP phone, or an IP phone that uses the template, is registered.

For information on how to access these settings, see Configure managed IP phones or templates.

<table>
<thead>
<tr>
<th>Detail</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone</td>
<td>This is the manufacturer and model of the IP phone device.</td>
</tr>
<tr>
<td>Type</td>
<td>This is the type of station (workstation or stand-alone phone).</td>
</tr>
<tr>
<td>IP Address</td>
<td>This is the IP address of the device. N/A indicates the device is not registered.</td>
</tr>
<tr>
<td>Contact Line</td>
<td>This is the SIP line used when the phone registered with the IC server. This line will be used to send SIP signaling to the phone.</td>
</tr>
<tr>
<td>Last Reload</td>
<td>This is the date and time when the phone requested configuration update or the phone was reloaded after a configuration change.</td>
</tr>
<tr>
<td>Status</td>
<td>This is the status of the phone from the IC server perspective (i.e., Not registered, Up-to-date, Reloading, Reload required.</td>
</tr>
<tr>
<td>Max. Line Keys</td>
<td>This is the maximum number of line keys associated with this device. An AudioCodes phone has 1 line key.</td>
</tr>
<tr>
<td>Setting</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Max. Appearances</td>
<td>This is the maximum number of shared line appearances for this device. An AudioCodes phone has 1 appearance.</td>
</tr>
<tr>
<td>Notes</td>
<td>These are any comments CIC administrators add about this device or the associated template.</td>
</tr>
</tbody>
</table>

**Related topics**

Configure managed IP phones or templates

**Interaction SIP stations**

**General settings: Interaction SIP stations or templates**

The following table describes the general settings for Interaction SIP stations or templates. For information on how to access these settings, see *Configure managed IP phones or templates*.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The name of this IP phone must be unique. Click <strong>Browse</strong> to locate an existing station.</td>
<td>Specified when the phone is added</td>
</tr>
<tr>
<td>Active</td>
<td>Inactive phones do not receive calls.</td>
<td>Active</td>
</tr>
<tr>
<td>MAC Address</td>
<td>The MAC address must be in the format xx:xx:xx:xx:xx:xx. Interaction SIP station MAC addresses start with 00:26:fd.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong>: Changing the MAC address will reload a previously registered managed IP phone.</td>
<td></td>
</tr>
<tr>
<td>Full Computer Name</td>
<td>The correct full computer name is listed on the SIP soft phone user's computer. Navigate to My Computer --&gt; Properties --&gt; Computer Name and note the <strong>Full Computer Name</strong>. For example: PattyJ.acme.com or...</td>
<td></td>
</tr>
<tr>
<td>Registration Group</td>
<td>The default options are:</td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Default Registration Group</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Default Secure Registration Group</td>
<td></td>
</tr>
<tr>
<td></td>
<td>You can create other registration groups in the Registration Groups container.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location</th>
<th>All station appearances are in this same location. Time zone information is read from the location and used to set the phone time, DST settings, and so on.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Note:</strong> If the Enable Regional Dialing option is selected, and a change to this location creates an extension conflict of a managed IP phone, a message is displayed listing duplicate extensions. For later reference when resolving conflicts, click <strong>Copy to Clipboard</strong> to copy the listing, and then paste the content to a program that supports CSV (like Microsoft Excel).</td>
</tr>
<tr>
<td></td>
<td>Default Location</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Preferred Language</th>
<th>This option is available only if multiple languages are installed. Select the language for all prompts for this managed IP phone. The available options depend on the installed languages.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>System Default</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Audio Protocol</th>
<th>The audio stream on this IP phone can be unencrypted using RTP (Real Time Protocol) or encrypted using Secure RTP (SRTP).</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• To use SRTP, you must choose TLS as the Transport Protocol</td>
</tr>
<tr>
<td></td>
<td>• Choose SRTP only if the endpoint(s) on this line support SRTP.</td>
</tr>
<tr>
<td></td>
<td>• If you select SRTP, it enables the <strong>Security</strong> option (below). Calls between devices transmitting and receiving SIP TLS messages and SRTP audio are completely secure.</td>
</tr>
<tr>
<td></td>
<td>RTP</td>
</tr>
</tbody>
</table>
**Note:** Interaction SIP Station phone models IP300, IP301, IP500, IP501, IP600, and IP601 do not support this audio protocol option, therefore this field is not displayed for these models.

<table>
<thead>
<tr>
<th><strong>Use Location Time Zone</strong></th>
<th>Determines whether the time zone of the associated location is used to set the date/time.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Firmware Version</strong></td>
<td>The available firmware options are listed.</td>
</tr>
<tr>
<td></td>
<td>The time zones listed are the same as Windows time zones.</td>
</tr>
<tr>
<td></td>
<td>The managed IP phone will use this time zone to set the daylight saving time information.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> You can also configure the time zone on the DHCP server. If you configure the time zone both on the DHCP server and in Interaction Administrator, then the time zone on the DHCP server is used.</td>
</tr>
<tr>
<td></td>
<td><em>(UTC-05:00) Eastern Time (US &amp; Canada)</em></td>
</tr>
<tr>
<td><strong>Time Zone</strong></td>
<td>The SIP Soft Phone does not support this time zone option.</td>
</tr>
<tr>
<td></td>
<td><strong>Station Appearances</strong></td>
</tr>
<tr>
<td></td>
<td>There are three types of station appearances (or an existing station may be selected). Not all types of appearances apply to all phones:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Station Appearance</strong> - This is a regular station appearance. For example, ManagedIPPhone105 has a regular station appearance by default labeled ManagedIPPhone105 on this station. (The label can be edited.) Interaction SIP Station uses only one station appearance.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Shared Station Appearance</strong> - This is an appearance that is assigned to another SIP station. If the key that is associated with this appearance is pressed, an incoming call can be picked up from the other SIP station.</td>
</tr>
</tbody>
</table>
**Note:** This option does not apply to Interaction SIP Station or a managed IP phone using a SIP bridge.

- **External Registration** - The IP phone obtains its registration outside the IC server or the managed proxy system. For example, one station appearance for the IP phone connects to the IC server, and another appearance connects to an outside SIP server.

  **Note:** This option does not apply to a managed IP phone using a SIP bridge.

After you add, edit, or remove station appearances, you must reload the phone.

### Related topics

- Configure managed IP phones or templates
- Support Site special notices
- Add Registration
- Registration Group
- SIP Bridge
- SIP Bridges Configuration
- Location
- Enable Regional Dialing option

### Managed IP phone appearance configuration

**Options: Interaction SIP stations or templates**

The following tables describe the options for Interaction SIP stations or templates. For information on how to access these settings, see *Configure managed IP phones or templates.*

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
</table>

**General**
<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ring Always</td>
<td>When this setting is enabled, the phone will always ring when the user receives a call, even if a CIC client is not running.</td>
<td>Not selected</td>
</tr>
<tr>
<td>Inband Call Waiting Tone</td>
<td>When this setting is enabled, the phone will emit a tone on an incoming call when another call is active.</td>
<td>Not selected</td>
</tr>
<tr>
<td>SIP Receive Port</td>
<td>This is the port that the IP phone uses to send and receive SIP signaling packets using the TCP and UDP transport protocols.</td>
<td>5060</td>
</tr>
<tr>
<td>SIP TLS Receive Port</td>
<td>This is the port that the IP phone uses to send and receive SIP signaling packets using the TLS transport protocol.</td>
<td>5061</td>
</tr>
<tr>
<td>Media Port Start Range</td>
<td>Use this setting for Polycom and Interaction SIP Station phones that need to use a different port range than the default ports for audio traffic. Set this to a valid port number that begins the new range of ports to use for audio. Reasons to use this include phones that are behind a firewall, or that use port forwarding, or that have another reason to specify a different port range.</td>
<td>Depends on the device manufacturer</td>
</tr>
<tr>
<td></td>
<td>If Interaction SIP Stations use both RTP and RTCP for the audio stream, a new port number specified in the Media Port Start Range (e.g., 6400) will apply to RTP audio, and RTCP audio will automatically use one port number higher (e.g., 6401). The default port number of 4000/4001 on Interaction SIP Stations works well for most situations.</td>
<td></td>
</tr>
<tr>
<td>LAN Port Mode</td>
<td>This is the network speed over the Ethernet for the IP phone through the LAN port.</td>
<td>Automatic</td>
</tr>
<tr>
<td></td>
<td>Acceptable values are:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 1 Gbps Full-duplex</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 10 Mbps Full-duplex</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 10 Mbps Half-duplex</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 100 Mbps Full-duplex</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 100 Mbps Half-duplex</td>
<td></td>
</tr>
<tr>
<td>PC Port Mode</td>
<td>This is the network speed over the Ethernet for the IP phone through the PC port.</td>
<td>Automatic</td>
</tr>
<tr>
<td></td>
<td>Acceptable values are:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 1 Gbps Full-duplex</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 10 Mbps Full-duplex</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 10 Mbps Half-duplex</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 100 Mbps Full-duplex</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 100 Mbps Half-duplex</td>
<td></td>
</tr>
</tbody>
</table>
Ringing Tone Name

This option allows you to select a custom ring tone for SIP100, SIP200, and 420HD phones. The ININDefault.wav file contains the ring tone that is included with CIC. You can replace this file with your custom ring tone provided that it meets these requirements:

- The ring tone file must be a WAV file (A/Mu-Law, 8-kHz audio sample rate and 8-bit audio sample size or PMC 16-kHz audio sample rate and 16-bit audio sample size, Intel PCM encoding).
- You must name your ring tone file ININDefault.wav.
- You must place your ringtone file in \i3\ic\resources on the IC server.

<table>
<thead>
<tr>
<th>Interface</th>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ring Volume (0-9)</td>
<td>This value sets the ring volume heard in the agent’s headset. When the phone configuration is reloaded or the device is rebooted (e.g., the network cable is unplugged and reconnected), the phone resets ring volume to this default value.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emergency Information</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Default</td>
</tr>
<tr>
<td>Description</td>
<td>The description of the location of this IP phone. This description is displayed in station group directories in the CIC clients. For example, a description might be &quot;Conference Room 1&quot;.</td>
</tr>
<tr>
<td>Location</td>
<td>The location information (60 digit alpha-numeric) that is provided to dispatched emergency personnel (for example, Building 1, floor 3, north wing, office #26, next to elevator). The ALI record field is LOC.</td>
</tr>
<tr>
<td>Calling Party Number</td>
<td>The outbound ANI (10 digit numeric) to use for emergency calls from this IP phone. The Automatic Location Identification (ALI) record field is CPN and in &quot;emergency&quot; terminology it is Emergency Location Identification Number (ELIN).</td>
</tr>
<tr>
<td>Customer Name</td>
<td>The name (32 character alpha-numeric) to provide for this IP phone (i.e., John Smith). The ALI record field is NAM.</td>
</tr>
</tbody>
</table>
**Advanced options: Interaction SIP stations or templates**

The following tables describe the advanced options for Interaction SIP Station phones or templates. For information on how to access these settings, see *Configure managed IP phones or templates*.

*Note:* These options are used only for diagnostic and troubleshooting purposes. Do not change them without clear direction from an Interactive Intelligence Support representative.

### Provisioning

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provisioning Method</td>
<td>This setting supports several methods for determining the provisioning server to which the IP phone should connect. The options are <strong>DHCP Options</strong>, <strong>Disabled</strong>, <strong>Static URL</strong>. Depending on which method is selected, the <strong>DHCP Option</strong> or the <strong>Static URL</strong> may be required below.</td>
<td><strong>DHCP Options</strong></td>
</tr>
<tr>
<td>DHCP Option</td>
<td>This option specifies the Dynamic Host Configuration Protocol (DHCP) option number that identifies the vendor and functionality of a DHCP client.</td>
<td>160</td>
</tr>
<tr>
<td>Static URL</td>
<td>Specify the IC server by entering the host name or IP address. All IP addresses in managed phones configuration are pass-through strings to support IPv6.</td>
<td>blank or &lt;empty&gt;</td>
</tr>
</tbody>
</table>

*Note:* If **Provisioning Method** is set to **Disabled**, the Interaction SIP Station does not attempt to connect with the provisioning server. Therefore configuration of firmware is not requested, so that configuration information requires updates through the web interface.
The following are all of the Syslog tracing options for Interaction SIP stations. The available options depend on the model.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syslog Enabled</td>
<td>This setting enables or disables diagnostic logs for Interaction SIP Stations in the form of Syslog messages. Setting this to <strong>Yes</strong> requires a Syslog Server to be specified. Use this only at the direction of authorized Interactive Intelligence support engineers.</td>
<td><strong>No</strong></td>
</tr>
<tr>
<td>Syslog Server</td>
<td>This setting specifies the IP address of a third party Syslog server used to capture diagnostic logs and error messages generated by the Interaction SIP Station. A valid Syslog server IP address is required if <strong>Syslog Enabled</strong> is set to <strong>Yes</strong>. All IP addresses in managed phones configuration are pass-through strings to support IPv6 in a future release.</td>
<td>The default IP address is 0.0.0.0, which is invalid until set to a valid address.</td>
</tr>
<tr>
<td>Server Port</td>
<td>This setting defines the UDP port of the Syslog Server. The valid range is from 0 to 65,535.</td>
<td><strong>514</strong></td>
</tr>
<tr>
<td>Voip Application</td>
<td>This setting specifies the level at which Syslog messages are generated related to VoIP. Select from the following list: None, Emergency, Error, Warning, Notice, Info, Deb</td>
<td><strong>None</strong></td>
</tr>
<tr>
<td>Control Center</td>
<td>This setting specifies the level at which Syslog messages are generated related to Networking</td>
<td><strong>None</strong></td>
</tr>
<tr>
<td>LCD Display</td>
<td>This setting specifies the level at which Syslog messages are generated related to LCD Display and other keypresses.</td>
<td><strong>None</strong></td>
</tr>
<tr>
<td>Web</td>
<td>This setting specifies the level at which Syslog messages are generated related to phone web server.</td>
<td><strong>None</strong></td>
</tr>
<tr>
<td>Watchdog</td>
<td>This setting specifies the level at which Syslog messages are generated related to the watchdog process, which keeps other processes running.</td>
<td><strong>None</strong></td>
</tr>
<tr>
<td>802.1x</td>
<td>This setting specifies the level at which Syslog messages are generated related to the security protocol.</td>
<td><strong>None</strong></td>
</tr>
</tbody>
</table>
Kernel

This setting specifies the level at which Syslog messages are generated related to the kernel process of the phone.

None

DSP

This setting specifies the level at which Syslog messages are generated related to the voice engine of the phone.

None

**Gain**

The microphone settings adjust the volume for the benefit of the caller and the speaker settings adjust the volume for the benefit of the agent. We recommend you talk to authorized Interactive Intelligence technical support engineers if you have problems with audio volume.

Digital settings adjust volume to the line while the analog settings adjust volume to headset. Select the intended value from the drop-down list.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headset Digital Microphone Gain</td>
<td>This setting controls the gain of the RTP audio stream sent from the Interaction SIP Station device to the line.</td>
<td>+0 dB</td>
</tr>
<tr>
<td>(default +0 dB)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Headset Digital Speaker Gain</td>
<td>This setting controls the gain of the RTP audio stream from the line through the Interaction SIP Station device and to the headset.</td>
<td>+0 dB</td>
</tr>
<tr>
<td>(default +0 dB)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Headset Analog Microphone Gain</td>
<td>This setting controls the audio signal gain from the analog headset microphone into the Interaction SIP Station device.</td>
<td>+39 dB</td>
</tr>
<tr>
<td>(default +39 dB)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Headset Analog Speaker Gain</td>
<td>This setting controls the audio signal gain from the Interaction SIP Station device to the analog headset.</td>
<td>-12 dB</td>
</tr>
<tr>
<td>(default -12 dB)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Headset Analog Sidetone Gain</td>
<td>This setting controls the sidetone audio signal gain from the Interaction SIP Station device to the analog headset. The sidetone controls the agents ability to hear their own voice in the headset as they speak.</td>
<td>-12 dB</td>
</tr>
<tr>
<td>(default -12 dB)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**VLAN**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>VLAN Discovery Mode</td>
<td>This setting specifies the method that this Interaction SIP Station uses to find its Virtual Local Area Network (VLAN). This setting controls the use of VLAN tagging (802.1Q) for audio streams over a VLAN.</td>
<td></td>
</tr>
</tbody>
</table>
• Automatic (CDP+LLDP) – This (default) option uses CDP (Cisco Discovery Protocol) together with LLDP (Link Layer Discovery Protocol) to automatically obtain the VLAN ID assignment. This option allows for discovery using whichever mode is active, and to use VLANs on different switches without changing configuration of the phone.

• Automatic (CDP) - This option uses CDP (Cisco Discovery Protocol) to automatically obtain the VLAN ID assignment. Use this option to strictly limit VLAN discovery to Cisco switches.

• Automatic (LLDP) - This option uses LLDP (Link Layer Discovery Protocol) to automatically obtain the VLAN ID assignment. Use this option to strictly limit VLAN discovery to non-Cisco switches.

• Disabled – This option disables the use of VLANs which stops VLAN tagging for this Interaction SIP Station. If you do not have the standard Voice/Data VLAN set up in your network, using this option skips the VLAN discovery mode which causes the IP phone to start-up faster on a reboot.

• Manual – This option requires you to specify a VLAN ID in the Manual VLAN ID field. This option allows the IP phone to generate traffic on the specified VLAN without having either CDP or LLDP protocols enabled on the network.

If the VLAN Discovery Mode field is set to "Manual", you can specify the VLAN ID for this Interaction SIP Station in this field by entering the value it will use. Valid values are 1 through 4094.

**Note: Important information regarding Manual VLAN ID**

If you configure an Interaction SIP Station (ISS) to a Manual VLAN ID, the phone will not listen to packets that come into its network port unless the appropriate 802.1q tagging is set in the header. Some network switches have been observed to strip away this header before sending the packets to the ISS in the field. If this occurs, and Manual VLAN ID is set on the device, the device will no longer hear any traffic and cannot be accessed. If this occurs, there are only two ways to recover the device:

1. The switch must be changed to not strip the 802.1q header. The simplest way to do this is to configure...
the switch port as a trunk port. The method for performing this is dependent on your type of switch.

2. The device must be reset to factory defaults to reset/clear the Manual VLAN ID value. This however is only possible if the phone is already running on the 1.2.2 version of firmware.

**WARNING**
Because of this danger of causing the device to be inaccessible, systems running on firmware versions prior to 1.2.2 will not honor the Manual VLAN ID value until you set a safety server parameter. The server parameter is "Provision ISS Manual VLAN ID Enabled" and needs to be set to "Yes" to enable it. Make sure you test one single phone to ensure your switch is not stripping the 802.1q VLAN tagging before you set any more phones!

If you choose to set the VLAN ID manually on an ISS and they are on pre-1.2.2 firmware, you will have to set your network switch ports to trunk ports in the case that they are stripping the 802.1q headers. If the ISS is on post 1.2.2 firmware, you will have to either configure the network switch ports as trunk ports, or perform the factory reset sequence on the device that is added in the 1.2.2 firmware. Be sure to check the support site for special notices.

### LAN

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
</table>
| **IP Assignment Mode** | This setting specifies the method that this Interaction SIP Station uses to obtain an IP address:  
  - Automatic (DHCP) – (Default) All network IP settings are provided by the Dynamic Host Control Protocol (DHCP) server in your network.  
  - Static – All network IP settings are specified manually through the remaining fields in the LAN section. |               |
| **IP Address**        | This setting specifies the IP address that this Interaction SIP Station will use when it starts. This field is used only if the IP Assignment Mode field is set to Static. All IP addresses in managed phones |               |
### Audio Quality Diagnostics

These settings are designed to help diagnose audio quality problems by capturing recorded audio packets using a network sniffer utility (for example Wireshark) and analyzing the network traffic and audio packets. Change these settings only at the direction of authorized Interactive Intelligence technical support representatives. Setting these values incorrectly can cause additional audio problems.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packet Recording Enabled</td>
<td>This setting activates the packet recording mechanism.</td>
<td>No</td>
</tr>
<tr>
<td>Packet Recording Remote IP Address</td>
<td>This setting specifies the IP address of the remote computer to capture the recorded packets. The recorded packets should be captured by a network.</td>
<td></td>
</tr>
</tbody>
</table>
A sniffer application. The default IP address is 0.0.0.0. All IP addresses in managed phones configuration are pass-through strings to support IPv6.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packet Recording Remote Port</td>
<td>This setting specifies the UDP port on the computer specified in <strong>Packet Recording Remote IP Address</strong>.</td>
<td>5000</td>
</tr>
<tr>
<td>RTP Recording Enabled</td>
<td>This setting activates the DSP RTP recording.</td>
<td>No</td>
</tr>
<tr>
<td>Network Recording (To User) Enabled</td>
<td>This setting activates the DSP network recording of outgoing audio traffic.</td>
<td>No</td>
</tr>
<tr>
<td>TDM Recording (From User) Enabled</td>
<td>This setting activates the DSP TDM recording of incoming audio traffic.</td>
<td>No</td>
</tr>
<tr>
<td>Echo Canceller Debug Recording Enabled</td>
<td>This setting activates recording of the echo cancellation activity to debug associated echo problems.</td>
<td>No</td>
</tr>
<tr>
<td>Port Mirroring</td>
<td>This setting activates port mirroring.</td>
<td>No</td>
</tr>
<tr>
<td>SRTP Audit Events</td>
<td>This setting activates auditing of SRTP events.</td>
<td>No</td>
</tr>
<tr>
<td>Noise Reduction Debug Recording</td>
<td>This setting activates noise reduction debug recording.</td>
<td>No</td>
</tr>
</tbody>
</table>

**Registration**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allow Manual Redundant Proxy Symmetric</td>
<td>CIC sets the redundant_proxy_is_symmetric parameter to true only when proxy type is configured as Line. In some scenarios, this is problematic and as a result the phone cannot be registered. Set this option to <strong>Yes</strong> to allow CIC to set the redundant_proxy_is_symmetric parameter as true if the first and second registration types are manual. For more information about the use of this option, see the <em>Interaction SIP Proxy Technical Reference</em>.</td>
<td>No</td>
</tr>
</tbody>
</table>

**Related topics**

- [Configure managed IP phones or templates](#)
- [Support Site special notices](#)
SIP settings overview: Interaction SIP stations or templates

SIP settings are organized into categories, as shown under Related topics.

For information on how to access the SIP settings, see Configure advanced options for managed IP phones or templates.

Related topics

SIP audio settings

SIP transport settings

SIP session settings

SIP authentication settings

Configure advanced options for managed IP phones or templates

Information: Interaction SIP stations or templates

The following table describes the information that is shown for Interaction SIP stations or templates. This information is automatically updated when the IP phone, or an IP phone that uses the template, is registered.

For information on how to access these settings, see Configure managed IP phones or templates.

<table>
<thead>
<tr>
<th>Detail</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone</td>
<td>This is the manufacturer and model of the IP phone device.</td>
</tr>
<tr>
<td>Setting</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Name</td>
<td>The name of this IP phone must be unique.</td>
</tr>
</tbody>
</table>

**Related topics**

[Configure managed IP phones or templates](#)

**Polycom phones**

**General settings: Polycom phones or templates**

The following table describes the general settings for Polycom phones or templates. For information on how to access these settings, see [Configure managed IP phones or templates](#).

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td></td>
<td>Specified when the phone is added</td>
</tr>
<tr>
<td><strong>Active</strong></td>
<td>Inactive phones do not receive calls.</td>
<td><strong>Active</strong></td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td><strong>MAC Address</strong></td>
<td>The MAC address must be in the format xx:xx:xx:xx:xx:xx. Polycom MAC addresses start with 00:04:f2.</td>
<td><strong>Note</strong>: Changing the MAC address will reload a previously registered managed IP phone.</td>
</tr>
</tbody>
</table>
| **Registration** | The available options are:  
  - **Registration Group**  
  - **SIP Bridge**  
  
  If you choose SIP Bridge, and there are more than one SIP bridges available, then select the name of the bridge in the list. If no bridge exists, CIC prompts you to create one.  
  
  To modify an existing SIP bridge, select the bridge and click **Configure**.  
  
  **Note**: If you select a SIP Bridge registration, then you must complete the **MAC Address** field. |
| **Location** | All station appearances are in this same location. Time zone information is read from the location and used to set the phone time, DST settings, and so on.  
  
  **Note**: If the Enable Regional Dialing option is selected, and a change to this location creates an extension conflict of a managed IP phone, a message is displayed listing duplicate extensions. For later reference when resolving conflicts, click **Copy to Clipboard** to copy the listing, and then paste the content to a program that supports CSV (like Microsoft Excel). |
<p>| <strong>Firmware Version</strong> | Older firmware versions previously installed on this system may also appear in the drop down list. In certain scenarios, you may wish to select older approved firmware for this Polycom IP phone model, for example, to control the rollout of new firmware to a managed IP phone or group of managed IP phones during an SU update. You can change this setting on multiple IP Phones if each phone selected supports this feature. | <strong>Latest</strong> |</p>
<table>
<thead>
<tr>
<th><strong>Note:</strong> This option will not appear if the selected Polycom IP phone model does not support the selectable firmware feature.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Preferred Language</strong></th>
<th>System Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>This option is available only if multiple languages are installed. Select the language for all prompts for this managed IP phone. The available options depend on the installed languages.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Audio Protocol</strong></th>
<th>RTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>The audio stream on this IP phone can be unencrypted using RTP (Real Time Protocol) or encrypted using Secure RTP (SRTP).</td>
<td></td>
</tr>
<tr>
<td>• To use SRTP, you must choose TLS as the Transport Protocol.</td>
<td></td>
</tr>
<tr>
<td>• Choose SRTP only if the endpoint(s) on this line support SRTP.</td>
<td></td>
</tr>
<tr>
<td>• If you select SRTP, it enables the <strong>Security</strong> option (below). Calls between devices transmitting and receiving SIP TLS messages and SRTP audio are completely secure.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Use Location Time Zone</strong></th>
<th>Selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determines whether the time zone of the associated location is used to set the date/time.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Time Zone</strong></th>
<th>(UTC-05:00) Eastern Time (US &amp; Canada)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The time zones listed are the same as Windows time zones. The managed IP phone will use this time zone to set the daylight saving time information.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Expansion Modules</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>In the first list, select the number of expansion modules you want. If a second list appears, select the type of expansion modules you want.</td>
<td></td>
</tr>
</tbody>
</table>
Note: If you select multiple expansion modules, they must all be of the same type.

IA automatically adds the appropriate number of line keys for the type of expansion module that you select.

There are three types of station appearances (or an existing station may be selected). Not all types of appearances apply to all phones:

- **Station Appearance** - This is a regular station appearance. For example, ManagedIPPhone105 has a regular station appearance by default labeled ManagedIPPhone105 on this station. (The label can be edited.) Interaction SIP Station uses only one station appearance.

- **Shared Station Appearance** - This is an appearance that is assigned to another SIP station. If the key that is associated with this appearance is pressed, an incoming call can be picked up from the other SIP station.

  Note: This option does not apply to a managed IP phone using a SIP bridge.

- **External Registration** - The IP phone obtains its registration outside the IC server or the managed proxy system. For example, one station appearance for the IP phone connects to the IC server, and another appearance connects to an outside SIP server.

  Note: This option does not apply to a managed IP phone using a SIP bridge.

After you add, edit, or remove station appearances, you must reload the phone.

**Related topics**

Configure managed IP phones or templates

Options

Information

Advanced options
Add Registration

Registration Group

SIP Bridge

SIP Bridges Configuration

Location

Enable Regional Dialing option

Managed IP phone appearance configuration

Options: Polycom phones or templates

The following tables describe the options for Polycom phones or templates. For information on how to access these settings, see *Configure managed IP phones or templates.*

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable MWI</td>
<td>When this setting is enabled, the phone will flash a message-waiting indicator (MWI) LED when instant messages and voice messages are waiting.</td>
<td>Yes</td>
</tr>
<tr>
<td>Ring Always</td>
<td>When this setting is enabled, the phone will always ring when the user receives a call, even if a CIC client is not running.</td>
<td>No</td>
</tr>
<tr>
<td>Inband Call Waiting Tone</td>
<td>When this setting is enabled, the phone will emit a tone on an incoming call when another call is active.</td>
<td>No</td>
</tr>
<tr>
<td>SIP Receive Port</td>
<td>This is the port that the IP phone uses to send and receive SIP signaling packets using the TCP and UDP transport protocols.</td>
<td>5060</td>
</tr>
<tr>
<td>SIP TLS Receive Port</td>
<td>This is the port that the IP phone uses to send and receive SIP signaling packets using the TLS transport protocol.</td>
<td>5061</td>
</tr>
<tr>
<td>Media Port Start Range</td>
<td>Use this setting for Polycom phones that need to use a different port range than the default ports for audio traffic. Set this to a valid port number that begins the new range of ports to use for audio. Reasons to use this include phones that are behind a firewall, or that use</td>
<td>Depends on the device manufacturer</td>
</tr>
</tbody>
</table>
port forwarding, or that have another reason to specify a different port range.

### Polycom Interface

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Language</strong></td>
<td>This is the internal language used by the Polycom interface. The language is specified in <code>&lt;language-region&gt;</code> format.</td>
<td>English-United States</td>
</tr>
<tr>
<td>Notes:</td>
<td>The supported languages for this IP phone depend on your Polycom firmware version and your CIC version. Please check the firmware release notes for information on your firmware version at VoIP SIP Software Release Matrix.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>It is recommended to select &quot;internal&quot; for the Polycom IP430 phone to conserve memory resources.</td>
<td></td>
</tr>
<tr>
<td><strong>Regional Tone Set</strong></td>
<td>Use this setting to change the language of most call progress tones. The tone set can be specified separately from the <strong>Language</strong>, but the value defaults to &quot;Language Default&quot;, which is the country based on the value of the <strong>Language</strong> setting. The IP phone requires a reload after changing this setting.</td>
<td>Language Default</td>
</tr>
<tr>
<td></td>
<td>Valid languages for the regional tone set include: Canada, China, Denmark, France, Germany, Italy, Japan, Korea, Netherlands, Norway, Poland, Portugal, Russia, Slovenia, Spain, Sweden, United Kingdom, United States.</td>
<td></td>
</tr>
<tr>
<td>Notes:</td>
<td>The regional tone set does not affect busy tones, ringback tones, or reorder tones. If the tone set is not providing the desired tones, contact an Interactive Intelligence Support representative for assistance in making configuration changes.</td>
<td></td>
</tr>
<tr>
<td><strong>Use 24 Hour Clock</strong></td>
<td>Use this setting to display the time in 24 hour format (for example, 21:43:12). The options are:</td>
<td>Language Default</td>
</tr>
<tr>
<td></td>
<td>• Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Language Default</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• No</td>
<td></td>
</tr>
<tr>
<td>Setting</td>
<td>Description</td>
<td>Options</td>
</tr>
<tr>
<td>------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Use Long Date Format</strong></td>
<td>Use this setting to display the date in the long date format (for example, January 14, 2010).</td>
<td>The options are: • Yes • Language Default • No</td>
</tr>
<tr>
<td><strong>Show Date Before Time</strong></td>
<td>Use this setting to display the date before the time. If the date and time are on the same line, then the date will be displayed on the left. If the date and time are on separate lines, then the date is displayed above the time.</td>
<td>The options are: • Yes • Language Default • No</td>
</tr>
<tr>
<td><strong>Date Format</strong></td>
<td>Use this setting to display the day of week, day, and month in a specific order.</td>
<td>The options are: • Thursday, 21 January • Thursday, January 21 • 21 January, Thursday • January 21, Thursday • MM-DD-YY (for example, 07-03-10) • DD-MM-YY (for example, 03-07-10)</td>
</tr>
</tbody>
</table>

*Note: For Use 24 Hour Clock, Use Long Date Format, Show Date before Time, and Date Format parameters, the “Language Default” value uses the Language field above.*

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Headset Mode</strong></td>
<td>When this setting is enabled, the headset is selected as the preferred mode after its first use until the headset key is pressed again. If this setting is not enabled, hands-free (speaker phone) mode is the preferred mode.</td>
<td>No</td>
</tr>
<tr>
<td><strong>One Touch Voicemail</strong></td>
<td>When this setting is enabled, the voice mail summary display is bypassed, and voice mail is dialed directly.</td>
<td>No</td>
</tr>
<tr>
<td><strong>Polycom Call Waiting</strong></td>
<td>Use this setting to change the call waiting behavior on Polycom IP phones. The options are:</td>
<td>Beep</td>
</tr>
<tr>
<td></td>
<td>• Beep</td>
<td></td>
</tr>
<tr>
<td>Setting</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Silent</strong></td>
<td>For no sound indicator for a call that is waiting.</td>
<td></td>
</tr>
<tr>
<td><strong>Persist Headset Volume</strong></td>
<td>When this setting is enabled, the receive volume between calls is remembered. If not enabled, the receive volume is reset to nominal at the start of each call.</td>
<td></td>
</tr>
<tr>
<td><strong>Persist Handset Volume</strong></td>
<td>When this setting is enabled, the receive volume between calls is remembered. If not enabled, the receive volume is reset to nominal at the start of each call.</td>
<td></td>
</tr>
<tr>
<td><strong>Persist Handsfree Volume</strong></td>
<td>When this setting is enabled, the receive volume between calls is remembered. If not enabled, the receive volume is reset to nominal at the start of each call. The default value is Yes (enabled).</td>
<td></td>
</tr>
<tr>
<td><strong>Enable Handsfree</strong></td>
<td>When this setting is enabled, the speakerphone can be used to dial. If not enabled, the handsfree mode is disabled and the speakerphone cannot be used to dial.</td>
<td></td>
</tr>
<tr>
<td><strong>Line 2 Key Function</strong></td>
<td>This applies to Polycom IP 330/IP 320 only. Use this setting to change the function of the Line 2 hard key. The options are:</td>
<td>Line 2</td>
</tr>
<tr>
<td></td>
<td>• Line 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Messages</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Do Not Disturb</td>
<td></td>
</tr>
<tr>
<td><strong>DND Key Function</strong></td>
<td>Select <strong>Phone only</strong> to enable DND functions on this IP phone. Select <strong>Status Synchronized</strong> to synchronize the user’s status with the user’s CIC client configuration status when he/she is logged into the station.</td>
<td>Disabled</td>
</tr>
<tr>
<td><strong>Forward Key Function</strong></td>
<td>Select <strong>Phone only</strong> to enable forwarding functions on this IP phone. When setting this option to <strong>Phone only</strong>, this phone’s status changes to “Reload Required.” After rebooting, a forward softkey is shown on the IP phone.</td>
<td>Disabled</td>
</tr>
<tr>
<td><strong>Number First in Caller ID</strong></td>
<td>This setting specifies the order of name and number in the caller ID. The options are:</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>• <strong>No</strong>: The caller’s name appears first.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• <strong>Yes</strong>: The phone number appears first.</td>
<td></td>
</tr>
</tbody>
</table>
### Polycom Local Dialplan

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emergency Registration Group</strong></td>
<td>Select the registration group from the pull-down list to use when routing calls made to emergency numbers (as listed in the Emergency Numbers option below).</td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Emergency Numbers</strong></td>
<td>This setting lists the numbers that should be monitored. If one of these numbers is detected as having been dialed by a user, the call will automatically be directed to the defined Emergency Registration Group. Separate multiple numbers by a comma.</td>
<td>911</td>
</tr>
</tbody>
</table>

### Emergency Information

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>The description of the location of this IP phone. This description is displayed in station group directories in the CIC clients. For example, a description might be “Conference Room 1”.</td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td>The location information (60 digit alpha-numeric) that is provided to dispatched emergency personnel (for example, Building 1, floor 3, north wing, office #26, next to elevator). The ALI record field is LOC.</td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Calling Party Number</strong></td>
<td>The outbound ANI (10 digit numeric) to use for emergency calls from this IP phone. The Automatic Location Identification (ALI) record field is CPN and in “emergency” terminology it is Emergency Location Identification Number (ELIN).</td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Customer Name</strong></td>
<td>The name (32 character alpha-numeric) to provide for this IP phone (i.e., John Smith). The ALI record field is NAM.</td>
<td>Not specified</td>
</tr>
</tbody>
</table>

### Related topics

Configure managed IP phones or templates
Advanced options: Polycom phones or templates

The following tables describe the advanced options for Polycom phones or templates. For information on how to access these settings, see *Configure managed IP phones or templates*.

**Note:** These options are used only for diagnostic and troubleshooting purposes. Do not change them without clear direction from an Interactive Intelligence Support Representative.

### Polycom General

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Call Offering Timeout</strong></td>
<td>This option specifies the time in seconds to allow an outgoing call to remain in the ringback state before dropping the call.</td>
<td>0</td>
</tr>
<tr>
<td><strong>Call Ringback Timeout</strong></td>
<td>This option specifies the time in seconds to allow the dialtone to be played before dropping the call. If set to 0, the call is not dropped. If set to &lt;NULL&gt; (or no value), the call is dropped after 60 seconds.</td>
<td>15</td>
</tr>
<tr>
<td><strong>Call Dialtone Timeout</strong></td>
<td>This option sets the length of time (in milliseconds) that the tones are generated when a sequence of DTMF tones is played automatically. This option also sets the minimum time the tone is played when an agent dials manually, regardless of the duration of the key press.</td>
<td>80</td>
</tr>
<tr>
<td><strong>Configuration Time Zone Overrides DHCP</strong></td>
<td>This option determines whether the time zone that is set for the location that is associated with the IP phone overrides the DHCP time zone settings.</td>
<td>No</td>
</tr>
<tr>
<td><strong>Configuration NTP Server Overrides DHCP</strong></td>
<td>This option determines whether the SNTP server settings that are associated with the IP phone override the DHCP server settings.</td>
<td>No</td>
</tr>
<tr>
<td><strong>DTMF On Time</strong></td>
<td>This option sets the length of time (in milliseconds) that the IP phone pauses between digits when a sequence of DTMF tones is played automatically.</td>
<td>80</td>
</tr>
<tr>
<td><strong>Phone Limits Calls Per Line Key</strong></td>
<td>This option indicates whether the number of calls per line key is limited by the specific model of Polycom IP phone settings.</td>
<td>No</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------</td>
<td>----</td>
</tr>
<tr>
<td><strong>Always Reboot on Reload</strong></td>
<td>This option indicates whether the phone is automatically rebooted when a user clicks <strong>Reload Now</strong>.</td>
<td>No</td>
</tr>
<tr>
<td>Note: When you enable this option, another port/service is open on the phone. Consider the security implications before you enable this option.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Enable Configuration Web Page</strong></td>
<td>This option allows you to enable or disable the webpage on Polycom phones.</td>
<td>Off</td>
</tr>
<tr>
<td><strong>Phone Offer Cryptosuites</strong></td>
<td>This option determines which cryptosuite(s) the phone offers in SDP. The choices are:</td>
<td>Both</td>
</tr>
<tr>
<td>• AES_CM_128_HMAC_SHA1_32 only</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• AES_CM_128_MHAC_SHA1_80 only</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Both</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Note: If you do not set this option, the phone automatically offers both cryptosuites.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Phone Require Secure Media</strong></td>
<td>This option indicates whether the phone is allowed to use only secure media streams.</td>
<td>No</td>
</tr>
<tr>
<td>• If set to “No,” the phone can accept non-secure media streams.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• If set to “Yes,” the phone accepts only secure media streams.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Any offered SIP INVITEs must include a secure media description in the SDP or the call is rejected.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• For outgoing calls, only a secure media stream description is included in the SDP of the SIP INVITE. The non-secure media description is not included.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Enable Power Saving</strong></td>
<td>Select this option to enable power saving mode. When the phone is in power saving mode, the phone’s LCD display is automatically turned off after 1 minute.</td>
<td>Off</td>
</tr>
<tr>
<td>This option is available for Polycom VVX models only:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option</td>
<td>Description</td>
<td>Default</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Use 486 For Reject</td>
<td>This option indicates whether CIC sends a busy signal as the rejection reason to a SIP request.</td>
<td>No</td>
</tr>
<tr>
<td>Phone Warning Level</td>
<td>This option determines when the phone's warning icon and warning pop-message appear on the Polycom phones. The choices are:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• All warnings</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Critical warnings</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The default value is All warnings. You must opt-in for settings other than the default value.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Note: The warning, &quot;Default admin password is in use. Please contact your administrator,&quot; reminds you to change the default administrator password on the phone. Interactive Intelligence recommends that you change this password.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alternatively, you can change the Phone Warning Level to 1 and the warning will no longer appear. However, changing the phone warning level does not actually fix the root problem involving the default admin password.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>On the phone, the warnings always appear under Settings&gt; Status &gt; Diagnostics &gt; Warnings.</td>
<td></td>
</tr>
<tr>
<td>TCP Session Timeout</td>
<td>This option sets the number of seconds CIC waits before it attempts a TCP connection. CIC attempts to connect until it meets the TCP session retries count.</td>
<td>&lt;Null&gt;</td>
</tr>
<tr>
<td>(seconds)</td>
<td>To control the timeout behavior in the event of a TCP connection failure, set this parameter and the TCP Session Retries parameter.</td>
<td>0</td>
</tr>
<tr>
<td>TCP Session Retries</td>
<td>This option sets the number of times CIC attempts to make a TCP connection. If it cannot connect within this number of times, CIC moves to the next server. A retry is made if the session reaches in seconds the timeout as set in the TCP Session Timeout (above).</td>
<td>&lt;Null&gt;</td>
</tr>
<tr>
<td></td>
<td>To control the timeout behavior in the event of a TCP connection failure, change this parameter and the TCP Session Timeout parameter.</td>
<td>0</td>
</tr>
<tr>
<td>Boot Server Type</td>
<td>This option determines whether the phone controls boot server options by the menu or the provisioning server controls boot server options. If controlled by</td>
<td>Phone</td>
</tr>
</tbody>
</table>
the phone, the CIC provisioning subsystem does not write configuration for boot server options. If controlled by the provisioning server, the server writes configuration to the provisioning files.  

**Note:** If the **Boot Server Option**, **Boot Server Option Type**, or **Provisioning URL** contain incorrect values, the provisioning server does not write the configuration for boot server options. If incorrect values exist, the provisioning logs contain errors such as:

- Boot Server Option not in range of 128-254.
- Provisioning URL is not a compliant RFC 2396/RFC 3986 URI.

This option is available for Polycom phones capable of 4.0 or newer firmware.

Select:

- **Phone** to use the phone menu to control boot server options.
- **Custom** to use the DHCP option you set by using the Boot Server Option and the Boot Server Option Type option.
- **Custom + Opt.66** to use the DHCP option you set by using the Boot Server Option and Boot Server Option Type option. If the phone cannot determine the information from the Boot Server Option option, the phone uses DHCP option 66.
- **Opt.66** to use DHCP option 66 to determine boot server parameters.
- **Static** to use the Provisioning URL option to determine the boot server.

---

### Boot Server Option

This option is the DHCP option that the phone uses when trying to determine the boot server parameters. Set this option if you selected **Custom** or **Custom + Opt.66** in the **Boot Server Type** option. Valid entries include empty string or an integer in range from 128 to 254. This option is available for Polycom phones capable of 4.0 or newer firmware.

### Boot Server Option Type

This option indicates the DHCP option type to use with the **Boot Server Option** option. You can select **IP Address** or **String**. Set this option if you selected **Custom** or **Custom+Opt.66** in the **Boot Server Type** option. This option is available for Polycom phones capable of 4.0 or newer firmware.

### Provisioning URL

This option indicates the URL that the phone points to. Set this option if you selected **Static** in the **Boot Server Type** option. Enter a compliant RFC 2396/RFC 3986 URI and use a scheme of FTP/TFTP/FTPS/HTTP/HTTPS. If you do not enter the scheme, the phone uses HTTP. If you do not enter...
the port, the phone uses the default value for the scheme. For HTTP provisioning, the URL must specify port 8088 since the Provisioning subsystem on the CIC server listens on port 8088 and not port 80. Polycom phones assume port 80 for an HTTP URL. Example: http://provision.mydomain.com:8088
This option is available for Polycom phones capable of 4.0 or newer firmware.

### Polycom Features

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presence</td>
<td>This option is related to the Presence feature of Microsoft Windows Messenger 5.1 on the IP phone.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> The Presence feature is reserved for custom integrations outside of IC. Enabling this option in Interaction Administrator has no effect in the CIC system.</td>
<td>No</td>
</tr>
<tr>
<td>Messaging</td>
<td>This option is related to the Instant Messaging feature of Microsoft Windows Messenger 5.1 on the IP phone.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> The Messaging option is reserved for custom integrations outside of IC. Enabling these features in Interaction Administrator has no effect in the CIC system.</td>
<td>No</td>
</tr>
<tr>
<td>Directory</td>
<td>This option specifies whether the user can edit the local contacts.</td>
<td>Yes</td>
</tr>
<tr>
<td>All Call Lists</td>
<td>This option specifies whether the user can view all call lists, including the Received Call List, the Placed Call List, and the Missed Call List.</td>
<td>Yes</td>
</tr>
<tr>
<td>Received Call List</td>
<td>This option specifies whether the user can view the list of received calls.</td>
<td>Yes</td>
</tr>
<tr>
<td>Placed Call List</td>
<td>This option specifies whether the user can view the list of placed calls.</td>
<td>Yes</td>
</tr>
<tr>
<td>Missed Call List</td>
<td>This option specifies whether the user can view the list of missed calls.</td>
<td>No</td>
</tr>
<tr>
<td>URL Dialing</td>
<td>This option specifies whether URL/name dialing is available from a private line. (This feature is never available from a shared line).</td>
<td>No</td>
</tr>
<tr>
<td>Call Park</td>
<td>This option specifies whether active calls can be parked and retrieved.</td>
<td>Yes</td>
</tr>
</tbody>
</table>
### Group Call Pickup
This option specifies whether calls to another phone within a predefined group can be picked up without dialing the extension of the other phone.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idle Screen Logo</td>
<td>Enter the name of the file excluding the extension. For example, if logo_ip600.bmp is the complete file name, enter the value of “logo_ip600.”</td>
<td></td>
</tr>
</tbody>
</table>

Supported formats for VVX phones are PNG, JPG, and BMP. Supported formats for SoundPoint IP phones are JPG and BMP.

**Note:** If you do not specify an extension, CIC assumes that BMP is the extension.

Place the source image file in the \ic\provision\polycom directory on the IC server.

If you leave this value, which is the default setting, the system looks for the following file names, based on the model:

<table>
<thead>
<tr>
<th>Model(s)</th>
<th>File name</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP320, IP330</td>
<td>IP_330</td>
</tr>
<tr>
<td>IP430</td>
<td>IP_430</td>
</tr>
<tr>
<td>IP450</td>
<td>IP_450</td>
</tr>
<tr>
<td>IP501</td>
<td>IP_501</td>
</tr>
<tr>
<td>IP550, IP560, IP600, IP601, IP650, IP670</td>
<td>IP_600</td>
</tr>
<tr>
<td>IP4000</td>
<td>IP_4000</td>
</tr>
<tr>
<td>IP6000</td>
<td>IP_6000</td>
</tr>
<tr>
<td>IP7000</td>
<td>IP_7000</td>
</tr>
</tbody>
</table>

**Note:** The resolution is dependent on the model. JPG, PNG, and BMP images may require special file...
| **Idle Screen Background Color** | This option sets a custom background color for the Polycom IP670 phone. This option is used to improve the appearance of the **Idle Screen Logo** for the IP670. Enter the color in either hexadecimal (for example, "0x0077FF" - must being with "0x"), or decimal value. | Not specified |
| **Headset Echo/Noise Suppression** | This option indicates whether echo and noise suppression is used with the agents' headsets. | No |
| **Headset Microphone Gain** | This option specifies the gain value for the headset microphone:  
- IP330 group (320, 321, 330, 331, 335)=21, and acceptable values are 0 to 21  
- IP430=21, and acceptable values are 0 to 39  
- IP450=21, and acceptable values are 0 to 21  
- IP550 and IP560=21, and acceptable values are 0 to 21  
- IP650 and 670=21, and acceptable values are 0 to 21 | |
| **Headset Speaker Gain** | This option specifies the gain value for the headset speaker:  
- IP330 group (320, 321, 330, 331, 335)=4, and acceptable values are 0 to 25  
- IP430 and IP450=1, and acceptable values are 0 to 25  
- IP550 and IP560=1, and acceptable values are 0 to 25  
- IP650 and IP670=1, and acceptable values are 0 to 25 | |
| **Headset Sidetone Gain** | This option specifies the gain value for the headset sidetone:  
- IP330 group (320, 321, 330, 331, 335)=-3, and acceptable values are -25 to -3  
- IP430 and IP450=-3, and acceptable values are -25 to -3  
- IP550 and IP560=-3, and acceptable values are -25 to -3 | |
### Electronic Hookswitch Mode

This option indicates whether optional external hardware is available for use with a headset attached to the IP phone’s analog headset jack.

The options are:
- Regular (None)
- Jabra (DHSG)
- Plantronics

**Regular (None)**

### Auto Dial on Off-hook

This option indicates whether contacts can be automatically dialed when the phone is off-hook. Contacts must be configured with the **Auto Dial on Off-hook Number** option.

No

### Auto Dial on Off-hook Number

This option specifies a number to auto dial when the **Auto Dial on Off-hook Number** option is enabled.

For complete information, see the Polycom Technical Bulletin 11572 and Polycom’s Administrator’s Guide for the SoundPoint® IP/SoundStation® IP Family.

### Polycom Local Dialplan

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Digitmap</strong></td>
<td>This option allows you to edit digitmap properties. The digitmap feature eliminates the need for using the Dial or Send soft key when making outgoing calls when a matching digit pattern is detected. As soon as a digit pattern match is found, the call setup process completes automatically. Acceptable values are strings compatible with the digit map feature of MGCP described in 2.1.5 of RFC 3435. String is limited to 768 characters and 30 segments; a comma is also allowed; when reached in the digit map, a comma will turn dial tone back on; ‘+’ is allowed as a valid digit; extension letter ‘R’ is used. For complete information, see the Polycom Technical Bulletin 11572 and Polycom’s Administrator’s Guide for the SoundPoint® IP/SoundStation® IP Family.</td>
<td>x.T</td>
</tr>
<tr>
<td><strong>Digitmap Timeout</strong></td>
<td>This option sets the timeout in seconds for each segment of the digitmap. <strong>Note:</strong> If there are more digitmaps than timeout values, the default value of 3 is used. If there are</td>
<td>3</td>
</tr>
</tbody>
</table>
more timeout values than digitmaps, the extra timeout values are ignored.

**Polycom Network Address Translation (NAT)**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAT IP Address</td>
<td>This option sets the IP address to use in NAT traversal.</td>
<td>Not specified</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong>: This setting only changes the IP address that is displayed in SIP signaling. <em>All IP addresses in managed phones configuration are pass-through strings to support IPv6.</em></td>
<td></td>
</tr>
<tr>
<td>NAT Signal Port (1024-65535)</td>
<td>This option sets the signal port to use in NAT traversal. This setting changes the port setting used by the IP phone.</td>
<td>Not specified</td>
</tr>
<tr>
<td>NAT Audio Port Start (1024-65535)</td>
<td>This option sets the audio port to start in NAT traversal. This setting changes the RTP port that is initially allocated to the IP phone.</td>
<td>Not specified</td>
</tr>
<tr>
<td>NAT Keep Alive Interval (0-3600 seconds)</td>
<td>This option sets the interval time in seconds in which IP phones send a keep-alive packet to the NAT device to keep the communication port open so that NAT can continue to function as initially configured.</td>
<td>Not specified</td>
</tr>
</tbody>
</table>

**Polycom Flash Parameters**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admin Password</td>
<td>This setting changes the phone’s local administrator password. Any string is an acceptable value.</td>
<td>Not specified</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong>: When this password is changed, the value is passed to the phone one time, and then is removed from DS (Directory Services). The Polycom phone remembers the password change, and the provisioning server does not send this value to the phone configuration in any subsequent phone reboots.</td>
<td></td>
</tr>
<tr>
<td>802.1Q VLAN Identifier</td>
<td>This setting is used by the IP phone to set the phone’s 802.1Q VLAN identifier if VLAN ID is not obtained by CDP or DHCP. Acceptable values are 0 to 4094</td>
<td>Not specified (no VLAN tagging)</td>
</tr>
<tr>
<td>LAN Port Mode</td>
<td>This option sets the network speed over the Ethernet for the IP phone through the LAN port.</td>
<td>Auto</td>
</tr>
</tbody>
</table>
Polycom Syslog Tracing

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syslog Server</td>
<td>This option sets the syslog server IP address or host name. When a <strong>Syslog Server</strong> is specified, the <strong>Syslog Transport</strong> and <strong>Syslog Render Level</strong> settings are used. When a <strong>Syslog Server</strong> is not specified, the <strong>Syslog Transport</strong> and <strong>Syslog Render Level</strong> settings are ignored. All IP addresses in managed phones configuration are pass-through strings to support IPv6. <strong>Note:</strong> When you specify a Syslog Server value, the IP phone’s application log which is sent to the provisioning server, is no longer used, or disabled. This means the log file no longer appears in the IC, and all information is present in the syslog instead, which protects Polycom’s flash memory abilities.</td>
<td>Not specified (syslogging is enabled, and the log file no longer appears in the CIC system)</td>
</tr>
<tr>
<td>Syslog Transport</td>
<td>This option sets the syslog transport protocol. Acceptable values include TCP and TLS.</td>
<td>UDP</td>
</tr>
<tr>
<td>Syslog Render Level</td>
<td>This option sets the lowest class of event that will be rendered to the syslog. The acceptable range of values is 0 through 6.</td>
<td>0</td>
</tr>
<tr>
<td>Disable App Logs When Using Syslog</td>
<td>When <strong>Syslog Tracing</strong> is enabled, application logs are disabled (set to <strong>Yes</strong>) by default. Change this setting to <strong>No</strong>, to enable the creation of application logs by Polycom phones. The information generated and collected in the application log (which is stored in the phones folder in the IC server’s logging directory, usually \IC\Logs[date]..., is the same information as the information generated and collected in the system</td>
<td></td>
</tr>
<tr>
<td>Section</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Application</td>
<td>The tracing bandwidth can be reduced by turning off the application log collection when the system log collection is enabled.</td>
<td></td>
</tr>
<tr>
<td><strong>Note</strong>: When</td>
<td>the tracing level, phone performance may be adversely affected. This is especially true if you increase multiple tracing levels simultaneously. Be sure to reduce the tracing level when you no longer need it.</td>
<td></td>
</tr>
<tr>
<td>Browser</td>
<td>This option sets the tracing level for the Application syslog topic.</td>
<td></td>
</tr>
<tr>
<td><strong>Note</strong>: When</td>
<td>the tracing level, phone performance may be adversely affected. This is especially true if you increase multiple tracing levels simultaneously. Be sure to reduce the tracing level as soon as possible.</td>
<td></td>
</tr>
<tr>
<td>Configuration</td>
<td>This option sets the tracing level for the Configuration syslog topic.</td>
<td></td>
</tr>
<tr>
<td><strong>Note</strong>: When</td>
<td>the tracing level, phone performance may be adversely affected. This is especially true if you increase multiple tracing levels simultaneously. Be sure to reduce the tracing level as soon as possible.</td>
<td></td>
</tr>
<tr>
<td>Copy Utilities</td>
<td>This option sets the tracing level for the Copy Utilities syslog topic.</td>
<td></td>
</tr>
<tr>
<td><strong>Note</strong>: When</td>
<td>the tracing level, phone performance may be adversely affected. This is especially true if you increase multiple tracing levels simultaneously. Be sure to reduce the tracing level as soon as possible.</td>
<td></td>
</tr>
<tr>
<td>CURL</td>
<td>This option sets the tracing level for the CURL syslog topic.</td>
<td></td>
</tr>
<tr>
<td><strong>Note</strong>: When</td>
<td>the tracing level, phone performance may be adversely affected. This is especially true if you increase multiple tracing levels simultaneously. Be sure to reduce the tracing level as soon as possible.</td>
<td></td>
</tr>
</tbody>
</table>

For more information, see Logging levels.
<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Observer</td>
<td>This option sets the tracing level for the Key Observer syslog topic.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> When you increase the tracing level, phone performance may be adversely affected. This is especially true if you increase multiple tracing levels simultaneously. Be sure to reduce the tracing level as soon as possible.</td>
</tr>
<tr>
<td></td>
<td>For more information, see Tracing levels for the Polycom Syslog.</td>
</tr>
<tr>
<td>SIP</td>
<td>This option sets the tracing level for the SIP syslog topic.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> When you increase the tracing level, phone performance may be adversely affected. This is especially true if you increase multiple tracing levels simultaneously. Be sure to reduce the tracing level as soon as possible.</td>
</tr>
<tr>
<td></td>
<td>For more information, see Tracing levels for the Polycom Syslog.</td>
</tr>
<tr>
<td>Support Objects</td>
<td>This option sets the tracing level for the Support Objects syslog topic.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> When you increase the tracing level, phone performance may be adversely affected. This is especially true if you increase multiple tracing levels simultaneously. Be sure to reduce the tracing level as soon as possible.</td>
</tr>
<tr>
<td></td>
<td>For more information, see Tracing levels for the Polycom Syslog.</td>
</tr>
<tr>
<td>TLS</td>
<td>This option sets the tracing level for the TLS syslog topic.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> When you increase the tracing level, phone performance may be adversely affected. This is especially true if you increase multiple tracing levels simultaneously. Be sure to reduce the tracing level as soon as possible.</td>
</tr>
<tr>
<td></td>
<td>For more information, see Tracing levels for the Polycom Syslog.</td>
</tr>
<tr>
<td>Wapp Mgr</td>
<td>This option sets the tracing level for the Wapp Mgr syslog topic.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Note:** When you increase the tracing level, phone performance may be adversely affected. This is especially true if you increase multiple tracing levels simultaneously. Be sure to reduce the tracing level as soon as possible.

For more information, see Tracing levels for the Polycom Syslog.

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**Polycom Voice Quality Monitoring**

**Note:** The Polycom Voice Quality Monitoring feature requires a license.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable RTCP-XR Reports</td>
<td>This setting indicates whether Polycom phones to generate reports in RTCP XR packet metrics on listening and conversational quality.</td>
<td>No</td>
</tr>
<tr>
<td>Enable Collector Session Reports</td>
<td>This setting indicates whether Polycom phones to create session type reports, which are generated at the end of a call.</td>
<td>No</td>
</tr>
<tr>
<td>Enable Collector Periodic Reports</td>
<td>This setting indicates whether Polycom phones to create periodic type reports, which are generated throughout a call.</td>
<td>No</td>
</tr>
<tr>
<td>Report Collector Address</td>
<td>This option sets the IP address or host name of the SIP server (report collector) that accepts voice quality reports contained in SIP PUBLISH messages. All IP addresses in managed phones configuration are pass-through strings to support IPv6.</td>
<td></td>
</tr>
<tr>
<td>Report Collector Port</td>
<td>This option sets the port of the SIP server (report collector) that accepts voice quality reports contained in SIP PUBLISH messages. If port is 0 or &lt;Null&gt;, port 5060 will be used.</td>
<td></td>
</tr>
<tr>
<td>Collector Period (5 to 20)</td>
<td>This option sets the time interval between successive periodic quality reports.</td>
<td>20</td>
</tr>
</tbody>
</table>

**Polycom Voice Quality Monitoring Alerts**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
</table>
| Enable Triggered Collector Periodic Reports | This option indicates whether the generation of periodic quality reports triggered by alert states. The options are:  
  - Critical: periodic reports will be generated when an alert state is critical | Disabled |
### MOS-LQ Warning Threshold (15 to 40)
This option sets the threshold value of listening MOS score that causes the IP phone to send a warning alert quality report.

Acceptable values are 15 to 40.

Not specified (warning alerts are not generated)

### MOS-LQ Critical Threshold (15 to 40)
This option sets the threshold value of listening MOS score that causes the IP phone to send a critical alert quality report.

Acceptable values are 15 to 40.

Not specified (warning alerts are not generated)

### Delay Warning Threshold (10 to 2000)
This option sets the threshold value of one way delay (in ms) that causes the IP phone to send a warning alert quality report.

Acceptable values are 10 to 2000.

Not specified (warning alerts are not generated due to one way delay; includes both network and end system delays)

### Delay Critical Threshold (10 to 2000)
This option sets the threshold value of one way delay (in ms) that causes the IP phone to send a critical alert quality report.

Acceptable values are 10 to 2000.

Not specified (critical alerts are not generated due to one way delay; includes both network and end system delays)

---

### Polycom SIP Security

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
</table>
| Inbound SIP Security Challenge | This option sets the level of security the Polycom IP phone uses to validate the SIP inbound (to the phone versus inbound to CIC) traffic. The possible values are:  
  - **Source**: The IP phone checks the source IP address of the SIP request against the IP addresses of its SIP Registrations. If addresses do not match, the SIP request is rejected. If there is a match, the request is accepted.  
  - **Digest**: The IP phone sends a 401 Unauthorized challenge when a SIP request comes in, and the sender of the request must respond with the proper credentials for the SIP transaction to proceed. | None (the phone does not take any steps to authenticate inbound SIP traffic) |
• Source and Digest: The IP phone first applies the Source method, then the Digest method.

| Phone side only SRTP (Offloading) | This setting has the same effect as that of the audio protocol setting in the general configuration, however it only changes the phone setting. | No |

Related topics

Configure managed IP phones or templates

Location

SNTP server

Audio protocol

---

SIP settings: Polycom phones or templates

SIP settings are organized into categories, as shown under Related topics.

For information on how to access the SIP option settings, see Configure advanced options for managed IP phones or templates.

Related topics

SIP audio settings

SIP transport settings

SIP transport settings

SIP session settings

SIP authentication settings

Configure advanced options for managed IP phones or templates
The following table describes the information that is shown for Polycom phones or templates. This information is automatically updated when the IP phone, or an IP phone that uses the template, is registered.

For information on how to access these settings, see *Configure managed IP phones or templates*.

<table>
<thead>
<tr>
<th>Detail</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone</td>
<td>This is the manufacturer and model of the IP phone device.</td>
</tr>
<tr>
<td>Type</td>
<td>This is the type of station (workstation or stand-alone phone.</td>
</tr>
<tr>
<td>IP Address</td>
<td>This is the IP address of the device. N/A indicates the device is not registered.</td>
</tr>
<tr>
<td>Contact Line</td>
<td>This is the SIP line used when the phone registered with the IC server. This line will be used to send SIP signaling to the phone.</td>
</tr>
<tr>
<td>Last Reload</td>
<td>This is the date and time when the phone requested configuration update or the phone was reloaded after a configuration change.</td>
</tr>
<tr>
<td>Status</td>
<td>This is the status of the phone from the IC server perspective (i.e., Not registered, Up-to-date, Reloading, Reload required.</td>
</tr>
<tr>
<td>Max. Line Keys</td>
<td>This is the maximum number of line keys associated with this device.</td>
</tr>
<tr>
<td>Max. Appearances</td>
<td>This is the maximum number of shared line appearances for this device.</td>
</tr>
<tr>
<td>Notes</td>
<td>These are any comments CIC administrators add about this device or the associated template.</td>
</tr>
</tbody>
</table>

**Related topics**

*Configure managed IP phones or templates*
Registration Groups

Add Registration

Use this page to select the type of registration and enter the settings. The options that are available depend on the registration group type.

If the registration group is "External," then you must define the registration settings manually or obtain them from DNS SRV. You cannot obtain the registration settings automatically from a line or from a proxy.

If Polycom phones connect to both a primary IC server and to another SIP server, then you can create an external group and add an external station appearance to the phones.

Switchover Systems

If you are configuring a Switchover pair on an IP phone network for managed Polycom phones, select Obtain registration settings automatically using DNS SRV on this page to obtain registration settings from the DNS SRV records created when you configured the network for Polycom phones.

For more information, see IC Provisioning of Managed IP Phones in the Technical Reference Documents section of the CIC Documentation Library.

Obtain registration settings automatically from this line

This option does not currently apply to an external registration group.

Use this option for Interaction SIP stations.

From the list, select the line from which settings are to be read. By default, the line setting is <Stations-UDP>. The settings used from the line are the network adapter, transport, protocol, and port. In this case, switchover is handled by the provisioning server.

CIC allows only one line registration per registration group. If there were multiple line registrations per registration group, phones could register to the same server twice.

Note: CIC creates two default line type registration groups.

Use the following registration settings

This option does not currently apply to Interaction SIP stations.
**Address:** Enter an IP address or host name and the protocol (default: UDP) address. IP addresses are pass-through strings to support IPv6.

**Port:** Enter the port to be used. The default is 5060.

**Transport Protocol:** Select the type of transport protocol. The options are UDP, TCP, and TLS. The default is UDP.

**Obtain registration settings automatically from this proxy**

*This option does not currently apply to Interaction SIP stations, nor does it apply to an external registration group.*

**SIP Proxy:** The SIP proxy that is trusted and available appears here.

**Alternate Address:** Type the alternate SIP proxy address in the format where the proxy is appended to the address, like "1|Proxy|proxy1|TCP|10.10.10.10." If you leave this field blank, the value is location-based.

**Transport Protocol:** Select the type of transport protocol for the proxy. The options are UDP, TCP, and TLS. The default is UDP.

**Obtain registration settings automatically using DNS SRV**

CIC allows only one DNS SRV registration per registration group, otherwise phones could register to the same server twice.

**Domain:** Type the DNS domain name.

**Transport Protocol:** Select the type of transport protocol. The options are UDP, TCP, and TLS. The default is UDP.

**Note:** Shared appearances do not attempt to register with managed SIP proxies. If a registration group has multiple entries, one of which is a managed SIP proxy, shared appearances using that registration group will attempt to register with all other entries, but not with a managed SIP proxy. Other (non-shared) appearances register as usual.

**Related topics**

SIP proxies

SIP line proxy

*SIP proxy configuration - general*

Endpoints
Registration groups

Managed IP Phone configuration - general

Registration Group Options

Use this page to select the DNS cache option and a custom certificate authority for managed IP phones.

Use Polycom Static DNS Cache

Select this check box to use cache file's preloaded resource information which is obtain when the DNS service is started.

Certificate Authority

Select the certificate from the pull-down list to use for managed IP phones for this registration group.

Note: You must first import the certificate authority in Certificate Authorities. This option is available only if the registration transport protocol is TLS, which requires the Advanced Security Feature license.

Default IP Phone Configuration

Use the this page to select the menu line. This page does not apply to Interaction SIP Station.

Note: Interaction SIP Station devices do not currently support auto-provisioning. In addition, the Use digest authentication option must be disabled to use Interaction SIP Stations on the server.

Auto-Provisioning

This line is used to provide the provisioning IVR you hear when you plug in an unprovisioned IP phone. The protocol and security settings of this line are used on the IP phone.

For example, if you have the advanced security feature license, then you can use a TLS line with SRTP enabled. Using a TLS line makes sure the DTMF can not be captured while entering your setup password.

Menu Line

Select the menu line for the default IP phone. The options are:

- Stations - TCP
- Stations - TLS
- Stations - UDP (default)
- An existing SIP line

**Line Label**

Type the name (or string) to display for the line on IP phones. This is a free-form field and the default value is "Setup".

**Configuration Requests**

Use this section to set the request options for the default IP phone configuration.

**Use Digest Authentication**

Select this check box to enable digest authentication. Digest authentication is a protocol used with web browsers for authenticating users browsing the Internet, and also a general protocol used for authentication, and by using SASL, provides increased protection. If this option is enabled, enter the **User Name** and **Password**, and **Confirm Password** to use as the authentication credentials. By default, this option is not enabled.

**Use HTTPS Always**

Select this check box to always have HTTP requests redirected to the HTTPS Port. Selecting this option requires mutual authentication. By default, this option is not enabled.

Note: To install client certificates through configuration and provide mutual authentication, select the **Use HTTPS Always** check box and set the **Provision HTTPS Mutual Authentication** server parameter to "Yes. Also, the client certificates must be signed by the Default Lines **Certificate Authority**. For more information, See **IC Managed IP Phones Administrator’s Guide** document in the **Technical Reference Documents** section of the CIC Documentation Library on the IC server.

**Support Insecure Legacy Phones**

Select this check box to support legacy phones that do not support HTTPS protocol, which means FTP/HTTP protocol is required. By default, this option is not enabled.

Note: If **Support Insecure Legacy Phones** and **Use HTTPS Always** options are both selected, then the HTTP protocol channel is available only for legacy phones. All other requests are redirected to HTTPS. Therefore, later model Polycom phones used as managed IP phones, should use HTTP directly.
A ring set contains details of the type of ring that occurs on incoming internal (user to user), external (through the main IVR or workgroup) and direct inward dial (DID) calls on a Polycom phone. By default, there is ring set <Default-Polycom> already configured for Polycom phones. The ring sets are assigned to stations/station appearances.

Use this page to configure additional ring sets or change the behavior of the default ring set.

**Name**

Type a descriptive name of the ring set. The category, ring type and details are displayed below the ring set name. Highlight the category to display the options for each setting. Select one option per internal, external, or DID setting. The options include settings for **Cadence**, **Wave File**, **Wave URL**, and **Visual**:

**Cadence** - Select one of the built-in ring types (based on the IP phone manufacturer):

- LowTrill
- LowDoubleTrill
- MediumTrill
- MediumDoubleTrill
- HighTrill
- HighDoubleTrill
- HighestTrill
- HighestDoubleTrill
- Beeble
- Triplet

**Wave File** - Select a wave file to play for a call. The wave file location must be in `\ic\resources\`

**Wave URL** - Select a valid URL for a wave file to play for a call.

**Visual** - Select this option to change the behavior of an incoming call, such that when a call is alerting and the user picks up the handset, the IP phone assumes that a new call is being placed. This protects against accidentally being connected to an alerting call.

**Related Topic:**

Managed IP Phone Appearances Configuration
SIP Bridges

New SIP Bridge Name

Type a meaningful and unique name that represents this new SIP bridge. This name is displayed in various dialog boxes in CIC.

SIP Bridges Configuration: General

Use this page to configure a SIP bridge by associating a registration group to it.

Before you configure SIP bridges and associated managed IP phones:

- Determine a unique name for each bridge.
- Get the MAC addresses of IP phones you are going to configure as managed IP phones used a SIP bridge.

Registration Group

the options are <Default Registration Group> (default) and <Default Secure Registration Group>.

SIP Bridge Details

The information displayed here shows details of this SIP bridge.

Note: Managed IP phones using a SIP bridge do not support shared appearances and external registrations.

Audio Sources

Audio Source Entry Name

Type a name to represent an audio source.
Use this page to configure the audio source.

**Audio source for a WAV file**

If you plan to create a WAV file, a safe format to use (which is also optimal in many configurations) is 8 kHz mono mu-law PCM. Store it in the `\IC\Resources` directory. The default WAV files are also located in the `\IC\Resources` directory.

If you have not already done so, create an audio source in the [Audio Source Entry Name](#) dialog box.

1. In the **Audio Source** tab in the Audio Sources Configuration dialog, select **WAV File**.
2. Set **Filename** to the address of the WAV file in the `\IC\Resources` directory or use the Browse button to locate the locate WAV file in that directory.
3. Implement the audio source using the "Audio: AudioSourceName" call attribute in one of the following ways:
   - For system-wide on-hold music, in the OnHoldAudioRandomizerMonitor handler.
   - For ACD workgroup on-hold music, in the Workgroup Configuration…Files dialog.
   - To create a custom handler, in the Play Audio File tool step.

**Server Parameters**

**Packaged Server Parameters**

CIC includes several pre-configured server parameters that are used in the default handlers and by various modules on the IC server. In addition, there are several optional server parameters that modify the default behavior of the email tools and the IC and Exchange interface.

**Note:** Parameters containing directory paths (for example, ServerReportLogOutputPath) are not updated, nor are they recognized immediately, when you change a path. To update these values, you must restart IC.

<table>
<thead>
<tr>
<th>Packaged Server Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AdminServerMonitorPath</td>
<td>This server parameter monitors paths and replaces trailing backslash with the value: <code>\(SERVER\)\Parameters\Attendant Audio Path\Value;\(SERVER\)\Parameters\FaxPath\Value;\(SERVER\)\Parameters\CustomMirrorDir\Value;\(SERVER\)\Parameters\Rx Document Path\Value;\(SERVER\)\Parameters\Temp Path\Value;\(SERVER\)\Parameters\conPath\Value</code></td>
</tr>
<tr>
<td>Allow Voicemail Operator Escape</td>
<td>Use this parameter to enable or disable the (silent) option to escape to the operator by pressing '0' during voicemail. Acceptable values are Y, Yes, T, True or 1 to enable the option. Any other value is treated as false which disables the option.</td>
</tr>
<tr>
<td>Attendant Audio Path</td>
<td>This is the default path where Interaction Attendant's stores its audio files or WAV files. This is usually <code>\IC\Resources\InteractionAttendantWaves</code>, which is shared among all AttendantWaves directories. This value is set during installation, and you should not change this value.</td>
</tr>
<tr>
<td><strong>Attendant Fax Path</strong></td>
<td>This is the path where Interaction Attendant’s fax files are stored on the server, usually <code>\\IC\Resources\InteractionAttendantFaxes</code>, which is shared as the Attendant directory. This value is set during installation, and you should not change this value.</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Collective Support</strong></td>
<td>When this server parameter has a value of 1, it tells CIC that Multi-Site is installed; if the value is 0, Multi-Site is not installed.</td>
</tr>
<tr>
<td><strong>CreateICNotifierIdentityProvider</strong></td>
<td>To reset the IC Notifier Identity Provider entries to their default settings, set this server parameter to “1.” The first time the IC Secure Token Server (STS) starts up, it creates the IC Notifier Identity Provider Directory Services settings. The IC STS creates the <code>CreateICNotifierIdentityProvider</code> server parameter and sets its value to “1” (true). The IC STS automatically resets the value of this server parameter to “0” each time it resets the IC Notifier Identity Provider Directory Services to their default values to prevent it from recreating the entries.</td>
</tr>
<tr>
<td><strong>CustomMirrorDir</strong></td>
<td>Specifies one or more directories on the active server to be mirrored on the backup server in addition to the default mirrored directories. Any time a file is added, removed, or modified in one of these directories, the change is mirrored in the corresponding directory on the backup server. Each directory in the list is separated from the next by a semicolon (;). If you want the directory mirrored recursively (including directory additions and deletions), place a “+” in front of the directory name. For example: <code>+D:\server\ic\ImportantDir</code> Please refer to the Automated Switchover technical reference for information about other directories.</td>
</tr>
<tr>
<td><strong>Default Hold Music File</strong></td>
<td>The default value used by TS is “SystemDefaultMusicOnHold.wav?playlocation=mediaserver”. <strong>Note:</strong> Handlers may override the hold music for any call by setting the <code>Eic_OnHoldAudioFile</code> call attribute. IC adds the “?playlocation=mediaserver” by default. CIC uses this default setting if the “Use System Default Hold Music” check boxes are selected on the Media Server General Configuration page. A Configuration reference is provided for this setting.</td>
</tr>
<tr>
<td><strong>DID Voicemail Workgroup</strong></td>
<td>Use this server parameter to set workgroups members having DID numbers. When a call is placed to the DID number, callers hear the name prompt, and then are transferred to voicemail. Type the name of the workgroup to set this behavior.</td>
</tr>
<tr>
<td><strong>Director Support</strong></td>
<td>You use Setup Assistant to configure a server as a Director Support server. To disable monitored server support, you can set this parameter to 0 and then restart the server.</td>
</tr>
<tr>
<td><strong>DirectoryGrammarFileCall</strong></td>
<td>Use this parameter to set the resource directory for Call grammar files. For example: <code>D:\I3\IC\Resources\CallDirectory</code>.</td>
</tr>
<tr>
<td><strong>DirectoryGrammarFileCompany</strong></td>
<td>Use this parameter to set the resource directory for Company grammar files. For example: <code>D:\I3\IC\Resources\CompanyDirectory</code>.</td>
</tr>
<tr>
<td>Parameter Name</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>DirectoryGrammarFileForward</td>
<td>Use this parameter to set the resource directory for Forward grammar files. For example, D:\I3\IC\Resources\DirectoryForward.</td>
</tr>
<tr>
<td>DirectoryGrammarFileMessage</td>
<td>Use this parameter to set the resource directory for Message grammar files. For example, D:\I3\IC\Resources\MessageDirectory.</td>
</tr>
<tr>
<td>DirectoryGrammarFileMO</td>
<td>Use this parameter to set the resource directory for Mobile Office grammar files. For example, D:\I3\IC\Resources\MODirectory.</td>
</tr>
<tr>
<td>e-FAQ Support</td>
<td>Set this parameter to 1 or True to enable the e-FAQ controls in the Interaction Manager. If the parameter is set to 0, the e-FAQ application will be disabled.</td>
</tr>
<tr>
<td>EnableDynamicStatusIconUpdates</td>
<td>This parameter protects network bandwidth by limiting when CIC clients display the changed status icon after you change it. By default, all CIC clients display the new status icon after they log out and change it.</td>
</tr>
<tr>
<td>EnableSupervisoryRecordAndMonitor</td>
<td>Allows an administrator to turn on the hidden supervisory recording. If the server parameter is set to Yes on the server, the CIC clients will suppress the indication of Workgroup Queue Supervisor Monitoring or Recording. When this parameter is added or modified, all CIC clients need to be restarted to recognize the change. By default, this parameter is set to No. Note: If you change the setting of this server parameter, Session Manager must be restarted to recognize the change. The change will not affect any interactions currently in-progress until an update occurs for them. For more information, see <a href="#">Who can see and listen to recordings</a>.</td>
</tr>
<tr>
<td>External Priority Voicemail</td>
<td>Set this parameter to Yes for an external caller to set the priority of the voice mail message. By default, this parameter is set to No.</td>
</tr>
<tr>
<td>Generate CBO Statistics</td>
<td>This parameter applies to IC subsystems that use an Oracle Database on the server. This parameter will have no effect on IC subsystems that use a SQL Server. Set this parameter to a value in the format 'HH:MM' with the time that the System Call Event Collection should run. Removing the parameter or clearing the value will disable System Call Event Collection from running. On a large database this can be a time consuming process, and should be scheduled in off-time if possible.</td>
</tr>
<tr>
<td>Handler Path</td>
<td>Specifies the active handler storage directory on the IC server.</td>
</tr>
<tr>
<td>Held Call Timeout</td>
<td><strong>Obsolete as server parameter.</strong> Specifies the number of seconds a call can remain on hold before TsServer signals an event. The minimum setting is 2 seconds and the maximum is 900 seconds (15 min). By default CIC uses this event to automatically disconnect the held call after 15 minutes. By default CIC uses this event to present the caller with an IVR (or use &quot;menu&quot; mode) allowing the caller to stay on hold, go to voice mail or re-alert the user. If not selected, the call will automatically be disconnected after the timeout limit is reached.</td>
</tr>
</tbody>
</table>
Also, the call must be placed on hold by the user, not by the system (for example, Wait Agent is not a valid on hold state in this instance).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I3Tables Path</td>
<td>Specifies the path for the location of table data used by IC handlers. You can use data without this parameter. The default location on the IC server is: \ic\Common\I3Tables</td>
</tr>
<tr>
<td>IconPath</td>
<td>This value is set and used during IC server installation to determine where in the Menu to create the shortcuts to CIC help files and applications. Do not change this value.</td>
</tr>
<tr>
<td>Ignore Dial String Leading Plus Sign</td>
<td>Set this parameter to True for CIC to ignore the &quot;+&quot; beginning a dial string. The parameter is set to False.</td>
</tr>
<tr>
<td>Ignore Dial String Leading Slash</td>
<td>Set this parameter to False for CIC to acknowledge the \ character at the start of a dial string. By default this parameter is set to True.</td>
</tr>
<tr>
<td>InitialMirrorDir</td>
<td>Specifies one or more directories on the active server to be mirrored on the IC server when the IC server starts, in addition to the default mirrored directories. Each directory is separated from the next by a semicolon (;). If you want the directory mirrored recursively (including directory additions) place a + in front of the directory name. For example: +D:\server\ic\ImportantDir. Please refer to the Automated Switchover technical reference for information about directories.</td>
</tr>
<tr>
<td>Interaction Limit (Chats)</td>
<td>This is the maximum number of chat interactions that are allowed in the CIC for any given time. The default is 4000. This server parameter is dynamic, meaning that any change to it takes effect immediately. If there are chat interactions in the queue when you set a new limit, and your maximum number is less than the previous maximum number, then the chat interactions that are currently in the queue will remain there. However, no new chat interactions can be added to the queue until the number of chat interactions in the queue falls below the new limit.</td>
</tr>
<tr>
<td>Interaction Limit (Emails)</td>
<td>This is the maximum number of email interactions that are allowed in the CIC for any given time. The default is 10000. This server parameter is dynamic, meaning that any change to it takes effect immediately. If there are email interactions in the queue when you set a new limit, and your maximum number is less than the previous maximum number, then the email interactions that are currently in the queue will remain there. However, no new email interactions can be added to the queue until the number of email interactions in the queue falls below the new limit.</td>
</tr>
<tr>
<td>Internal Call Classifications</td>
<td>The default name of the phone number classification for calls within the CIC (for example, station-to-station calls) is Intercom. That classification could also be set in CIC and work identically. CIC handlers look for the name(s) in this server parameter to determine the name of the classification to use for dialing internal calls. If you...</td>
</tr>
</tbody>
</table>
example, translate) the name of the Intercom classification, you must add this server parameter.
This parameter is a comma delimited list of Classifications that are designated as internal calls. The default value of this parameter is *Intercom, Internal* and is set at server install. Customers can add any classification, which has been previously configured with *Intercom* as the internal call classification. Any Classification appears in this list will be treated as an internal call by the handlers that process and CIC Client dialing.

<table>
<thead>
<tr>
<th>Keep Internal Regional Calls On Server</th>
<th>Set this server parameter to Enable, E, Disable, D, Same Region Only, or S to keep internal Regional Calls On or Off.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last Known Good Backup</td>
<td>D:\I3\IC\Backup\RegistryBackup_18-8-2011-825171</td>
</tr>
<tr>
<td>Mirror Exceptions</td>
<td>Specifies the extensions of any files that you do not want to mirror. Separate extensions with a semicolon, for example: txt;gif;myext.</td>
</tr>
<tr>
<td>Mobile Office DID</td>
<td>This parameter adds capability to direct dial into Mobile Office based on a configured DID. When the user calls the DID, the ANI is recognized as a number associated with Mobile Office. By default this parameter is &lt;Not Set&gt;.</td>
</tr>
<tr>
<td>PlayUserPrompts</td>
<td>When this parameter is set to false, internal calls and transferred calls will not hear the name and extension that is being called. When this parameter is set to true, user prompts will be heard for all calls.</td>
</tr>
</tbody>
</table>
| Mobile Office ANI Pattern              | Patterns are defined in the "Mobile Office ANI Pattern" server parameter. Patterns are defined to match for digits along with any other characters as literals, so the pattern "+1 (XXX) XXX-XXX-XXX" would format 3178723000 as "+1 (317) 872 - 3000". Because the ANI may not be stored in the user's settings in the same format received, the tool will try to use the following patterns (in order) for the search: Any pattern specified using the "Mobile Office ANI Pattern" server parameter is followed by: XXXXXXXXXXXX  
XXX-XXX-XXX  
(XXX)XXX-XXX  
(XXX) XXX-XXX  
1-XXX-XXX-XXX  
1-(XXX)-XXX-XXX  
For this server parameter, the format should be a pipe | delimited list of patterns, for example, if the ANI is 3178723000, and the pattern is ABC-XXX-123-XXX-XX, the value used for the search would be ABC-317-123-872-3000. |
<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NewVMPollingInterval</td>
<td>This parameter determines the interval in time in seconds that the IP Server Mail server for unread voicemails for users. The default value is 240 seconds.</td>
</tr>
<tr>
<td>OutofBandReportDataTransfer</td>
<td>This parameter enables Interaction Reporter reports that run on the CIC client to transfer data from the database using a secure communication layer.</td>
</tr>
<tr>
<td>Play Queue Announcements</td>
<td>Set this parameter to External for user and extension prompts to be played for external callers. Set this parameter to No for no prompts to be played.</td>
</tr>
<tr>
<td>Reco Call Type</td>
<td>This parameter should only be used by the direction of an Interactive Intelligence representative.</td>
</tr>
<tr>
<td>Recording Path</td>
<td>A packaged Server Parameter, pre-configured, which specifies the directory server used to store uncompressed manually recorded calls. The path is specified during the IC server installation. Interaction Recorder uses its own setting to specify the Storage Location.</td>
</tr>
<tr>
<td></td>
<td>If you used IC Setup Assistant during the IC Server installation, to configure the Interaction Recorder Compressed Files Location, the directory you specified is used to specify the Default Storage Location Retention Policy. The Default Storage Location Retention Policy for compressed and processed files can be modified using Interaction Recorder Policy Editor. For more information, see the Interaction Recorder and Interaction Quality Manager Technical Reference in the Documentation Library.</td>
</tr>
<tr>
<td>RecordServer</td>
<td>Enter the name of the recording server.</td>
</tr>
<tr>
<td>ReportComponentsInstalled</td>
<td>Used by various CIC systems to determine which type of reporting is installed. Change this value. Reporting is considered active when REPORTS is found in the string of this parameter. All references to the Report tab in the CIC clients are disabled when reporting is considered inactive (when REPORTS is not found in the string of this parameter).</td>
</tr>
<tr>
<td>ReportFilePath</td>
<td>Specifies the path to the report templates used to generate reports from CIC. The default value is %ServerName%\IC_Reports.</td>
</tr>
<tr>
<td>ResetCalledIDOnExternalTransfer</td>
<td>If the call is in the IVR and the call is blind transferred to a non-Native(Extern) Directory Number/Queue then CIC will reassign the Cisco TAPI Call Attribute “CalledID” to the value it’s redirecting it to. This works well when CIC is acting as a front-end PBX. Example: 1) Call come into Main IVR (CalledID = 3000) 2) CIC performs a blind transfer to another PBX at 3010. 3) When the PBX gets the call. (CalledID = 3010)</td>
</tr>
<tr>
<td>ResetCalledIDOnTransferToUser</td>
<td>This reassigns the Cisco TAPI Call Attribute “CalledID” value to the destination Directory Number any time a call is sent to a user through the alert tool step. Example: 1) Call come into Main IVR (CalledID = 3000) 2) IC Blindtransfers the call to User logged into Station 7001. (CalledID = 7001) 3) User then Blindtransfers to User logged into Station 7075. (CalledID = 7075)</td>
</tr>
<tr>
<td>Resource Path</td>
<td>Specifies the directory on the IC server used to store CIC resources such as fax cover pages, etc. The path is specified during the IC server installation.</td>
</tr>
<tr>
<td>Rx Document Path</td>
<td>Response management document path on the server. Defaults to C:\server\IC\i3RxDocs where C is the install drive.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Server Path</td>
<td>Specifies the home directory of the CIC system software. The path is specified as the IC server installation.</td>
</tr>
<tr>
<td>ServerReportLogAutoN</td>
<td>Auto logging refers to the ability of statserver to receive its own statistics sent to it as notification and then log the statistics to the database. <strong>This parameter is for advanced administrator use only.</strong></td>
</tr>
<tr>
<td>ServerReportLogDataDestination</td>
<td>This parameter replaces the ServerReportLogMSMQPath parameter. It now supports for CSV, RTM, and other transport types.</td>
</tr>
<tr>
<td>SNMPTrapEnterprise</td>
<td>This parameter tells the I3 SNMP Trap Monitor what SNMP traps it needs to catch. Valid values are <strong>All, I3, ININ, Microsoft</strong> (default), and <strong>None</strong>. The Trap Monitor can forward these traps to Handlers.</td>
</tr>
<tr>
<td>Station Event Window Time</td>
<td>Station Event Window Time is the number of consecutive milliseconds used for the maximum number of station events (set in &quot;Station Event Window Limit&quot;). Default is 60000 ms (60 seconds), with a minimum window of 10000 ms (10 seconds). If 20 events occur within 60 seconds, CIC disables the station device that generates events.</td>
</tr>
<tr>
<td>SuppressAdsiCallDetailLogging</td>
<td>ADSI calls are not normally seen on the queues, and cannot be logged. This parameter allows you to control whether or not to log them if they should somehow end up on the queues. After you install this optional parameter, you may use it to control whether to log ADSI calls. Set the parameter to T, TRUE, Y, YES, or 1 to suppress logging ADSI calls. Set the parameter to F, FALSE, N, No, or 0 (Zero) to log ADSI calls. The default setting for this feature is Yes. You should not change this value.</td>
</tr>
<tr>
<td>SwitchAddress</td>
<td>If the Switchover system uses a Dataprobe device with an Ethernet control card, this parameter specifies the IP address.</td>
</tr>
<tr>
<td>SwitchComPort</td>
<td>If the Switchover system uses a Dataprobe device with a serial port control card, this parameter specifies the COM port. <strong>Note:</strong> This server parameter is installed by default, but is not relevant for M devices.</td>
</tr>
<tr>
<td>SwitchMACAddress</td>
<td>This parameter specifies the MAC address of the Ethernet control card in the Switchover device.</td>
</tr>
<tr>
<td>Switchover UDP Initial Ping Delay</td>
<td>Specifies the time in seconds that Switchover on the backup server will wait before checking if the active server is still up. Acceptable values are between 1 and 20 seconds. The default value is 5 seconds.</td>
</tr>
<tr>
<td>SwitchoverServer A</td>
<td>The name of the Switchover server designated as the initial active server. This server will come up as active first and will remain so until the first Switchover event. If the system uses a Dataprobe device to switch lines, this is the server connected to the active line last. <strong>Note:</strong> This server parameter is installed by default, but is not relevant for M devices.</td>
</tr>
</tbody>
</table>

Paths to create on the server:

```
${Rx Document Path}
${Rx Document Path}/users
```

For example, if `Rx Document Path = C:\server\IC\server\i3rxdoc`, then the directories must be created:

```
C:\server\IC\server\i3rxdoc
C:\server\IC\server\i3rxdoc\users
```
<table>
<thead>
<tr>
<th>Server Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SwitchoverServer B</strong></td>
<td>The name of the Switchover server designated as the initial backup server. This server will come up as backup first and will remain so until the first Switchover event. The Switchover system uses a Dataprobe device to switch lines, this is the server in the “B” row.</td>
</tr>
<tr>
<td><strong>Note:</strong></td>
<td>This server parameter is installed by default, but is not relevant for MSwitchType.</td>
</tr>
<tr>
<td><strong>SwitchType</strong></td>
<td>The type of switch control used between the two Switchover servers. If the Switchover system does NOT use a Dataprobe device to switch lines, set this to None. (SIP/AudioCodes, and Cisco TAPI systems do not use a Dataprobe device)</td>
</tr>
<tr>
<td></td>
<td>If the Switchover system uses a Dataprobe device, set one of the following values depending on the type of control card: SerialCP8, SerialK16, EthernetEPAL, EthernetK16. Please refer to the Automated Switchover technical reference on the different types of control cards.</td>
</tr>
<tr>
<td><strong>Temp Path</strong></td>
<td>Specifies the temporary file storage location on the IC server.</td>
</tr>
<tr>
<td><strong>Toll Call Classifications</strong></td>
<td>This server parameter is used for setting Forced Authorization Codes. It is created during IC server installation with these values: Long Distance;International;Unknown. Additional phone classifications can be added as values, or the default value can be deleted.</td>
</tr>
<tr>
<td></td>
<td><strong>Tip:</strong> See How Do I Set Up Forced Authorization Codes?</td>
</tr>
<tr>
<td><strong>Unified Messaging</strong></td>
<td>This server parameter is set to 1 during the IC server installation if one of the unified messaging options was selected (such as Microsoft Exchange or IBM Notes). Interaction Administrator can configure all mailboxes for user, workgroup, etc. If a unified messaging option was selected during installation, this server parameter will be set to zero. In this case, Interaction Administrator will not attempt to connect to the Domino server, and the Mailboxes dialogs will not work for users, workgroups, etc.</td>
</tr>
<tr>
<td><strong>Use Enhanced Regional Dial Plan</strong></td>
<td>This parameter should only be used by the direction of an Interactive Intelligence support representative.</td>
</tr>
<tr>
<td><strong>Use ICMS for AdHoc Conferences</strong></td>
<td>Set this server parameter to Yes for Interaction Conference Media Server to handle adhoc conferences instead of a Media Server. By default, the parameter is set to No. This parameter should only be used by the direction of an Interactive Intelligence support representative.</td>
</tr>
<tr>
<td><strong>Use Outbound Base Call For Connection</strong></td>
<td>The Interaction Client’s Listen feature allows authorized users to listen to agents. Normally, the listener can hear both the agent and the external caller via telecidetone. In some cases, the listener may be able to hear the agent but not the remote party. If this happens, change the value of Use Network Echo to 1, which directs CIC to use the echo from the network to listen to the remote party.</td>
</tr>
<tr>
<td><strong>Use Network Echo</strong></td>
<td>Set this parameter (in minutes) to pass the value to the Record Audio tool starting from the default values.</td>
</tr>
<tr>
<td></td>
<td>The default length of voicemail recordings in the shipping handlers 300 seconds (5 minutes), and the default length of the voicemail recordings by the Record A is 600 seconds (10 minutes). You may want to set an arbitrary value, other than the default settings, for this duration.</td>
</tr>
<tr>
<td><strong>Voicemail Maximum Duration</strong></td>
<td>Set this parameter (in minutes) to pass the value to the Record Audio tool starting from the default values.</td>
</tr>
</tbody>
</table>
For more information on the Record Audio toolstep, see the Interaction Desktop help.

<table>
<thead>
<tr>
<th>Web Event Image Path</th>
<th><code>/i3webimages/</code></th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Path</td>
<td>Specifies the location of a working directory used by the fax and voicemail store intermediate copies of faxes and voicemail.</td>
</tr>
</tbody>
</table>

**Related topics**

- Automated Switchover System Server Parameters
- Dialer Server Parameter
- e-FAQ Server Parameters
- Optional Server Parameters
- Packaged System Parameters
- Text To Speech Server Parameters

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**Optional General Server Parameters**

The following general server parameters are optional.

To set these server parameters, add the parameters in the **Server Parameters** container. Then set the values as necessary.

<table>
<thead>
<tr>
<th>Optional Server Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACDAgentLockTimeout</td>
<td>This parameter determines how long the agent will be locked out if the &quot;Select Item&quot; or &quot;Release Agent Lock&quot; toolsteps are not called. Without this parameter the ACD agent lockout time is 10 seconds.</td>
</tr>
<tr>
<td>ACDAvailableOnNon-ACD</td>
<td>Use this parameter so that agents are available for ACD interactions when on non-ACD unavailable, the agents must set their status to a non-ACD status. Set the parameter as Yes, 1, true, etc., to enable it. Without this parameter, or if there is no value entered for the parameter, then agents are available for ACD when on non-ACD interactions. For similar email-specific actions, see the <strong>ACDAvailableOnNon-ACDEmail</strong> parameter.</td>
</tr>
<tr>
<td>ACDAvailableOnNon-ACDEmail</td>
<td>Use this parameter so that agents are available for ACD interactions when on non-ACD unavailable, the agents must set their status to a non-ACD status. Set the parameter as Yes, 1, true, etc., to enable it. Without this parameter, or if there is no value entered for the parameter, then agents are available for ACD when on non-ACD interactions. For similar email-specific actions, see the <strong>ACDAvailableOnNon-ACDEmail</strong> parameter.</td>
</tr>
</tbody>
</table>
must set their status to a non-ACD status. Set the parameter value to any value, enable it.
Without this parameter, or if there is no value entered for the parameter, then agents are available on a non-ACD email.
This parameter is similar to the ACDAvailableOnNon-ACD parameter, but is enabled by setting the non-ACD interaction.

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Description</th>
</tr>
</thead>
</table>
| ACDConsiderSingleTypeForEWTAvailable | Use this parameter for ACD Queue Statistics to compare the agent %available to the interaction type. Possible values are:  
- call  
- chat  
- callback  
- web collaboration  
- instant question  
- sms message  
- email  
- generic  
**Note:** Enter only one interaction type.
This parameter is useful if you want to route a particular interaction type to an agent who is currently unavailable due to being on other interaction types or being on a non-ACD interaction. The parameter forces a single type of interaction to agents when otherwise the agent would be unavailable due to being on other interaction types or being on a non-ACD interaction. |
| ACDDisableOnHoldProcessingForCalls | A non-blank value turns off "on hold" processing for calls. This removes the call agent's utilization "score." |
| ACDDoNotDeleteObjectsUntilDeallocation | Currently, ACD skills are lost when calls are transferred. This server parameter forces skills to be saved until the call is deallocated from the system before deleting it. The value to set this parameter is:  
ACDDoNotDeleteObjectsUntilDeallocation=1 |
| ACDInteractionLockTimeout | This server parameter determines how long the interaction will be locked if the "Select agent" or "Release interaction lock" tools are used. Without this parameter the ACD interaction lockout time is 10 seconds. |
| ACD Recorded Workgroups | This is an optional parameter that was added for EIC so that automatic recording works with modifying handlers. This parameter will work with CIC too. The parameter value is a list of workgroup names (not the fully qualified queue id, only the queue name). For example, if workgroups existed Marketing, Support and Sales then a parameter value of "Marketing,Support" means automatic recording is on for those two workgroups. The Support workgroup records automatic recording is off by default for workgroups configured as "ACD" by the workgroup's Configuration tab in IA. This does not apply to workgroups configured with CIC. |
| Additional Redaction Expression | This parameter allows you to either append text to the default filter expression or replace the default filter expression.  
To append text to the default filter expression:  
Add the **Redact Using Default Expression** server parameter and set its value to a string.  
Add the **Additional Redaction Expression** server parameter and specify the text to append to the default filter expression.  
To replace the default filter expression:  
If you added a **Redact Using Default Expression** parameter, set its value to **No**  
Add the **Additional Redaction Expression** and specify the new default filter expression. |
<table>
<thead>
<tr>
<th><strong>Allow Full Custom Headers</strong></th>
<th>Use this server parameter to allow the use of custom SIP headers (headers in add headers). If you do not set this parameter to &quot;Yes&quot;, you can only use headers that this parameter is not present, so you must create it and set it to &quot;Yes&quot; to enable.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AllowScripterToBypassStatusCheck</strong></td>
<td>To allow Scripter to be exempt from status change access checks, add this parameter.</td>
</tr>
<tr>
<td></td>
<td>If you do not add this server parameter, then errors can appear in Scripter logs when errors arises:</td>
</tr>
<tr>
<td></td>
<td>The agent’s status in the <strong>User</strong> container indicates that the &quot;status is user selectable.&quot;</td>
</tr>
<tr>
<td></td>
<td>The user’s has the <strong>View</strong> access control rights for the <strong>All</strong> and <strong>Do Not Disturb</strong> state.</td>
</tr>
<tr>
<td></td>
<td>The agent goes on break but leaves his or her status set to &quot;Available.&quot;</td>
</tr>
<tr>
<td></td>
<td>Scripter cannot set the agent's status to “Do Not Disturb.”</td>
</tr>
<tr>
<td><strong>Allow Voicemail Save As</strong></td>
<td>Use this server parameter to conditionally show or hide the Save As menu option for the CIC clients. By default, the menu option is available (visible). Set the value to 0 the option.</td>
</tr>
<tr>
<td><strong>Allow SNMP Process Restarts</strong></td>
<td>If you use SNMP monitoring/management tools to monitor IC server processes, stop/restart processes via SNMP, create this server parameter and set the value to 1 this parameter is disabled (is not listed in the server parameter container).</td>
</tr>
<tr>
<td><strong>Attendant System Profile</strong></td>
<td>Attendant System Profile designates which Interaction Attendant profile calls are. Users press the star (*) key after going off hook.</td>
</tr>
<tr>
<td></td>
<td>See the Interaction Attendant online help for more information.</td>
</tr>
<tr>
<td><strong>AutoAddUsernameCategory</strong></td>
<td>This server parameter adds a category to each user upon startup. The possible values are:</td>
</tr>
<tr>
<td></td>
<td>■ 0: Feature is turned off.</td>
</tr>
<tr>
<td></td>
<td>■ 1: Feature is turned on adding a suffix of &quot;-auto&quot; to the CIC user name.</td>
</tr>
<tr>
<td></td>
<td>■ &lt;any other value&gt;: Feature is turned on adding a suffix of &lt;value&gt; to the CIC user name.</td>
</tr>
<tr>
<td></td>
<td>For example, if set to &quot;1&quot;, user JeffS would result in a category of JeffS-auto. If set to &quot;2&quot;, JeffS-Director.</td>
</tr>
<tr>
<td></td>
<td>Blank or &lt;null&gt; values are not supported. This parameter must be present at AC changes are not dynamically updated in ACD Server, so adding this parameter or parameter, requires a restart of the ACD Server.</td>
</tr>
<tr>
<td><strong>BatchSaveSalesforceCallLogs</strong></td>
<td>Use this parameter to configure the way the Salesforce web client saves custom Salesforce saves attributes in an iterative method, one at a time.</td>
</tr>
<tr>
<td></td>
<td>• Set the parameter to 1 to save all custom parameters at once.</td>
</tr>
<tr>
<td></td>
<td>• Set the parameter to 0 (which is the default) to enable the iterative save method.</td>
</tr>
<tr>
<td><strong>Notes:</strong></td>
<td>Setting this parameter to 1 to save all parameters at one, is firm. If there is an error during the saves will fail. Otherwise, if there is no errors, the saves are successful.</td>
</tr>
<tr>
<td></td>
<td>You mustreload the SIP Soft Phone or log in again to Salesforce to save the changes.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>BridgeHostTrustedSites</td>
<td>Use this parameter to provide BridgeHost with a list of trusted IP addresses, so that connections can be established from anywhere. By default, Session Manager only trusts connections from clients on the same subnet. Enter values in the following pipe-delimited format: `&lt;IPAddress&gt;</td>
</tr>
<tr>
<td>Call Analysis Language</td>
<td>CIC can provide language specific call analysis based on the language specified with the parameter. If the value is not specified, call analysis uses CIC's default language. Enter the language value such as &quot;en-US&quot;. The value of the parameter must match the language folder name located in the `[drive]:[install folder]\IC\Resources\i3ca directory on the server. For more information on Call Analysis, see the following topics: Media Servers.</td>
</tr>
<tr>
<td>Call Forward Analysis Mode</td>
<td>This server parameter affects the &quot;SystemIVRFollowMeSequential.ihd&quot; handler. The possible parameters values are: DEFAULT (default settings), CA_DISABLE (disable Call Analysis), VM_DISABLE (disable VM Analysis), FULL_DISABLE (set both to false). If you set this parameter to &quot;FULL_DISABLE,&quot; then CIC stops all forms of call analysis for agents who have selected either the Follow-me status or the Forward status. Invalid values are: true, yes, false, and no.</td>
</tr>
<tr>
<td>Call History Max Size</td>
<td>Use this parameter to set the number of calls per user to save in the Call History. The default value is 300.</td>
</tr>
<tr>
<td>Call History Max Time</td>
<td>Use this parameter to set the time in hours to save the call information saved in CIC clients. The default value is 72, meaning the call history lists 3 days of information. The number of calls is reached (See Call History Max Size).</td>
</tr>
<tr>
<td>Callback Interaction Recovery Enabled</td>
<td>Create this parameter and assign a non-zero value to enable switchover support. This server parameter is available in IC 4.0 SU3 and later releases.</td>
</tr>
<tr>
<td>Chat Interaction Recovery Enabled</td>
<td>Create this parameter and assign a non-zero value to enable switchover support. This server parameter is available in IC 4.0 SU3 and later releases.</td>
</tr>
<tr>
<td>ClientDirectoryPageSize</td>
<td>Use this parameter to specify the number of directory records to display on a single interface. The default value is 25.</td>
</tr>
<tr>
<td>Confirm Station Connection</td>
<td>Enabling this server parameter sends an eCallEvent_StationConnectionConnect to the ConfirmStationConnection initiator, and StationInteraction tool step. This allows the User to intercept a remote client connection call and change the handler. Valid values are: true, yes, false, and no.</td>
</tr>
<tr>
<td>ConnectionCache.ODBC.Timeout</td>
<td>This server parameter provides a way to explicitly set the timeout for connection cache. You can use this parameter to fine tune the performance of your database connections for seconds.</td>
</tr>
<tr>
<td><strong>Server Parameter</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Continue to Monitor Calls After Transfer</strong></td>
<td>This server parameter provides the option for an Interaction Supervisor user to continue monitoring a call if it is transferred away from the agent. By default, monitoring is not enabled if the call is transferred away from the agent. To enable this option, set the parameter to Y, Y. For more information, see “Monitor Agent, Station, Workgroup” in Interaction Supervisor Help.</td>
</tr>
<tr>
<td><strong>CustomOnHookNotification</strong></td>
<td></td>
</tr>
<tr>
<td><strong>DefaultSpeedDialPageSize</strong></td>
<td>If <strong>MaxSpeedDialPageSize</strong> is not defined, CIC uses this parameter to determine how many directory records to display in a Speed Dial view. For more information, see Max Speed Dial By Page Size in the System Administration Guide.</td>
</tr>
<tr>
<td><strong>DialByNameExtensionLength</strong></td>
<td>Defines how many characters can be used in searching a party by last name. Companies with large directories can extend the default search character to 4. This parameter allows for more specific search results.</td>
</tr>
<tr>
<td><strong>DID Ringback Only</strong></td>
<td>If you do not like the current voice prompt that plays with DID, you can change the default prompt. To make the change, create this server parameter with one of the following values: <strong>c</strong>, <strong>C</strong>, or <strong>C</strong>. For more information, see DID Custom Ringback in the System Administration Guide.</td>
</tr>
<tr>
<td><strong>DirectorystoCacheOnSMStartup</strong></td>
<td>Lists the directories that Session Manager will cache on startup. By default all directories in the Local Directory are cached upon the first request.</td>
</tr>
<tr>
<td><strong>Disable Related Interactions</strong></td>
<td>In case of system degradation due to rapid multiple related interactions queries, a mechanism was put into place. In order to shut off all automatic related interactions queries, IT service desk can shut off server parameter, and set the value to True. As long as this server parameter exists with the specified value, no related interactions will be served. <strong>Note</strong>: The related interactions feature is only available in SQL Server installations. If an Oracle database is detected, the related interactions feature will be unavailable. Interaction search and interaction history are available in SQL Server installations.</td>
</tr>
<tr>
<td><strong>DiscardFailedFax</strong></td>
<td><strong>Note</strong>: This server parameter is not used when Media Server Fax is enabled. See Media Configuration – Fax Server. Use this server parameter to disable delivery of partial faxes on fax failure. If this parameter is set to True, partial faxes are discarded. The value is 0 by default, and partial faxes are delivered on a best-effort basis.</td>
</tr>
<tr>
<td><strong>Don’t Allow Users To Delete Recordings</strong></td>
<td>Enter this parameter to turn off the ability for users to delete recordings. There is no way to turn on this parameter; the presence of this parameter turns off the ability to delete recordings.</td>
</tr>
</tbody>
</table>
| **EmailEditor**                              | This parameter determines which editor agents use to format their emails in emlx. The editor appears as a toolbar of formatting options.  
  - To use the Telerik editor, set this parameter to 1.  
  - To use the MSHTML editor, set this parameter to 2.  
  For more information on how agents use the editor, see the Interaction Desktop Documentation Library.  
  **Notes:**  
  This parameter affects all users of Interaction Desktop. An agent cannot select one editor and then another.  
  In Interaction Desktop, the MSHTML editor is available for only the Email Editor view and Editor view. For more information, see the Interaction Desktop Documentation Library. |
If you do not specify a value, then the Telerik editor is used.

**Important:** If you configure the CIC clients to use the MSHTML toolbar, the Email Admin User are unavailable. If users had the Email Editor or Email Preview view open before be closed. In order to get these views back you would have to switch the configuration mode. Once this is done the user can re-add these views or you can push out a different user.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email Admin User</td>
<td>When listening to voicemail messages remotely or through the TUI, the system of number to a Display Name in the system, then reads &quot;Voicemail from (Displayed)&quot;. Then the system reads the phone number that the call is from. If the call is from an external number, then the ICAdmin account del user. Use this parameter to show the external number (remote number) instead of ICAdmin. Set the value to a CIC user name or the display name for that user.</td>
</tr>
<tr>
<td>Email Stream</td>
<td>This parameter allows a voicemail opened from Exchange via the IC server TUI has rather than copy the entire contents of the message. This parameter is helpful in an IC server might be in one location and the Exchange Server at another remote. You turn on this parameter.</td>
</tr>
<tr>
<td>Enable CaaS Speech Billing</td>
<td>For CaaS customers only. This parameter determines whether the IC billing system provides usage-based Speech (ASR/TTS). If this parameter is set to True, then the IC billing system sends usage information to CaaS Billing system. The default value is false.</td>
</tr>
<tr>
<td>Enable Media Server Call Analysis</td>
<td>When this setting is enabled (set to &quot;1&quot; or &quot;true&quot;), and the &quot;Use Media Servers for call analysis&quot; check box is selected, call analysis is turned on. When turned on, &quot;Media Server&quot; Analysis Type drop-down list on the SIP Line Configuration page. If you delete &quot;Media Server&quot; option will disappear and the Interaction Media Server will no longer be available.</td>
</tr>
<tr>
<td>EnableSSOConfiguration</td>
<td>To activate the Single Sign-on Configuration Utility plug-in, create this server parameter. The default value is False. The Single Sign-on Configuration Utility plug-in simplifies the creation of a SAML mechanism for your Interaction Center Server. For more information about the SAML Utility plug-in, see the Identity Providers Technical Reference in the CIC Documents.</td>
</tr>
<tr>
<td>ErrorOutIfT38ReinviteIsNotSupported</td>
<td>Create this parameter and set to &quot;true&quot;, to help prevent 'stuck' calls if REINVITE is not supported. For more information, contact your authorized Interactive Intelligence support representative.</td>
</tr>
<tr>
<td>External Pick Access Codes</td>
<td>(Value = a list of any strings, separated by a semicolon, that will be used as a pin for external pick access codes. If the attribute is set, then external callers must enter this pin number to pickup a call outside the CIC system. External callers can pickup held, parked or alerting calls from an external account. This parameter can be used in a scenario where a user can use a cell phone to pickup a call on the system, and then alert another user. For example, you have attended a meeting and Sarah came and said she parked a call on your queue. You dial into your IC server and pickup the call.</td>
</tr>
<tr>
<td>Fax Header &quot;From&quot; String</td>
<td>Set this parameter to the appropriate replacement for the English string, &quot;From&quot; in the fax message.</td>
</tr>
<tr>
<td>Fax Header &quot;To&quot; String</td>
<td>Set this parameter to the appropriate replacement for the English string, &quot;To&quot; in the fax message.</td>
</tr>
<tr>
<td>Server Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Force 200 Response For Delayed Media Remote Initiati...</td>
<td>This server parameter applies to customers using phones that are configured with persistent media connections and that are connected to a CUCM. These customers may experience issues with remote stations that cannot resume persistent connection calls placed on remote stations. The calls are dropped instead. To remedy this problem, create this server parameter and set it to True.</td>
</tr>
<tr>
<td>Force Message Button Password Only</td>
<td>Set this parameter to Y, Yes, T, True or 1 for users to be prompted to enter only the voicemail access code when using the message button on the station. Users must have the station set as the default workstation for the user.</td>
</tr>
<tr>
<td>Generic Parameter with Replaces</td>
<td>Cisco Series 7960 Customers: To make the Call Recovery Feature compatible with the 7960 phones, set this parameter to True. The default value is False.</td>
</tr>
<tr>
<td>Global Remote Message Limit</td>
<td>This parameter limits the number of messages enumerated in the mail folder by the system. If a value is given, it overrides other email settings and is the maximum number of messages each user can view. The value set to zero, it will return all messages. <strong>NOTE:</strong> Beginning in 2.3, the message limit is set globally in the Mail container, the server parameter for backward compatibility issues, but you should start using the Mail setting instead. The Mail setting takes precedence over the server parameter.</td>
</tr>
<tr>
<td>HDSI Switchover</td>
<td>This server parameter informs TsServer that the HDSI SIB is in use in a switchover event. The value can be set to: true, yes, no, or false. The default value is false.</td>
</tr>
<tr>
<td>Honor User Language</td>
<td>Set this parameter to Yes or True to recognize the user's default language set in the Interaction Administrator. For example, an IC server may have users in multiple countries. A UK user's voice mail message should be presented in UK English, while a German user's voicemail message should be presented in German. Based on this server parameter, IC sets the language of the call based on the user's language setting. If this server parameter is not enabled, the default behavior does not change.</td>
</tr>
<tr>
<td>ICRenderServerHost</td>
<td>After you run the IC Render Server setup, create a server parameter with the name ICRenderServerHost and type the name of the computer running the IC Render Server.</td>
</tr>
<tr>
<td>Immediate Socket Operations</td>
<td>This is an optional general system parameter for TLS and TCP transport lines. If persistent TCP or TLS connections during times of high call volume, set this parameter to true. It allows TLS and TCP connections and disconnections. The default value is False.</td>
</tr>
<tr>
<td>Include Fax With Notification</td>
<td>Set this parameter to Yes, for all users that are setup for fax notifications to receive an attachment to the fax notification email. The default value is No.</td>
</tr>
<tr>
<td>Interaction Conference Support</td>
<td>This server parameter is created by the Interaction Conference install, and should be present in the system. The presence of this parameter signifies that the Interaction Conference module is licensed and enabled.</td>
</tr>
<tr>
<td>INTERNAL_USER_PIC_URL</td>
<td>This parameter enables the Company Directory shortcut menu in the CIC clients to display a user’s photo for each user. Set the value to <a href="http://intranet.yourcompany.com/users/$(0)/image.png">http://intranet.yourcompany.com/users/$(0)/image.png</a>, where you replace the example value with actual valid URI pointing to images. The string formatting placeholder &quot;$(0)&quot; substitutes the currently selected user’s ID into the URL string.</td>
</tr>
<tr>
<td>INTERNAL_USER_LOCATION_PIC_URL</td>
<td>This parameter enables the “Office Location” feature available in Interaction Client (double-click) in the Company Directory. When selecting Office Location, the user’s office location photo is displayed. Set the value to <a href="http://intranet.yourcompany.com/offices/$(0).png">http://intranet.yourcompany.com/offices/$(0).png</a>, where you replace the example value with actual valid URI pointing to images. The string formatting placeholder &quot;$(0)&quot; substitutes the currently selected user’s ID into the URL string.</td>
</tr>
<tr>
<td><strong>IR Search Unique Tracker Joins</strong></td>
<td>This optional server parameter controls the number of recordings returned when a search is run that includes the search attributes Date/Time range and User Name. When this server parameter is set to 1, in addition to returning recordings for the search attributes, recordings are also returned for participants whose last name matches the specified criteria.</td>
</tr>
<tr>
<td><strong>ISDN Inband Dial Enabled</strong></td>
<td>Add this parameter and set the value to <code>True</code> to enable the feature that allows a code to be dialed inband.</td>
</tr>
<tr>
<td><strong>IWPCallMonitoringOperationTimeouts</strong></td>
<td>Add this parameter to specify timeout values in milliseconds. To specify a single operation, type the value in milliseconds. For example, 10000. To specify timeouts for different types of call operations, use a pipe `</td>
</tr>
<tr>
<td><strong>IwpLdapSyncFrequency</strong></td>
<td>Add this parameter to control how frequently IC syncs with LDAP. You must restart IC in order for the parameter to take effect. The default is 5 seconds. <strong>Notes:</strong> In earlier CIC releases, the LDAP sync frequency defaulted to 5 minutes. If you change this parameter to a lower value, CIC will continue to use the sync value you set. All new servers added to the IWP's IC server configuration are automatically created with the new value.</td>
</tr>
<tr>
<td><strong>IVRReportingTransactionBatchCount</strong></td>
<td>Add this parameter to designate the batch count for IVR tracing transactions. Prior to 2015 R3, all IVR tracing transactions were sent out one at a time. This led to increased latency and reduced throughput. When this parameter is enabled, IVR tracing transaction batches are sent in groups, with the number of transactions defined by this server parameter. To disable transaction batching, set this parameter to zero (0). The default value is 100.</td>
</tr>
<tr>
<td><strong>IVRReportingTransactionDelayMilliseconds</strong></td>
<td>Add this parameter to designate the delay in milliseconds that will occur after an IVR transaction is sent. This delay results in a throttling of transactions when the number of transactions overwhelms the system. To prevent this delay from being used, set this parameter to zero (0). The default value is 5000.</td>
</tr>
<tr>
<td><strong>IVRReportingTransactionDelayThresholdSeconds</strong></td>
<td>Add this parameter to designate the threshold in seconds of the length of time an IVR tracing transaction takes. If the transactions exceed this threshold three consecutive times, then the delay in milliseconds defined by the <code>IVRReportingTransactionDelayMilliseconds</code> parameter will be engaged. If subsequent transactions are under this threshold five consecutive times, then the delay parameter will be disengaged. To disable the automatic throttling mechanism, set this parameter to zero (0). The delay will occur every time.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Leave Dynamic Calls Connected on Shutdown</td>
<td>Add this parameter and set it to <strong>True</strong> to keep dynamic calls connected in the call agent. The default value is <strong>True</strong>. <strong>Note:</strong> For development and test machines, set this parameter to <strong>False</strong>.</td>
</tr>
<tr>
<td>Mail Interaction Recovery Enabled</td>
<td>Create this parameter and assign a non-zero value to enable switchover support server parameter is available in IC 4.0 SU3 and later releases.</td>
</tr>
<tr>
<td>Mail Maximum Interactions</td>
<td>Add this parameter to specify the maximum number of email interactions that can be processed at one time. This is not a typical situation, but for example you might specify “1000” for development and test machines.</td>
</tr>
<tr>
<td>Max T.38 Datagram Size</td>
<td>This parameter allows you to configure the max datagram size of T.38 packets for each fax session. If the server parameter is undefined or set to -1, the media server determines the max datagram size. You can specify any positive value up to the maximum supported by the media server, but the recommended value is 150.</td>
</tr>
<tr>
<td>Max Cover Page Size</td>
<td>This parameter determines the maximum size of a cover page in Interaction Fax parameter is 10,000 KB. If the cover page for a fax exceeds the value set in this parameter, it will not be sent.</td>
</tr>
<tr>
<td>MaxDirectoryStatusWatches</td>
<td>Add this parameter and set the value to a number to specify the maximum size of a directory before the interface changes to a paged interface.</td>
</tr>
</tbody>
</table>
| MaxSpeedDialPageSize                     | Use this parameter to specify the maximum number of directory records to display on the Web interface. This parameter works in conjunction with the **DefaultSpeedDialPageSize**.  
  - If you do not define **DefaultSpeedDialPageSize** and the requested number of contacts returned is less than or equal to MaxSpeedDialPageSize, the number of contacts returned is limited to MaxSpeedDialPageSize.  
  - If you define only **DefaultSpeedDialPageSize**, the number of contacts returned is limited to DefaultSpeedDialPageSize.  
  - If you define both **MaxSpeedDialPageSize** and **DefaultSpeedDialPageSize**, the number of contacts returned is limited to MaxSpeedDialPageSize, then the request is denied. If greater than MaxSpeedDialPageSize, the DefaultSpeedDialPageSize will be returned.  
  - If you do not define either **MaxSpeedDialPageSize** or **DefaultSpeedDialPageSize**, the number of contacts returned is limited to 25. |
<p>| Maximum Ringing Calls per Second         | Add this parameter to limit the number of station calls that CIC places every second. <strong>Note:</strong> If you are using workgroups that are configured as Group Rings, set this parameter to “10” for stability. By default, there is no limit. |
| MaximumHttpSessions                      | Add this parameter to specify the maximum number of HTTP sessions that Session Manager can handle before the maximum threshold is reached, any subsequent attempts will be denied until Session Manager is under the limit. <strong>Note:</strong> This limit is per Session Manager and not the IC server as whole. To turn this limit off, set it to “0”. The default value is 1000. |
| Non-silence Timeout                      | When using <strong>Media Server</strong>, set this parameter to specify in milliseconds before a timeout occurs when no silence is detected. If this parameter doesn’t exist or is set to 0, there is no timeout. The value of this parameter should be greater than the value of the <strong>Answering Monitor</strong> parameter, otherwise, the timeout occurs before silence is detected. |</p>
<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OnPhoneDoes</td>
<td>Set this server parameter to prevent users’ “Time in Status” from changing when they do not want their status to change). To enable, set the value to <strong>true</strong>. To return to the previous behavior, set the value to <strong>false</strong>.</td>
</tr>
<tr>
<td>Outlook Data Source</td>
<td>This server parameter is used by handlers for Data Manager queries of Outlook Interaction Mobile Office. The name of the parameter is the same name as the associated CIC Data Source Configuration. Parameter value: <strong>&lt;the data source name for outlook private contacts&gt;</strong></td>
</tr>
<tr>
<td>PAS_HandlerResponseTimeout</td>
<td>Use this parameter to specify the number of seconds IPA should wait before displaying a Handler action if it does not execute successfully. If the parameter is not set, the default is 5 seconds. If the server parameter’s value is 0, then the wait time is unlimited. <strong>Note</strong>: Only processes migrated from Interaction Process Automation 3.0 use this parameter. Interaction Process Automation 4.0, you can configure timeout values for each activity.</td>
</tr>
<tr>
<td>PAS Maximum Monitored Flows</td>
<td>This server parameter determines the maximum number of monitored process flows that can be displayed in IC Server Manager. You can use it to reduce the number of processes displayed to prevent much data. Set this parameter to any value to override the default maximum value of 100.</td>
</tr>
</tbody>
</table>
| Play Queue Announcements             | This server parameter applies to non-DID calls (values are not case sensitive):  
  - Neither (N) - Neither internal or external calls will hear queue announcements  
  - Internal (I) - only internal (intercom) calls will hear queue announcements  
  - External (E) - only external calls hear queue announcements (this is the default behavior if the parameter is not set or set with an invalid value)  
  - Both (B) - both internal and external calls hear queue announcements **Note**: DID calls: Queue announcements are different than the DID prompt used when a DID number is called (only accessible from an external, inbound call), queue announcements are handled by **Play Queue Announcements** for more information. |
| Prevent Multiple Proactive Recordings | Set this server parameter to **True** to prevent multiple recordings from being created.                                                                                                                                 |
| ProblemReporterPath                  | Use this server parameter to specify the local path to store Problem Reporter files. The default path is **<ICservername>\i3\IC\ProblemReporter\<CIC client user>**. This parameter is used by the Problem Reporter. |
| Provision Auto-Provisioning Enabled  | Set this parameter to **No** to disable the auto-provisioning feature. This returns to the old behavior where there is no setup label. It allows the phone to be associated to a managed IP phone, and a restart of the provisioning server is required to make this setting effective. |
| Provision FTP Enabled                 | This parameter allows you to enable FTP on the provisioning server. Set the parameter to **Yes** to enable FTP. If the value is anything other than “Yes” (case insensitive), FTP is disabled. If the FTP parameter is **true**, the default behavior is FTP enabled. **Note**: The provision server must be restarted after adding/modifying the parameter for the changes to take effect.   |
| Provision HTTPS Mutual Authentication | Set this parameter to **Yes** and enable **Use HTTPS Always** to support mutual authentication. This parameter authenticates the IP phone, and the IP phone authenticates the server. Also, the default lines certificate authority signed by the **Default Lines Certificate Authority**. A restart of the provision server is required to make this setting effective. For more information, see **IC Managed IP Phones Administrator’s Guide**. |
Provision ISS Manual VLAN ID Enabled

For more information, see *Managed IP Phone Advanced Options*.

QPSReportingTransactionBatchCount

Add this parameter to control the batching of the queue period stat database output by Stat Server at every interval.

To reduce the StatServer CPU usage, reduce the batch count. Be aware, however, that large PMQ files could become backed up on the hard drive.

To increase the StatServer CPU usage, increase the batch count. This also increases processing and reduces PMQ file backups if they become a problem with the database.

The default value is 100.

Redact Using Default Expression

This parameter allows you to filter most credit card numbers and social security and email messages. These numbers are replaced with masked numbers so that sensitive information is protected.

By default, masked numbers appear as "###############".

See also the *Additional Redaction Expression* and *Redaction Replacement Text*.

Redaction Replacement Text

This parameter allows you to specify the how masked numbers appear.

Optionally use this server parameter with the *Redact Using Default Expression* and *Additional Redaction Expression* server parameter.

Reject T38 If Multiple Media In INVITE

Some SIP carriers offer SIP INVITE messages with multiple media lines for multiple RTP (voice) and T.38 (fax). When this server parameter is set to Yes (default), Intuit reassigns the T.38 portion of these INVITE messages while acknowledging and processing the INVITE.

Note:

This server parameter does not affect SIP REINVITE messages that change the media T.38.

Remote Station Call Analysis Answer Supervision

Call analysis should terminate as soon as a call connects for remote stations. This behavior begins in IC 4.0 SU3. To revert to the previous behavior, set this parameter to 0.

RemoteEmailFormLimit

This server parameter limits the number of email forms that can be open simultaneously. This includes the Email Window for Incoming Messages and Email Window for Outgoing Messages.

The server parameter applies only to CIC clients in a Citrix or Terminal Services environment. To disable the limit, set this parameter to -1.

ResetCalledIDOnExternalTransfer

This server parameter is a feature for customers that want to use Cisco Unity for CIC for voice mail.

When this parameter is set to 1 or Yes (enabled), if a call is in the IVR and it is being redirected to an external (EXTERNAL) CIC Directory Number/Queue, then CIC reassigns the Cisco T38 value to the value it's redirecting it to. This works well when CIC is acting as a front end.

Example:

1.) Call come into Main IVR (CalledID = 3000)
2.) IC Blindtransfers to another PBX at 3010.
3.) When the PBX gets the call. (CalledID = 3010)

ResetCalledIDOnTransferToUser

This server parameter is a feature for customers that want to use Cisco Unity for CIC for voice mail.

When this parameter is set to 1 or Yes (enabled), the system reassigns the Cisco T38 value to the value it's redirecting it to. This works well when CIC is acting as a front end.

Example:

1.) Call come into Main IVR (CalledID = 3000)
2.) IC Blindtransfers to another PBX at 3010.
3.) When the PBX gets the call. (CalledID = 3010)
"CalledID" value to the destination Directory Number any time a call is sent to a step.
Example:
1.) Call come into Main IVR (CalledID = 3000)
2.) CIC Blindtransfers the call to User logged into Station 7001. (CalledID = 7001)
3.) User then Blindtransfers to User logged into Station 7075. (CalledID = 7001)

<table>
<thead>
<tr>
<th>Rx Tree Init Collapsed</th>
<th>This server parameter gives users the option (on the Configuration tab in CIC client) to choose whether Management nodes open or closed when accessing Response Management. Set the value to 1 for the nodes to be collapsed initially.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAPI DSCP Value</td>
<td>If the Interactive Intelligence QoS driver is not installed, Interaction Center cannot send TTS through VoIP calls. Enter &quot;0x0&quot; to represent the Differentiated Services Code Point (DSCP) value inserted in RTP packets of VoIP interactions. The DSCP value can be set to any value, including zero, if there is a specific need to do so.</td>
</tr>
<tr>
<td>Screen Record Delta Frame Count</td>
<td>This optional server parameter controls the number of delta frames between a key touch and a recording. Increasing this value effectively decreases the size of screen recording data produced. For more information, see Interaction Recorder and Interaction Quality Manager CIC Documentation Library.</td>
</tr>
<tr>
<td>Seize Deactivated Lines</td>
<td>This parameter applies to analog lines. When present and set to a value of &quot;true&quot; or &quot;yes&quot;, this server parameter causes those lines to be seized and not configured as active in Interaction Administrator to the off-hook state. To keep those lines to receive a busy signal. <strong>Note</strong>: Values are not case sensitive.</td>
</tr>
<tr>
<td>Send FBMC Call Recordings To Notification Address</td>
<td>Set this server parameter to Y, Yes, T, True or 1 to have FBMC users’ call recordings and fax notification email address as configured in CIC client options. By default, this parameter is set to False, or disabled.</td>
</tr>
<tr>
<td>Send MWI to PBX</td>
<td>Set this parameter to Yes to send MWI to non-CIC stations. The default value is False.</td>
</tr>
<tr>
<td>Send Status Forward Notification</td>
<td>Set this parameter to Internal, External, All or None to determine which type of forwarding status notification is sent in an email notification if the user is in a forwarding status.</td>
</tr>
<tr>
<td>Server A Address</td>
<td>Specifies the alternate IP address of SwitchoverServer A in a dual NIC configuration.</td>
</tr>
<tr>
<td>Server B Address</td>
<td>Specifies the alternate IP address of SwitchoverServer B in a dual NIC configuration.</td>
</tr>
<tr>
<td>Show Legacy Res Mgt</td>
<td>Legacy response management containers (Interaction Messages, Interaction URL, and Fax) will not be displayed unless they contain legacy information. Use this parameter to display the legacy containers (whether they contain information or not). Set the value to &quot;1&quot; to display the legacy containers. If this parameter is not added or &quot;No&quot;, then the legacy response management containers will not be displayed in the CIC client.</td>
</tr>
<tr>
<td>Single-Sided Monitor</td>
<td>This parameter allows you to listen to both sides of a monitored call. The default is to listen to both sides. If the server parameter is set to 1, monitoring will only hear one side of the call. This parameter is helpful when you are short on conference resources, but in general, this should not be used. Setting the parameter to 1 is you save conference resources. In some situations, you might want to listen to both sides of the call.</td>
</tr>
<tr>
<td>SIP Phone Information Update</td>
<td>Enter this parameter and set the value to &quot;1&quot;, &quot;yes&quot;, or &quot;true&quot; for TS to dynamically update Model information, and MAC address for Polycom phones based on the User registration process. This server parameter is helpful when migrating IP phones.</td>
</tr>
<tr>
<td>Parameter Name</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| **Split E-1 Support** | A value of 1 tells TS to turn on Split E-1 support. You can then choose the type of Configuration dialog when creating a new line. Your choices will include:  
- <Not Split>  
- E & M  
- FXS Loopstart |
| **Split T-1 Support** | A value of 1 tells TS to turn on Split T-1 support. You can then choose the type of Configuration dialog when creating a new line. Your choices will include:  
- <Not Split>  
- E & M  
- FXS Loopstart |
| **StatServer_AlwaysTrackACWForLastACDIInteraction** | After an interaction is disconnected for an agent, the agent can manually change (After Call Work). By default, the Stat Server does not add the time that the agent spent in the last interaction. To track the ACW time, set it to true. |
| **StatServer_SendQPSNotification** | You can create the StatServer_SendQPSNotification parameter when you want to the Queue Period Initiator handler to generate a notification that contains QPS data. If the amount of user or workgroup data, the notification can become very large and take longer. In some cases, the Notifier service terminates. For this reason, the server parameter is requested at startup. |
| **Station Pickup User Validation** | (Value = Yes) - If this attribute is set, users must enter their extension and pass a password other than their own. Users only have access to the queues configured for their users. This parameter requires that the user identify themselves if they are dialing from a non-logged in station. |
| **Stop Recording T38** | Use this parameter to automatically stop the proactive recording of a call if the call is being recorded. When the call is switched to a T.38 fax call, you must enable this parameter if this parameter is not enabled, inbound and outbound faxes may fail. By default, this parameter is disabled. |
| **Stutter Tone** | If you create this server parameter and give it any non-null value, you will hear a tone that contains unheard voicemails. If you want to change the tone, it can be edited in System_StationOffHook. |
| **SupervisorViewSuspendDelay** | Use this parameter to tell Supervisor how long (in seconds) a view must be invisible before it is suspended. This parameter is queried at startup. If the parameter value is changed, Supervisor must be restarted to apply the change. |
| **SupervisorMaxActiveInvisibleViews** | Use this parameter to tell Supervisor how many invisible views may exist with active views. This parameter is queried at startup. If the parameter value is changed on the IC server, Supervisor must be restarted to apply the change. |
| **SuppressForwardingAnnouncement** | Currently, for “available, forward” calls, the prompt “your party is available at a reason (usually hold music) is played. If you do not want this prompt played, you can suppress it. To suppress the prompt, add this server parameter with a value of either Y, yes, or N, no (case sensitive). |
| **Switchover NetTest A** | For use with Switchover in WAN environments. Applies to “Pure SIP” or TAPI configurations. |
*Switchover NetTest A* specifies the name or IP address of a machine on the same network segment as the active server. It is used by the Switchover process on SwitchoverServer A when the backup server detects a failure condition. Whenever a failure condition is detected, Switchover on the backup server will attempt to contact this IP endpoint found on the same network segment as the active server. If Switchover cannot contact this endpoint within 10 seconds, it will assume the active server is still operable and not switch because it has no network connection (and thus cannot log an error to the event log and shut down processing). The backup server will not perform Switchover monitoring and replication to resume.

**Recommendation:** The value for *Switchover NetTest A* should be the closest “ping” address to SwitchoverServer B from SwitchoverServer A.

**Switchover NetTest B**

For use with Switchover in WAN environments. Applies to “Pure SIP” or TAPI configurations.

Specifies the name or IP address of a machine on the same network segment as the active server. It is used by the Switchover process on SwitchoverServer B when SwitchoverServer B detects a failure condition. If Switchover cannot contact this endpoint within 10 seconds, it will assume the active server is still operable and not switch because it has no network connection (and thus cannot log an error to the event log and shut down processing). The backup server will not perform Switchover monitoring and replication to resume.

**Recommendation:** The value for *Switchover NetTest B* should be the closest “ping” address to SwitchoverServer A from SwitchoverServer B.

**Switchover NetTest Timeout**

For use with Switchover in WAN environments. Applies to “Pure SIP” or TAPI configurations.

Used with Switchover NetTest A and Switchover NetTest B, this parameter specifies (in seconds) that Switchover should wait for an ICMP echo to return. By default, this value is 10 seconds.

**Switchover Monitoring**

For use in Interaction Director Switchover systems. Allows Interaction Processor monitoring and replication to resume instead of Telephony Services. The default value is set to "IP".

**Switchover IP Retry Delay**

For use in Interaction Director Switchover systems. When monitoring IP, this server parameter has the same effect as Switchover TS Failure Retry Delay.

**Switchover IP Timeout**

For use in Interaction Director Switchover systems. When monitoring IP, this server parameter has the same effect as Switchover TS Timeout.

**Switchover UDP Monitor**

Allows UDP (heartbeat) monitoring to be disabled. Create and set this server parameter to "Yes" if a failure occurs, file replication is in an unknown state. The backup server will not perform Switchover monitoring and replication to resume.

**Switchover UDP Maximum Ping Delay**

Specifies the number of failures (failure count increases each second a datagram is not returned to the backup server) before initiating a Switchover. Acceptable values are between 0 and 10 seconds. By default, this value is 5 seconds.

**Switchover TS Timeout**

Specifies the number of seconds that Switchover will wait for a Telephony Services (TS) ping before signaling a TS failure. The value should be between 5 and 10 seconds.

**Switchover TS Failure Retry Delay**

Specifies the number of seconds Switchover will wait after the active server fails a Telephony Services (TS) ping before retrying a TS ping. A second failure will cause the system to be greater than 0 seconds. The default is 1 second.

**SwitchMACAddress**

Specifies the MAC address of the Ethernet control card in the Dataprobe device.

**Switchover Ping on Aux Connection**

Set this parameter to Yes or 1 to move the TS ping from the main connection to the auxiliary connection.

**Note:** To enable QoS on the ping on the auxiliary connection (not the main connection), activate both the *Switchover Ping on Aux Connection* and the *Switchover Use QoS For Ping* parameter. QoS cannot be used on ping if only *Switchover Use QoS For Ping* parameter is enabled.
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Switchover Use QoS For Ping</strong></td>
<td>This parameter allows customized use of QoS for the TS ping on the auxiliary connection. Set this parameter to Yes if you want to prioritize ping (echo request and echo reply) packets. Further customization can be made using <strong>Switchover QoS DSCP</strong>, <strong>Switchover QoS Token Rate</strong>, and <strong>Switchover QoS Value 8021</strong>, each described below.</td>
</tr>
<tr>
<td><strong>Switchover QoS DSCP</strong></td>
<td>When <strong>Switchover Use QoS For Ping</strong> is enabled, set this parameter to set the value in the QoS byte. Differentiated Services Code Point (DSCP) is a significant bits of a packet. You can use DSCP to prioritize QoS traffic on switchover.</td>
</tr>
<tr>
<td><strong>Switchover QoS Token Rate</strong></td>
<td>When <strong>Switchover Use QoS For Ping</strong> is enabled, set this parameter to define the token rate for QoS traffic on switchover.</td>
</tr>
<tr>
<td><strong>Switchover QoS Value 8021</strong></td>
<td>When <strong>Switchover Use QoS For Ping</strong> is enabled, set this parameter to define the value 8021 (priority levels in both RTP and RTCP packets) for the QoS traffic.</td>
</tr>
<tr>
<td><strong>Tone Location</strong></td>
<td>Use this server parameter to set the global signaling tones for dial tone, busy signal, and other tones played by handlers. Entering a value does not change the signaling of the hardware; instead, it sets the global settings to be used. User and station settings can be changed by configuring a Custom Attribute on the User or Station object or by using the CustomValue attribute. Possible values: Belgium, France, Germany, Israel, Italy, Japan, Norway, Singapore, South Korea, Sweden, Switzerland, Taiwan, The Netherlands.</td>
</tr>
</tbody>
</table>
### Notes

Internal alerts are controlled by the global setting only. User and station internal alerting since the context of the tone is tied to the remote caller. Therefore, controlled by the server parameter setting only.

Ringback for outbound calls to delayed answer devices does not follow this setting. For ringback, set 'Ringback File' in Telephony Parameters. This type of ringback typically is used on a SIP line that is configured to use Delayed Media.

#### Track Abandoned Dialer Interactions in InteractionSummary

Beginning in 2016 R1, Interaction Dialer calls with a connect event are no longer included in the summary table. To re-enable this behavior, add this parameter and set it to "Y"

After you enable or re-enable this parameter, Interaction Tracker needs to re-sync its parameters, so you must do one of the following:

- Modify an item under Items tracked in Interaction Administrator - Uncheck the Items Tracked configuration (Interaction Tracker --> Configuration) and then apply the changes. You then can re-check (enable) that item if it you wish.
- Restart Interaction Tracker - we recommended taking this action after enabling or re-enabling this parameter.

#### TreatEndpointIdleAsFullIdle

By default, CIC disconnects a call when both endpoints are in the idle state (no RTP on Disconnect Time). If you want CIC to disconnect calls where only one endpoint is idle state, create this parameter and set to "On", "True", or "Yes" to enable it. Also see Reference in the CIC Documentation Library on the IC server.

#### TS Remove From Workgroup Conference Logic Active

This server parameter was added to make conferences conform to the same rules as for transfers. The default is set to TRUE.

If you set the value to FALSE, the function will be restored to the behavior prior to 2016 R1 where a workgroup call transferred from a three-party conference to a two-party transfer, and the call stays on the workgroup (even when it has been transferred in the system).

#### UseDNISStringComparison

This server parameter determines how the DNIS of an incoming call is handled in the Refer-To address URI.

- Set this value to 0 to evaluate the DNIS number as an integer.
- Set this value to 1 to evaluate the DNIS number as a string. This is useful:
  - The DNIS starts with leading 0's (for example: 000153)
  - The value of the DNIS is greater than 2^31, or 2147483648 (for example: 8889468999)

When the DNIS is evaluated as a string, the comparisons evaluate properly. For example, 000153 instead of 53. In the same way, 18889468999 is used instead of 2147483648 because 2^31 would otherwise be resolved to that numeric value.

#### UUI Headers Copied in REFER

UUI information is sent via a BlindTransfer or a ConsultTransfer to the transfer target. CIC duplicated the UUI information in the transferee's REFER request. However, this was removed from CIC 2016 R1.

If you want to duplicate the UUI information in the transferee's REFER request, a parameter must be set to true.

**Note:** The standard technique of forwarding UUI information to the new transferee is via the Refer-To address URI.
The default value is false.

<table>
<thead>
<tr>
<th>Waiting Call Indication</th>
<th>Call waiting is enabled out-of-the-box. The default for this parameter, if it is not used, is false. Use the Waiting Call Indication parameter to globally disable call waiting for a user with one of the following values: off, false, F, N.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workgroup Alert Users On Calls</td>
<td>Set this parameter to T (true) to alert users on calls for direct to queue processing. The default value is F (false).</td>
</tr>
<tr>
<td>Workgroup Distribution List Behavior</td>
<td>Set this parameter to True, Yes, or 1 to make a workgroup (without a queue) behave like a team. When this server parameter is enabled, voicemail messages left for a workgroup are routed to the workgroup members. The workgroup can not have an email address associated with it to work correctly. See “Set Up Voice Mail Distribution in Attendant” in the online help for more information.</td>
</tr>
</tbody>
</table>

**Related topics**

- Packaged Server Parameters
- Automated Switchover System Server Parameters
- Dialer Server Parameters
- E-FAQ Server Parameters
- Server parameters for IC Business Manager Views
- Text To Speech Server Parameters

The server parameters for the Automated Switchover System affect how interactions are handled when a switchover occurs. The following table lists the optional Switchover System server parameters that you can set. For information about the required Switchover System server parameters, see Packaged Server Parameters. For more information about the Automated Switchover System, see the Automated Switchover System Technical Reference in the CIC Documentation Library on the IC server.
<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Callback Interaction Recovery Enabled</td>
<td>To enable switchover support for callback interactions, add this parameter and assign it a non-zero integer. This server parameter is available in IC 4.0 SU3 and higher releases. By default, this parameter is set to &quot;0&quot; or &quot;Off.&quot;</td>
</tr>
<tr>
<td>Chat Interaction Recovery Enabled</td>
<td>To enable switchover support for chat interactions, add this parameter and set it to &quot;Yes&quot; or &quot;1.&quot; This server parameter is available in IC 4.0 SU3 and higher releases. <strong>Note:</strong> CIC does not support SMS resiliency when the Chat destination option is selected. By default, this parameter is set to &quot;0&quot; or &quot;Off.&quot;</td>
</tr>
<tr>
<td>Custom Upgrade Attribute Exceptions</td>
<td>For information about this server parameter, see the Automated Switchover System Technical Reference in the CIC Documentation Library.</td>
</tr>
<tr>
<td>Custom Upgrade File Synchronization Directories</td>
<td>For information about this server parameter, see the Automated Switchover System Technical Reference in the CIC Documentation Library.</td>
</tr>
<tr>
<td>Custom Upgrade File Synchronization Exceptions</td>
<td>For information about this server parameter, see the Automated Switchover System Technical Reference in the CIC Documentation Library.</td>
</tr>
<tr>
<td>Custom Upgrade Synchronization Directories</td>
<td>For information about this server parameter, see the Automated Switchover System Technical Reference in the CIC Documentation Library.</td>
</tr>
<tr>
<td>ForceSwitchoverFQDNs</td>
<td>This parameter enables the Switchover system to override the system-generated names for the switchover pair, which it automatically resolves. When this parameter is set to &quot;Yes&quot; or &quot;1,&quot; the Switchover system instead uses the names that the system administrator specifies in the SwitchoverServerFQDN A and SwitchoverServerFQDN B server parameters. <strong>Note:</strong> If this server parameter is missing or disabled, then Switchover will try to automatically resolve the FQDNs from the NetBIOS.</td>
</tr>
<tr>
<td>Mail Interaction Recovery Enabled</td>
<td>To enable switchover support for email interactions, create this parameter and assign it a non-zero value. This server parameter is available in IC 4.0 SU3 and later releases. By default, this parameter is set to &quot;0&quot; or &quot;Off.&quot;</td>
</tr>
<tr>
<td>Server A Address</td>
<td>To specify the IP address of the dedicated Switchover NIC on SwitchoverServer A in a dual or multiple NIC configuration, add this parameter. When Server A Address and Server B Address are set, the Switchover system uses these addresses exclusively to direct its traffic.</td>
</tr>
<tr>
<td>Server B Address</td>
<td>To specify the IP address of the dedicated Switchover NIC on SwitchoverServer B in a dual or multiple NIC configuration, add this parameter.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>When Server A Address and Server B Address are set, the Switchover system uses these addresses exclusively to direct its traffic.</td>
<td></td>
</tr>
<tr>
<td>SMS Interaction Recovery Enabled</td>
<td>To enable switchover support for SMS interactions, add this parameter and set it to &quot;Yes&quot; or &quot;1.&quot; This server parameter is available in CIC 2016 R4 and higher releases. By default, this parameter is set to &quot;0&quot; or &quot;Off.&quot;</td>
</tr>
<tr>
<td>StatServer_DisableQPSLoggingOnBackup</td>
<td>To disable the backup server from sending its log data to the CSV file, add this parameter and set its value to Yes.</td>
</tr>
<tr>
<td>Switchover Disable Gateway Ping</td>
<td>To enable the gateway ping, set this server parameter to &quot;No&quot; or &quot;0.&quot; To disable the gateway ping set the parameter to &quot;Yes&quot; or &quot;1.&quot; For more information about using this server parameter, see the Automated Switchover System Technical Reference in the CIC Documentation Library.</td>
</tr>
<tr>
<td>Switchover DS Request Timeout</td>
<td>To specify the timeout length (in seconds) for DS requests that are sent by the backup server to the primary server, add this parameter. The requests can be sent during either the initial startup of the backup server or the resynchronization with the primary server. When you enable the WAN Optimizations for DS Synchronization parameter, the minimum value for the Switchover DS Request Timeout parameter is 120 seconds. In this case, the 120-second timeout is used only as a temporary value. The Switchover DS Request Timeout parameter is not changed from its user-defined setting.</td>
</tr>
<tr>
<td>Switchover File Monitor Health Check Interval</td>
<td>Set this parameter to the number of seconds between each health check request that is sent from the backup server to the File Monitor on the primary server. To turn off the health check request, set this parameter to &quot;0.&quot; If no value is specified, the default value is 60 seconds.</td>
</tr>
<tr>
<td>Switchover File Monitor Health Check Timeout</td>
<td>Set this parameter to the number of seconds that the backup server gives File Monitor to respond to the health check request before it times out and traces the failure. If no value is set, the default value is 10 seconds.</td>
</tr>
<tr>
<td>Switchover IP Retry Delay</td>
<td>Add this parameter, if necessary, for use with Interaction Director Switchover systems. When monitoring IP, this server parameter has the same effect as Switchover TS Failure Retry Delay. The Interaction Director server install automatically creates this server parameter. Interactive Intelligence recommends that you review this server parameter in Interaction Administrator on the Interaction Director server to confirm the setting.</td>
</tr>
<tr>
<td>Switchover IP Timeout</td>
<td>Add this parameter, if necessary, for use with Interaction Director Switchover systems. When monitoring IP, this server parameter has the same effect as Switchover TS Timeout. The Interaction Director server install automatically creates this server parameter.</td>
</tr>
<tr>
<td><strong>Note:</strong> Confirm the setting of this server parameter in Interaction Administrator on the Interaction Director server.</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td></td>
</tr>
<tr>
<td><strong>Switchover Max Restarts</strong></td>
<td>To specify the maximum number of times in a restart period that a new process ID can be returned in the TS ping notification before a restart occurs, add this parameter. By default, this value is 2.</td>
</tr>
<tr>
<td><strong>Switchover Max Restarts Period</strong></td>
<td>To specify the time period (in seconds) during which the Switchover system counts TS ping notifications that contain new process IDs, add this parameter. By default, this value is 300 (5 minutes).</td>
</tr>
<tr>
<td><strong>Switchover Max Sequential Restarts</strong></td>
<td>To specify the maximum number of sequential times that a new process ID can be returned in the TS ping notification before a switch occurs, add this parameter. By default, this value is 2.</td>
</tr>
</tbody>
</table>
| **Switchover Max TS Failures** | To specify the number of TS ping failures the Switchover system on the backup server tolerates before starting a switchover, add this parameter.  
**Note:** Set this value greater than 0. The default value is 2  
**Note:** The failure count is reset each time the Switchover system successfully receives a response from TS on the primary server. |
| **Switchover Monitoring** | Add this parameter, if necessary, for use with Interaction Director Switchover systems.  
The Interaction Director server install automatically creates this server parameter. It sets up an IP ping process in Interaction Director configurations, which are similar to the TS ping process in CIC configurations. The default value is TsServer.  
**Note:** Confirm the setting of this server parameter in Interaction Administrator on the Interaction Director server. |
| **Switchover NetTest A** | Add this parameter, if necessary, for switchover in WAN environments. It applies to "Pure SIP" configurations only.  
Switchover NetTest A specifies the name or IP address of a computer on the same network segment as SwitchoverServer B. The Switchover system uses the IP address on SwitchoverServer A when SwitchoverServer A is the backup server.  
Whenever a failure condition is detected, the Switchover system on the backup server uses ICMP echo to ping this IP endpoint. It must find the IP endpoint on the same network segment as the active server. If the Switchover system cannot ping this endpoint, it assumes that the active server is still operable and doesn't switch because there a WAN failure.  
**Important:** Since the Switchover system no longer has a network connection (and thus cannot replicate changes), it logs an error to the event log and shuts down processing. Restart the backup server, so that the Switchover system can resume its monitoring and replication.  
**Recommendation:** The value for Switchover NetTest A is the closest “pingable” (ICMP echo) IP address to SwitchoverServer B from SwitchoverServer A. |
| **Switchover NetTest B** | Add this parameter, if necessary, for switchover in WAN environments. It applies to "Pure SIP" configurations only.  
This parameter specifies the name or IP address of a computer on the same network segment as SwitchoverServer A. The Switchover process on SwitchoverServer B uses the IP address when SwitchoverServer B is the backup server. |
<table>
<thead>
<tr>
<th><strong>Recommendation</strong>: The value for Switchover NetTest B is the closest &quot;pingable&quot; (ICMP echo) IP address to SwitchoverServer A from SwitchoverServer B.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Switchover NetTest Timeout</strong></td>
</tr>
<tr>
<td><strong>Switchover Notifier Reconnect Delay</strong></td>
</tr>
<tr>
<td><strong>Switchover Ping on Aux Connection</strong></td>
</tr>
<tr>
<td><strong>Switchover Primary Monitor Ping Delay</strong></td>
</tr>
<tr>
<td><strong>Switchover Primary Monitor Retry Ping Delay</strong></td>
</tr>
<tr>
<td><strong>Switchover Primary Monitor Retry Count</strong></td>
</tr>
<tr>
<td><strong>Switchover Primary Monitor Timeout</strong></td>
</tr>
<tr>
<td><strong>Switchover QoS DSCP</strong></td>
</tr>
<tr>
<td><strong>Switchover Reconnect Delay</strong></td>
</tr>
</tbody>
</table>
You can use this parameter to prevent switchovers from occurring on networks where the connection occasionally drops for a short, consistent amount of time. The default value is 90 seconds.

Switchover Reconnect Timeout

Specifies the duration in seconds that switchover on the backup will attempt to reconnect with the primary. This timeout begins once the primary monitor has diagnosed the connection and signaled the appropriate event to the switchover state machine. Therefore, the actual duration from the time connections issues were first detected to the time the backup gives up and switches over will be longer than this because there is the interval where the retry pings are sent and then the network checks all made by the primary monitor. This can take around 15 seconds if the backup is not connected to the network or 70 seconds if the primary is not connected to the network.

A value of 0 indicates an immediate switchover when a connection is lost. A value greater than 0 indicates the number of seconds that the timer will be set to expire. The default value is 30. The minimum value is 0. There is no maximum value.

Switchover TS Failure Retry Delay

To specify the number of seconds that the Switchover system waits, after marking a TS failure, before sending the second ping, add this parameter. The system switches once the failure count exceeds the value stored in the Switchover Max TS Failures parameter, which defaults to 2.

Note: Set this value to greater than 0 seconds. The default is 1 second.

Switchover TS Timeout

To specify the number of seconds that the Switchover system waits from the time the ping is sent until it is marked as a TS failure, add this parameter. This parameter also specifies the number of seconds that the Switchover system waits after a TS success before it sends another ping.

Set this value between 5 - 60 seconds. The default is 10 seconds.

Switchover Unreachable Primary Ping Count

Specifies the number of times that a ping set is sent to the primary before switching over. A ping set consists of one or more pings sent during a single attempt to detect the primary’s system on the network. Pings will be sent until the primary responds or the maximum number of ping attempts is reached.

This count is not the number of pings sent in a single set when trying to contact the primary but the maximum number of sets before a switchover will occur.

The delay between sending ping sets is defined by the Switchover Unreachable Primary Ping Delay parameter. A value of 0 results in an immediate switchover. No further attempts are made to detect the primary after it is considered unreachable. This is the default value if the parameter is not defined. A value of -1 results in unlimited attempts until the primary is reachable. In this case, if the connection issue has been determined to be an unreachable primary, switchover will not occur since the backup will keep waiting for the primary to be reachable again. This value should only be used if a switchover should never occur as long as the primary is unreachable. The default value is 0. The minimum value is -1. There is no maximum value.

Switchover Unreachable Primary Ping Delay

Specifies the interval in seconds between sending ping sets to the primary monitor when it is unreachable. See the
<table>
<thead>
<tr>
<th>Related topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaged Server Parameters</td>
</tr>
</tbody>
</table>

### Related topics

#### Packaged Server Parameters

---

**Dialer Server Parameter**

The optional server parameter for the Dialer check box is:

<table>
<thead>
<tr>
<th>Dialer Server Parameter</th>
<th>Description</th>
<th>Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dialer Support</td>
<td>Set the value of this server parameter to 1 to enable the &quot;Dialer&quot; check box in Interaction Administrators User configuration. This server parameter, along with the appropriate feature license is required for expose Interaction Dialer in Interaction Administrator.</td>
<td>Interaction Dialer</td>
</tr>
</tbody>
</table>
The optional server parameters available for e-FAQ support are:

<table>
<thead>
<tr>
<th>e-FAQ Server Parameter</th>
<th>Description</th>
<th>Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>e-FAQ Support</td>
<td>This server parameter enables the e-FAQ Interaction Administrator plug-in to register e-FAQ servers for use with the CIC clients. A value of 1 means e-FAQ is installed, and a value of 0 means e-FAQ is not installed.</td>
<td>e-FAQ</td>
</tr>
<tr>
<td>Hide e-FAQ</td>
<td>This server parameter removes the e-FAQ tab from the CIC clients. If the e-FAQ Support server parameter is 1 and Hide e-FAQ server parameter is 0, the e-FAQ tab will be displayed as well as the options menu. If the e-FAQ Support server parameter is 0 and Hide e-FAQ server parameter is 0, the e-FAQ tab will show a &quot;commercial&quot; for e-FAQ and the e-FAQ Options menu item will be gray and not available. If the Hide e-FAQ server parameter is 1, neither the e-FAQ tab nor the e-FAQ Options menu item will be displayed regardless of the value for e-FAQ Support.</td>
<td>e-FAQ</td>
</tr>
</tbody>
</table>

**Server parameters for IC Business Manager Views**

You can set the following server parameters to restrict the number of records that may appear in the IC Business Manager statistics views.

To set these server parameters, add the parameters in the **Server Parameters** container. Then set the values as necessary.

**Note:** Interactive Intelligence performed scalability tests for 5000+ agents and 500+ supervisors. During these tests, we were able to allow each supervisor to observe up to 720 agent statistics and 720 workgroup statistics simultaneously. Exceeding the tested number of simultaneous statistics watches could cause IC server scalability issues.

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MaximumAgentsInAgentGraphView</td>
<td>Set this parameter to limit the number of agents shown in the Agent Graph view.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>MaximumAgentsInAgentOverviewView</td>
<td>Set this parameter to limit the number of agents shown in the Agent Overview view. The default value is 20.</td>
</tr>
<tr>
<td>MaximumStatisticsInAgentGraph</td>
<td>Set this parameter to limit the number of statistics shown in the Agent Graph view. The default value is 40.</td>
</tr>
<tr>
<td>MaximumStatisticsInWorkgroupGraph</td>
<td>Set this parameter to limit the number of statistics shown in the Workgroup Graph view. The default value is 40.</td>
</tr>
<tr>
<td>MaximumStatisticsInWorkgroupOverviewView</td>
<td>Set this parameter to limit the number of statistics shown in the Workgroup Overview view. The default value is 180.</td>
</tr>
<tr>
<td>MaximumWorkgroupsInWorkgroupOverviewView</td>
<td>Set this parameter to limit the number of statistics shown in the Workgroup Overview view. The default value is 20.</td>
</tr>
<tr>
<td>MaximumWorkgroupsInWorkgroupGraphView</td>
<td>Set this parameter to limit the number of workgroups shown in the Workgroup Graph view. The default value is 20.</td>
</tr>
</tbody>
</table>
The optional server parameters for the CIC’s Telephony tools for text-to-speech (TTS) conversion can change the default behavior of the TTS tools and the way CIC interfaces with the TTS engine on the IC server. If the server parameter is not set (that is, it does not appear in the Server Parameters container in Interaction Administrator), the default values are in effect for each condition.

The most common optional TTS server parameters are listed in the following table. Other server parameters can be set as needed, under the direction of qualified Interactive Intelligence technical support staff.

<table>
<thead>
<tr>
<th>TTS Server Parameters</th>
<th>Description</th>
<th>Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>TTS Audio File Directory</td>
<td>Specifies the path to a .wav file created with the Record String tool if the path was not specified in the tool step. (For more information, see the Record String tool in Interaction Designer's online help.)</td>
<td>TTS</td>
</tr>
<tr>
<td>TTS Speech Pitch</td>
<td>An integer that specifies the number of hertz used to determine the voice pitch of the TTS engine reading a user's email or other text.</td>
<td>TTS</td>
</tr>
<tr>
<td>TTS Speech Rate</td>
<td>An integer that specifies the rate (words per minute) at which the TTS engine reads a user's email or other text.</td>
<td>TTS</td>
</tr>
</tbody>
</table>

Set up forced authorization codes

To require users to enter an extension and a password in order to make a call, you can configure forced authorization codes.

There are many reasons you might want to use forced authorization codes. If you have a phone station in a reception area, you might set it up so an authorization code would have to be used to make a call. You might set codes so users, placing long distance calls from an associate's office, would have to enter their own extension and password to make a call.

The first step in setting forced authorization codes is including a phone classification in the server parameter "Toll Call Classification." Then, set the forced authorization codes by the Default User, users, members of roles and workgroups, or by stations.

Set up the Toll Call Classification server parameter

The server parameter "Toll Call Classification" is created during installation and includes the following classifications: Long Distance; International; and Unknown. You can add additional classifications or remove existing ones. To configure this server parameter:
1. In the list view of the Server Parameter container, double-click **Toll Call Classification**.

2. To add a phone classification, type the name exactly as it appears on the Classifications page in the Phone Number Configuration dialog. Use a semi-colon (;) between classifications. You can also delete classifications from the server parameter.

Next, set the **Forced Authorization Codes** to be required by Default User, User, members of Roles and Workgroups, or by stations.

**Set up the default user**

1. Double-click **Configuration** in the Default User container.

2. On the **User Rights** page, select **Required Forced Authorization Code**.

**Set up a user**

1. In the list view of the **Users** container, double-click on a user name.

2. On the **User Rights** page, select **Required Forced Authorization Code**.

**Set up a member of a role or workgroup**

1. In the list view of the **Roles** or **Workgroups** container, double-click on a name.

2. On the **User Rights** page, select **Required Forced Authorization Code**.

**Configure a station**

1. In the list view of the **Stations** container, double-click on a station.

2. On the **Station Rights** page, select **Required Forced Authorization Code**.

The extension and password defined in the User Configuration dialog is used for forced authorization code access.

**Note:** If a user is dialing an external (long distance) number through the switch hook and the forced authorization codes are in effect for that user, then the user has to enter an authorization code.

**Structured Parameters**

To add a parameter click **Add** and enter the **Name**, **Type**, and **Value**.

**Name**

Type the name of the parameter.

**Type**

Select the type of parameter from the list. Options are String, Multi-string and Secrets.

**Value**
Enter the value of the parameter.

To edit a parameter entry, select it and then click **Edit**.

To delete a parameter entry, select it and then click **Delete**.

---

**Packaged Structured Parameters**

CIC includes a pre-configured structured parameter that is accessible through the **Get Structured Parameters** and **Put Structured Parameters** tools under **System** in Interaction Designer.

The pre-configured structured parameters are:

<table>
<thead>
<tr>
<th>Packaged Server Parameter</th>
<th>Description</th>
<th>Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Client About Statement</td>
<td>Use this parameter to create an additional statement to be displayed in the CIC client interface in the &quot;About&quot; box. Create name-value pairs associated with your required language (i.e., en-US = &quot;Hello&quot;, es = &quot;Hola&quot;, or fr-FR = &quot;Bonjour&quot;), or use a default (i.e., Default = &quot;Hello&quot;).</td>
<td>CIC clients</td>
</tr>
</tbody>
</table>

**Related Topics:**

Structured Parameters

[Add a Structured Parameter](#)

**Regionalization**

Create Location

**Location Name**

Use this page to name the new location and enter a description.

**Location Name**

Enter a name for the location, i.e., "HQ".

**Description**

Enter a description for the location, i.e., "Indianapolis Headquarters".
**Time Zone**

Select time zone for this location from the pull-down menu. The time zones listed are the same as Windows time zones. The managed IP phones in this location use the time zone to set the daylight saving time information.

**SNTP Server**

Managed IP phones in this location use this server to request the time. Select **Use IC server** to use the IC server as the SNTP server or select **Other** and enter the SNTP server IP address.

**Enable Regional Dialing**

Select this check box to allow dialing of short extensions within the same location. When selected, the **Significant Digits** setting is enabled. By default, this option is not enabled.

Example:

- Station A in Location "Indianapolis" has an extension of 1500
- Station B in Location "Indianapolis" has an extension of 1600

If the Enable Regional Dialing check box is selected in the Location "Indianapolis" the Significant Digits are set to "3", Station A can reach Station B by dialing 600, and Station B can reach Station A by dialing 500.

This feature is not limited to stations. All objects that can be assigned an extension, including users (through the default workstation for the user) and IP phones, as well as stations, are included in the scope of this feature.

**Significant Digits**

When the Enable Regional Dialing option is selected, the Significant Digits option can be set. By default, the value is 4 digits. A value of 0 means that no number of (or zero) digits are significant, therefore regional dialing is not truly enabled. Set the value to 3 to make the last three digits of an extension significant, set the value to 2 to make the last two digits significant, etc. See the example above.

**Note:** If changing the significant digit setting on a location creates an extension conflict, i.e., using the example above and setting the significant digits to "2", a conflict would exist between Station A (00) and Station B (00). If the system detects a conflict, a message is displayed listing duplicate extensions. For later reference to help with conflict resolution, click **Copy to Clipboard** to copy the listing, and then paste the content to a program that supports CSV (comma-separated value) format (like Microsoft Excel).

**Related topics**
Use this page to indicate which locations are allowed to communicate with devices in each other location. The location you are creating is listed as "This Location" at the top of the list, and the <Default Location> and other configured locations are listed below it. Select a location(s) by clicking the check box next to the location.

Click Next to go to Select Codecs for Each Location Mapping

Related topics
Regionalization

Use this page to specify the Codecs used to communicate within that location and from that location to each of the other previously selected locations. The first location listed is the new location you are creating. The default Codecs for each location is displayed. Click Modify Codecs... to change the default Codec selection for a location.

Click Next to go to Save the Location.

Related topics
Regionalization
This page allows you to review the new location and the location communications. Click **Finish** to save the location. You can optionally select the **Launch the Location Assistant after the new location is saved** check box to step through the Location Assistant. The assistant steps you through the location configuration tasks in a linear fashion, so there is no need to manually open each related container or sub-container to complete the new location configuration.

**Related topics**

Regionalization

**Location Settings**

A location represents an area where things are considered to be in the same physical place. This location defines a set of endpoints (lines, stations, and servers) that share a common dial plan, and it defines Codec communications for the endpoints. A Codec mapping defines the list of Codecs for two locations to communicate with each other sharing a common set of bandwidth requirements. The stations and lines that are members of a Location define the dial plan entries that are applicable to a locale they are operating in.

Use the **Location** container to configure the following:
How CIC prioritizes multiple locations

In IA, you can select locations for the following items:

- Users
- Stations
- Lines

When a user initiates or transfers a call, CIC determines which servers to use in the following ways:

- When a user makes an outbound call while logged in to a workstation, CIC uses the servers in the station's region.
- When a users makes an outbound call while logged in to a remote station or remote number, CIC uses the servers in the user's region.
- If a user transfers an inbound call to an external number with the forward, follow me, or TUI transfer feature, CIC uses stations in the region of the line on which the inbound call arrived.

Related topics

SIP Line Region

SIP Station Region

Regional Dial Plan

Home Site Configuration

Location Assistant

Peer Site Configuration

User Configuration
**Managed IP Phone Configuration - General**

**Selection rules for a location**

CIC uses selection rules to determine the following things:

- Which media servers CIC uses to handle audio communications for an interaction
- Which session managers CIC uses to handle connections between users and stations
- Which content servers CIC uses to manage recordings for a location
- Which ASR servers CIC uses to handle automatic speech recognition
- Which MRCP servers CIC uses to handle text to speech and in-line audio (MoH)

CIC has a default selection rule for each of these types of objects. You can define additional selection rules in the **Selection Rules** container. For each location, you can configure the selection rule(s) that you want CIC to use.

**Related topics**

- Selection Rules

**Location Configuration**

Use this page to add a description for this location. If this is the **Default Location** which CIC automatically creates, these fields are read-only and cannot be edited.

**Description**

Enter the description for this location.

**Time zone**

Select the time zone for this location.

**SNTP Server**

Managed IP phones in this location use this server to request the time. Select **Use IC server** to use the IC server as the SNTP server or select **Other** and enter the SNTP server IP address.

**This IC server is in this location (Default Location)**
Use this check box to indicate if this IC server is in this specific location. This is applicable when the server acts as an endpoint. By default this check box is selected (enabled).

**This Location accepts hub conferences**

The default value should be selected for locations containing an IC server and false/unchecked otherwise.

By default, CIC enables hub conferences for locations containing an IC server, and defines latency values of 10. For locations outside current location, hub conferences are not enabled by default, although if you enable it, the latency defaults to 100. These default actions ensure functionality of the distributed conferencing feature through the Interaction Center network.

**Note:** Interactive Intelligence recommends that you use these default settings for the distributed conferencing feature. Extensive modification of hub connector locations and latency values could result in unforeseen or unintended consequences, such as usage of expensive network connections and the inability of Interaction Media Server to connect regional conference calls. Other variables, such as allowed codecs, can increase the possibility of not being able to connect regional conference calls. For more information on the Distributed Conferencing feature, see the *Interaction Conference Media Server Technical Reference* document in the IC Documentation Library on the IC server.

**The Switchover Server A (server name) is in this location**

Select this check box if you have a switchover environment, and Switchover Server A is located in this geographic location. By default, this check box is not selected. The location of a switchover server allows you to change codecs associated with the server.

**The Switchover Server B (server name) is in this location**

Select this check box if you have a switchover environment, and Switchover Server B is located in this geographic location. By default, this check box is not selected. The location of a switchover server allows you to change codecs associated with the server.

**Enable keyword spotting in this location**

Select this check box to use Interaction Analyzer's Keyword Spotting for this location. For more information about keyword spotting, see *Interaction Analyzer Technical Reference* in the CIC Documentation Library.

**Enable Regional Dialing**

Select this check box to allow dialing of short extensions within the same location. When selected, the **Significant Digits** setting is enabled. By default, this option is not enabled.
Example:

- Station A in Location "Indianapolis" has an extension of 1500
- Station B in Location "Indianapolis" has an extension of 1600

If the Enable Regional Dialing check box is selected in the Location "Indianapolis," and the Significant Digits are set to "3," Station A can reach Station B by dialing 600, and Station B can reach Station A by dialing 500.

This feature is not limited to stations. All objects that can be assigned an extension, including users (through the default workstation for the user) and IP phones, as well as stations, are included in the scope of this feature.

**Significant Extension Digits**

When the **Enable Regional Dialing** option is selected, you can set the Significant Digits option. By default, the value is 4 digits. A value of 0 means that no number of digits are significant, therefore regional dialing is not truly enabled. Set the value to 3 to make the last three digits of an extension significant, set the value to 2 to make the last two digits significant, etc. See the example above.

**Note:** If changing the significant digit setting on a location creates an extension conflict, i.e., using the example above and setting the significant digits to "2," a conflict would exist between Station A (00) and Station B (00). If the system detects a conflict, a message is displayed listing duplicate extensions. For later reference, click **Copy to Clipboard** to copy the listing, and then paste the content to a program that supports CSV (like Microsoft Excel).

**Related topics**

- Communication
- Endpoints
- SIP line region options
- SIP Station Region
- Regional Dial Plan
- Home Site Concepts
- Location Assistant
- Configure a Peer Site
Use this page to select users that belong in this physical location. Click **Add** to open the **Select Users** page, and use this page to identify the users in this location. Click **Delete** to remove a user from this location.

**Related Topics**

- Location
- **Communications**
- Endpoints
- SIP Line Region
- SIP Station Region
- Regional Dial Plan
- Home Site Configuration
- Location Assistant
- Peer Site Configuration

Use this page to define a set of Codec communications for the endpoints (lines, stations, and servers). Communication between devices require a mapping between locations.

Click **Modify** to display the list of prioritized Codecs. Select the Codecs to map to the endpoints. By default, no Codecs are selected. You must select one Codec for the mapping to be valid. The **Up** and **Down** buttons set the preferred order of Codecs to use.
Click **Set Parameters** to modify the **Frame Size** (in milliseconds) and the **Frames per Packet** of a Codec. This option is available only for G.711 Codecs.

Use the up and down arrows to set the **Inter-conference latency** in milliseconds. You assign latency values to connections between locations. By specifying the latency values, you create a method of indicating which connections CIC should prefer when it joins regional conference calls through hub servers.

By default, the latency value for communications within a location is 10. The default latency value for communications to other locations is 100. Acceptable latency values range from -1 to 3000. You can adjust the latency values to specify which location Interaction Center should first attempt to use in establishing connections between regional servers and hub servers.

As an example, if the cost of bandwidth usage to one location is much more expensive than another location, you could give a higher latency value to the first location. Interaction Center would try to join conference calls through a hub server in the second location. Only if no hub servers in the second location had enough resources to facilitate the conference calls would Interaction Center then try to use a hub server in the first location.

You can use any criteria you prefer to determine the latency values that you will assign to connections between locations. The criteria could include bandwidth costs, bandwidth limits, network quality, and so on.

### Notes

**Latency:** For distributed conference calls in the Interaction Center environment, *latency* does not implicitly refer to the delay in the relaying of transmissions on a network. Instead, *latency* is a value that an administrator specifies to indicate which locations Interaction Center should first use to find a hub server for joining regional conference calls together.

**Multiple Codecs:** To enable the use of multiple codecs, contact your Interactive Intelligence Support representative.

**No Codecs Defined:** If two devices each have a Codec defined, but there are no Codecs defined in the communications between them, then they are not allowed to communicate directly to each other. This can be used to intentionally block traffic between some Codecs.

**G.726:** G.726 is only available with AudioCodes.

**Packet and Frame size:** Summary on packet size and frequency from the www.erlang.com website: "The frequency at which the voice packets are transmitted have a significant bearing on the bandwidth required. The selection of the packet duration (and therefore the packet frequency) is a compromise between bandwidth and quality. Lower durations require more bandwidth. However, if the duration is increased, the delay of the system increases, and it becomes more susceptible to packet loss; 20ms is a typical figure." So, the more of the voice you put in a single packet (i.e., 60ms versus 20ms), the more of the voice you lose if that packet is lost.

**MOS:** The quality of transmitted speech is a subjective response of the listener. A common benchmark used to determine the quality of sound produced by specific Codecs is the mean opinion score (MOS). With MOS, a wide range of listeners judge the quality of a voice sample (corresponding to a particular Codec) on a scale of 1 (bad) to 5 (excellent). The scores are averaged to provide the MOS for that sample.
Use this page to configure endpoints for the location. An endpoint is one end of a SIP connection. An endpoint can be a line, a station, or a server.

**Line and Station Endpoints**

When you select a line as an endpoint, and a proxy is configured on this line, then the proxy is in this region. When you select a line as an endpoint and a proxy is not configured on this line, then any SIP device that uses this line also uses this region. Typically, this is any device (station or line proxy) that is not configured already in CIC.

**Notes**: A line or station can only belong to one location.

**Server Endpoints**

The purpose of server endpoints is to define the Codec communications between the server and other endpoints (i.e., lines or stations) recognized by CIC. The following objects are valid server endpoints:
- Lines
- Managed IP phones
- Media servers
- MRCP servers
- Recognition servers (ASR servers)
- Session manager servers
- SIP proxies
- Unmanaged stations

**Example**

An example of a server and a station as endpoints is if a call is made from a station into an IVR menu. In this case, the station is one endpoint, and the server playing the IVR menu is the other endpoint.

**Adding Endpoints**

To add endpoints:

1. In the **Endpoint type** list, select the type of endpoint you want to add.
2. In the **Available endpoints** list, select the endpoints you want for this location and click the arrow to move them to the **Selected endpoints** list.
3. Click **OK**.

**Note:** Interaction Administrator prevents you from adding unmanaged stations and managed IP phones with duplicate extensions.

**Removing Endpoints**

**Note:** You cannot remove endpoints from the default location.

To remove endpoints:

1. In the **Endpoint type** list, select the type of endpoint you want to remove.
2. In the **Selected endpoints** list, select the endpoints you want to remove from this location and click the arrow to move them to the **Available endpoints** list.
3. Click **OK**.

**Related topics**

- Location Configuration
- Communications
The Custom Attributes page allows you to add customized attributes so that you can reference your own variables and settings through the IceLib interface.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes to the Custom attributes page in the User Configuration dialog box and the Workgroup Configuration dialog box dialog box are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

The page contains a list for the attributes and displays a **Name** and a **Value** column, and has the following buttons:

**Add**
Click **Add** and select an existing custom attribute from the pull-down list, enter a new custom attribute. If creating a new attribute, use a unique name, otherwise the existing attribute will be overwritten.

**Edit**
Click **Edit** to change the value of an existing custom attribute.

**Delete**
Click **Delete** to delete an existing custom attribute.

**Manage Attributes**
Click **Manage Attributes** to open a dialog box that displays a list of custom attributes. Click **Add** or **Delete** to manage the appearance of the custom attributes in the pull-down list.
The custom attributes are saved in the path of the root container. This **Path** is displayed at the bottom of the dialog box.

**Note:** For more information on the Interaction Center Extension Library (IceLib), see the **System APIs section** in the CIC Documentation Library on the IC server.

---

**History**

This page provides a way to manually document configuration changes and when they occurred. Changes made in Interaction Administrator are also automatically logged in the Interaction Administrator Change Notification Log (Log ID 7). Later, authorized users can run reports against this log to summarize all configuration changes.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes to the History page in the User Configuration dialog box and the Workgroup Configuration dialog box dialog box are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

---

**Last Modified**

This date is automatically updated each time you click the **OK** button, presumably after you make changes to the configuration. To avoid updating this date, exit the page by clicking the **Cancel** button.

**Note:** If you click **Cancel**, none of the changes made to this page will be preserved.

In addition, the history is updated when changes are made to the record elsewhere in Interaction Administrator. For example, when a user change his or her password, the **Last Modified** date is updated.

**Note:** Changes to the licenses for a user or a station do not update the Last Modified date.

---

**Date Created**

This date is automatically set when the user creates the initial configuration for this page. If the page was initially created during setup, the date could be blank.

---

**Notes**

Type notes about configuration settings and changes. If you change the configuration page and click **OK**, the **Last Modified** date is updated.

You must manually enter the date beside each entry in the **Notes** field to identify the date of each
note.

To create a new line in the Notes field, press Enter.

**Default Regionalization**

**Default Regionalization Conferences**

**Starting Location**

**Configuration Simulation**

1. In the Configuration simulation area, select one of the following options:
   - Include only locations with active media servers (default)
   - Specify a custom list of locations
     a. Click the Configure button to open the Select Locations dialog box and select locations to include.
     b. Click OK.

2. Click the Simulate button. The Simulation Results dialog box is displayed.

   ![Simulation Results](image)

   If you selected more than two locations, CIC calculates the path between each combination of locations.

3. In the list box on the left side of the dialog box, select an item.

   The list box on the right side of the dialog box displays a list of locations through which CIC would connect a distributed conference call. To view the path of the other location combinations, select each item in the list box on the left side of the dialog box.
**Note:** If an item in the list box on the left side of the Simulation Results dialog box displays -1, Interaction Center would not be able to connect a distributed conference call between the two locations. This problem is caused by a location that is configured to not accept hub connections. To fix this problem, enable the location to allow hub connections.

4. When you are finished, select the Close button.

**Selection Rules**

CIC uses selection rules for other servers such as media and session manager servers. Use this page to create prioritized lists of locations to select media servers and session manager servers. By default, CIC has a default <Default Media Server Selection Rule> configuration, and a default <Default Session Manager Selection Rule> configuration.

**About media servers and selection rules**

CIC uses Interaction Media Server to process audio communications for an interaction between two or more endpoints, such as a telephone call. To select a media server, CIC uses Selection Rules.

This feature enables you to create prioritized lists of locations in Selection Rules configuration. You can select media server to service an interaction. (You can also select a session manager server to service an interaction.)

Within a location, CIC selects a media server, if more than one exists, based on the following criteria:

- Available CPU resources
- Number of resources in use

When an interaction that requires audio processing starts, CIC searches, in order, each location in a selection rules configuration. If a location does not have a media server or all media servers in that location are busy, CIC searches the next location in the Selection Rules configuration. This process continues until CIC finds an available media server.

**Notes:** By default, CIC has only one location: <Default Location>. When you create a device in CIC, it is assigned to the <Default Location> location. To use the selection rules effectively, define additional locations and assign devices, such as stations, SIP lines, and media servers, to those locations.

When you configure RCS server selection rules, you cannot make an RCS server a member of a location. Instead, you configure each RCS server to service one, multiple, or no locations. For more information, see the Interaction Recorder Remote Content Service Installation and Configuration Guide in the CIC Documentation Library on the IC server.
For more information, see *Interaction Media Server Technical Reference* in the CIC Documentation Library on the IC server.

### About session manager servers and selection rules

Selection rules allow connections for users and stations associated with a particular location, to use certain session manager servers.

A location also uses selection rules to define which session manager locations should be used first, similar to the way media server selection rules are processed: When CIC needs a session manager for processing, CIC searches, in order, each session manager location in a selection rules configuration. If a location does not have a session manager server or all session manager servers in that location are busy, CIC searches the next location in the selection rules configuration. This process continues until CIC finds an available session manager server.

### About Interaction Recorder Remote Content Service and selection rules

For more information, see the *Interaction Recorder Remote Content Service Installation and Configuration Guide* in the CIC Documentation Library on the IC server.

### Default Selection Rules

CIC provides the following default selection rules:

- <Default ASR Selection Rule>
- <Default Media Server Selection Rule>
- <Default MRCP Selection Rule>
- <Default Session Manager Selection Rule>

### Prioritized Location list

**Add:** Click this button to add a static or variable location to the **Prioritized Location** list box.

**Remove:** Click this button to remove the highlighted location from the **Prioritized Location** list box.

**Move up:** Click this button to move the highlighted location to higher position in the **Prioritized Location** list box.

**Move down:** Click this button to move the highlighted location to a lower position in the **Prioritized Location** list box.

**Group selected:** Click this button to group the highlighted locations together for distributed call audio processing.
**Tip:** To select multiple locations, press and hold the Ctrl key while clicking each location in the box.

**Ungroup selected:** Select this button to remove the highlighted location from an existing call audio processing group.

**Excluded Location list**

**Do not use any other Locations:** Select this option to restrict Interaction Center from selecting any other location than those specified in the Prioritized Location list box.

**Use any Location, except the following:** Select this option to allow Interaction Center to select any available location after it cannot locate an available media or session manager server in the Prioritized Location list box. Interaction Center will exclude any server location specified in the Excluded Location list box.

**Add:** Click this button to add a location to the Excluded Location list box.

**Remove:** Click this button to remove the highlighted location from the Excluded Location list box.

**Restore:** Click this button to reset this configuration to the default settings.

**License Allocation**

**License Configuration**

The License Configuration dialog box allows you to add and remove users, workgroups, and stations allocated to a license as needed, while keeping within the license threshold. This dialog box is especially useful when allocating an Access license because of the overview it provides of users, workgroups, and stations at the same time. Access to this information can save time when determining availability of licenses for new staff or departmental changes, and in setting up newly purchased licenses that must be configured. Large numbers of items such as the CIC clients, or ACD and media level, can be granted the license to a user, workgroup, or station quickly.

The License Configuration dialog box has two tabs; Assignable and Concurrent.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then changes to user licenses and station licenses are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

**Assignable**
The **Assignable** tab provides a way to allocate licenses to users, workgroups and stations, with the exception of a Basic Station license. The Basic Station license can only be allocated to stations.

There are two counters shown at the bottom of each page. These counters are the **Number of licenses** and the **Total Configured (which is the number of licenses assigned and enabled)**:

- **Number of licenses** - This is the total number of licenses available.
- **Total Configured** - This is a count of the total number of users, workgroups and stations that are granted and have the enabled the current license based on the contents of this page. If this number exceeds the **License Threshold**, warning text is displayed at the bottom of the page.

**To allocate a license to a user or workgroup (making this user or workgroup a licensed user or workgroup):**

1. Click the **Add** button to the right of the user or workgroup list to display the **Select Items** dialog box.

2. Add users or workgroups to be assigned the license:

   - Double-click the user or workgroup, or
   - Select the user or workgroup and click **Add**. To add a group of users or workgroups, highlight each, then click **Add**.
3. Optionally search for **Name Only** or display **More Columns**.
4. Click **OK** to return to the **License Configuration** dialog box.

**To allocate this license to a station (making this station a licensed station):**

1. Click the **Add** button to the right of the station list to display the **Select Items** dialog box.

2. Add stations to be assigned the license:
   - Double-click the station, or
   - Select the station and click **Add**. To add a group of stations, highlight each station, then click **Add**.

3. Optionally search for **Name Only** or display **More Columns**.
4. Click **OK** to return to the **License Configuration** dialog box.

**To de-allocate this license to a user, workgroup, or station (making this user, workgroup, or station not licensed):**

1. Highlight the user, workgroup or station and click the **Delete** button to the right. To de-allocate a group of user, workgroups, or stations, highlight each, then click **Delete**.
2. Click **OK** to save the changes.
The **Concurrent** tab provides a way to allocate licenses to users only and is based on the number of simultaneous users accessing a feature or function. This license method allows users to acquire available licenses during logon instead of based on configuration. With the concurrent license method, the license is not allocated until the user logs in to the application. CIC maintains a list of users, and licenses available and in use.

There are two counters shown at the bottom of each page. These counters are the **Number of licenses** and the **Total Configured**:

- **Number of licenses** - This is the total number of licenses available.
- **Total Configured** - This is a count of the total number of users and stations that are granted the current license based on the contents of this page. If this number exceeds the **License Threshold**, warning text is displayed at the bottom of the page.

**To allocate a concurrent license to a user:**

1. Click the **Add** button to the right of the user list to display the **Select Items** dialog box.

2. Add users to be assigned the license:
• Double-click the user, or
• Select the user and click Add. To add a group of users, highlight each, then click Add.

3. Optionally search for Name Only or display More Columns.
4. Click OK to return to the License Configuration dialog box.

Note: Clicking OK on the License Configuration dialog box updates the total license values for the users or stations by updating the station and user configuration directly. The list for this license in the Licenses Allocation container is updated to reflect the user and station allocations. Also, the Total Configured count changes based on the selections on each page.

Related Topics

Licensing
Station Licenses
Other Station Licenses
License Allocation

People
Security for people
Master administrator rights

Assign the master administrator rights

Note: If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

To assign the master administrator right

1. On the Security page, select any combination of the following options:
   • To allow the user to modify anything in CIC, select the Master Administrator check box. If you select this option, the other options are unavailable, because they represent a subset of the functionality provided by the Master Administrator right.
   • To allow the user the right to edit all Administrative Access items, select the Allow Administrative Access editing check box.
   • To allow the user the right to edit all Access Control items, select the Allow Access Control editing check box.

2. Click OK.
Related topics

Overview of the master administrator rights

**Administrator access rights**

These are the available categories in the **Category** list in the **Administrator Access** page:

- Account Codes
- Accumulators
- Actions
- Audio Sources
- Client Buttons
- Client Configuration
- Client Configuration Templates
- Collective
- Contact Data Manager
- Contact List Sources
- Default IP Phone
- Default Location
- Default Station
- Default User
- e-FAQ
- Fax Configuration
- Fax Groups
- Handlers
- IC Data Sources
- Initialization Functions
- Interaction Conference Rooms: Allows user access to configure individual conference rooms.
- Interaction Feedback
- Interaction Files
- Interaction Messages
- Interaction Recorder
- Interaction Tracker
- Interaction URLs
- Interfaces
- IP Phone Registration Groups
- IP Phone Ring Sets
- IP Phone Templates
- IP Phones
- Licenses Allocation
- Line Groups
- Lines
- Locations
- Log Retrieval Assistant
- Mail Configuration
- Media Servers
- MRCP
- MRCP Servers
- Optimizer Advanced Configuration
- Optimizer Agents
- Password Policies
- Password Policies Configuration
- Peer Sites
- Phone Numbers
- Recorder Categories
- Recorder Questionnaires
- Report Logs
- Reports
- Response Management
- Roles
- Schedules
- Server Parameters
- Servers
- SIP Proxies
- Skills
- SMDI Ports
- SMS Broker
- SMS Configuration
- Speech Recognition
- Station Groups
- Station Templates
- Stations
- Status Messages
- Structured Parameters
- System Configuration
- System Parameters
- Tables
- Telephony Resources
- Users
- Voice Modules
- Web Services Parameters
- Workgroups
- Wrap-up Codes
Assign administrator access rights

Administrator access allows a user to modify configuration options in Interaction Administrator containers. You can assign administrator access to any role, workgroup, user, or the default user.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

To assign administrator access rights

1. In the **Security** page, click **Administrator Access**. The **Administrator Access** dialog box appears.
   
   By default (<All>) categories are displayed. You can select a specific category of access rights or you can locate rights by using the **Search** box.

2. Select the rights to assign. You can assign specific access rights within a group (or container), or assign *[All]* access rights in a group.

3. Click **Close**. The **Administrator Access** page appears.
4. Click **Apply**. Your configuration changes are saved.

To allow an administrator to assign (edit) all of the actions in the Actions container

1. From the **Category** list, select **System**.
2. Under **Actions**, select the *[All]* check box.
3. Click **Close**.

Related topics

Analyzer category

Attendant category

Collective category

Conference category

Dialer category
Access control rights

**Assign access control rights**

*Note:* If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

To assign access control rights

1. In the Security page, click Access Control.
   
   The Access Control dialog box appears. The categories of rights that appear depend on the CIC products that you have installed. You can locate rights by selecting a category or by using the Search box.

2. Select the rights to assign. You can assign specific rights within a group, or assign *[All]* rights in a group. The following tables show the available access control groups, the rights, and the associated descriptions, by category.

<table>
<thead>
<tr>
<th><strong>Application Category</strong></th>
<th><strong>Name</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback Surveys</td>
<td>View</td>
<td>Determines which Interaction Feedback surveys and survey results the user can view.</td>
</tr>
<tr>
<td></td>
<td>Modify</td>
<td>Determines which Interaction Feedback survey definitions can be modified.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Note:</strong> Select this right for the user if the user needs to be able to enable the survey.</td>
</tr>
<tr>
<td>Recorder Questionnaires</td>
<td>View</td>
<td>Determines which questionnaire directories are available from the drop-down list in the Interaction Recorder</td>
</tr>
</tbody>
</table>
Questionnaire container. If available from the list, a recording can be scored with that questionnaire.

| Modify | Determines which questionnaire directories can be modified. Users can create and delete questionnaires within the directory. |

### Attendant Profiles Category

<table>
<thead>
<tr>
<th>Group</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email Profiles</td>
<td>View</td>
<td>Determines which Interaction Attendant email profiles can be viewed.</td>
</tr>
<tr>
<td></td>
<td>Search</td>
<td>Determines which Interaction Attendant email profiles are available in the <strong>Transfer to</strong> dialog box.</td>
</tr>
<tr>
<td></td>
<td>Modify</td>
<td>Determines which Interaction Attendant email profiles can be modified. Users who can modify a profile can acquire a lock and edit or publish it.</td>
</tr>
<tr>
<td>Inbound Profiles</td>
<td>View</td>
<td>Determines which Interaction Attendant inbound profiles can be viewed.</td>
</tr>
<tr>
<td></td>
<td>Search</td>
<td>Determines which Interaction Attendant inbound profiles are available in the <strong>Transfer to</strong> dialog box.</td>
</tr>
<tr>
<td></td>
<td>Modify</td>
<td>Determines which Interaction Attendant inbound profiles can be modified. Users who can modify a profile can acquire a lock and edit or publish it.</td>
</tr>
<tr>
<td>Operator Profiles</td>
<td>View</td>
<td>Determines which Interaction Attendant operator profiles can be viewed.</td>
</tr>
<tr>
<td></td>
<td>Search</td>
<td>Determines which Interaction Attendant operator profiles are available in the <strong>Transfer to</strong> dialog box.</td>
</tr>
<tr>
<td></td>
<td>Modify</td>
<td>Determines which Interaction Attendant operator profiles can be modified. Users who can modify a profile can acquire a lock and edit or publish it.</td>
</tr>
<tr>
<td>Outbound Profiles</td>
<td>View</td>
<td>Determines which Interaction Attendant outbound profiles can be viewed.</td>
</tr>
<tr>
<td></td>
<td>Search</td>
<td>Determines which Interaction Attendant outbound profiles are available in the <strong>Transfer to</strong> dialog box.</td>
</tr>
<tr>
<td></td>
<td>Modify</td>
<td>Determines which Interaction Attendant outbound profiles can be modified. Users who can modify a profile can acquire a lock and edit or publish it.</td>
</tr>
</tbody>
</table>

### Interaction Conference Category

<table>
<thead>
<tr>
<th>Group</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conference Rooms</td>
<td>Restrict</td>
<td>Determines if a conference room is available for creating conferences. A conference room is a set of telephone phone numbers or stations that are designated as a conference room in Interaction Conference. If you assign the Restricted right to a conference room, then users cannot make new conferences that use the conference room. Users can still call into the conference room if they have a PIN.</td>
</tr>
</tbody>
</table>
By default, every user who has access to Interaction Conference can use every conference room that is defined in CIC.

### Interaction Dialer Category

<table>
<thead>
<tr>
<th>Group</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campaigns</td>
<td>View</td>
<td>Determines which campaigns can be viewed in Interaction Dialer Manager.</td>
</tr>
<tr>
<td></td>
<td>Modify</td>
<td>Determines which campaigns can be managed in Interaction Dialer Manager.</td>
</tr>
</tbody>
</table>

### Interaction Optimizer Category

<table>
<thead>
<tr>
<th>Group</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent Groups</td>
<td>View</td>
<td>Determines which agent groups in Interaction Center Business Manager (ICBM) can be viewed.</td>
</tr>
<tr>
<td></td>
<td>Modify</td>
<td>Determines which agent groups in ICBM can be modified.</td>
</tr>
<tr>
<td></td>
<td>Create</td>
<td>Determines if user can create agent groups in ICBM.</td>
</tr>
<tr>
<td></td>
<td>Delete</td>
<td>Determines if user can delete agent groups in ICBM.</td>
</tr>
<tr>
<td>Forecasts</td>
<td>View</td>
<td>Determines which forecasts in Interaction Center Business Manager (ICBM) can be viewed.</td>
</tr>
<tr>
<td></td>
<td>Modify</td>
<td>Determines which forecasts in Interaction Center Business Manager (ICBM) can be modified.</td>
</tr>
<tr>
<td></td>
<td>Create</td>
<td>Determines which forecasts in Interaction Center Business Manager (ICBM) can be created.</td>
</tr>
<tr>
<td></td>
<td>Delete</td>
<td>Determines which forecasts in Interaction Center Business Manager (ICBM) can be deleted.</td>
</tr>
<tr>
<td>Interaction Optimizer Master Administrator</td>
<td>Has Right</td>
<td>Allows access to all Interaction Optimizer-related activities in IC Business Manager.</td>
</tr>
<tr>
<td>Intraday Monitoring</td>
<td>View</td>
<td>Allows access to view Intraday Monitoring configuration in ICBM.</td>
</tr>
<tr>
<td>Real-time Adherence (RTA)</td>
<td>View</td>
<td>Allows access to view RTA configuration in ICBM.</td>
</tr>
<tr>
<td></td>
<td>Modify</td>
<td>Allows access to modify RTA configuration in ICBM.</td>
</tr>
<tr>
<td>Schedule Preferences</td>
<td>View</td>
<td>Allows access to the Schedule Preferences configuration in ICBM.</td>
</tr>
<tr>
<td>Schedules</td>
<td>View</td>
<td>Allows access to view schedules in ICBM. This includes weekly schedules and schedule bids.</td>
</tr>
<tr>
<td></td>
<td>Modify</td>
<td>Allows access to modify schedules in ICBM. This includes weekly schedules and schedule bids.</td>
</tr>
<tr>
<td></td>
<td>Create</td>
<td>Allows access to create schedules in ICBM. This includes weekly schedules and schedule bids.</td>
</tr>
<tr>
<td></td>
<td>Delete</td>
<td>Allows access to delete schedules in ICBM. This includes weekly schedules and schedule bids.</td>
</tr>
</tbody>
</table>
### Interaction Process Automation Category

<table>
<thead>
<tr>
<th>Group</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processes</td>
<td>View</td>
<td>Determines what processes in Process Monitor and the CIC clients can be searched for and viewed.</td>
</tr>
<tr>
<td></td>
<td>Manage</td>
<td>Determines which processes can be searched, canceled, and retried in Process Monitor.</td>
</tr>
<tr>
<td></td>
<td>Launch</td>
<td>Determines which processes can be launched from the CIC clients.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Note:</strong> A process must be published before it can be launched.</td>
</tr>
</tbody>
</table>

### People Category

<table>
<thead>
<tr>
<th>Group</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Account Codes</td>
<td>View</td>
<td>Determines which account codes the user can view in the CIC client dialog boxes. To assign account codes to incoming and outgoing calls the Account Code Verification security right must be assigned in addition to this access control right.</td>
</tr>
<tr>
<td>Client Buttons</td>
<td>View</td>
<td>Determines which custom buttons can be used on the Queue Control toolbar in the CIC clients.</td>
</tr>
<tr>
<td>Directory Status Columns</td>
<td>View</td>
<td>Determines which status columns the user can add to a directory view. These status columns include: Activated, Forward Number, Logged In, Notes, On Phone, Status, Status Summary, Time in Status, and Until.</td>
</tr>
</tbody>
</table>
### Queue Columns

<table>
<thead>
<tr>
<th>View</th>
<th>Determines which queue columns the user can view in user, station, orbit, or workgroup queues. For more information, see <a href="#">Who can see and listen to recordings</a>.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substitute</td>
<td>Determines which interaction attributes the user can use in a response macro. For more information, see the help for the CIC clients.</td>
</tr>
</tbody>
</table>

### Skills

| View          | Determines which skills the user can use to design processes that transfer interactions to workgroups. For more information, see the Interaction Process Automation help. |

### Workgroups

<table>
<thead>
<tr>
<th>View</th>
<th>Determines how the user can work with workgroups in the CIC clients.</th>
</tr>
</thead>
</table>

### Queues Category

<table>
<thead>
<tr>
<th>Group</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Line Queues</strong></td>
<td>Modify</td>
<td>Allows pickup, transfer, and disconnect of call interactions on a line queue. (<a href="#">see note</a>)</td>
</tr>
<tr>
<td></td>
<td>Monitor</td>
<td>Allows coach, join, listen, and record of call interactions on a line queue. (<a href="#">see note</a>)</td>
</tr>
<tr>
<td></td>
<td>View</td>
<td>Determines which line queues can be viewed.</td>
</tr>
<tr>
<td><strong>Station Queues</strong></td>
<td>Modify</td>
<td>Allows disconnect, hold, mute, pickup, or transfer of call interactions on a station queue. (<a href="#">see note</a>)</td>
</tr>
<tr>
<td></td>
<td>Monitor</td>
<td>Allows coach, join, listen, or record of call interactions on a station queue. (<a href="#">see note</a>)</td>
</tr>
<tr>
<td></td>
<td>View</td>
<td>Determines which station queues can be viewed.</td>
</tr>
<tr>
<td></td>
<td>Search</td>
<td>Determines which station queues can be transfer targets in the <strong>Transfer</strong> dialog box.</td>
</tr>
<tr>
<td><strong>User Queues</strong></td>
<td>Modify</td>
<td>Allows disconnect, hold, mute, pickup, or transfer of interactions on a user queue. (<a href="#">see note</a>)</td>
</tr>
<tr>
<td></td>
<td>Monitor</td>
<td>Allows coach, join, listen, or record of interactions in a user queue. (<a href="#">see note</a>)</td>
</tr>
<tr>
<td></td>
<td>View</td>
<td>Determines which user queues can be viewed. See also Configure the visibility of user data in reports</td>
</tr>
<tr>
<td></td>
<td>Statistics</td>
<td>Determines which user queues’ statistics can be viewed.</td>
</tr>
<tr>
<td><strong>Workgroup Queues</strong></td>
<td>Modify</td>
<td>Allows disconnect, hold, mute, pickup, or transfer of interactions on a workgroup queue. (<a href="#">see note</a>)</td>
</tr>
<tr>
<td></td>
<td>Monitor</td>
<td>Allows coach, join, listen, or record of interactions on a workgroup queue. (<a href="#">see note</a>)</td>
</tr>
<tr>
<td></td>
<td>View</td>
<td>Determines which workgroup queues can be viewed.</td>
</tr>
</tbody>
</table>
**Note:** The View Workgroup Queue rights filter which workgroups are exposed to a user when the user is using the Telephone User Interface (TUI) to send or forward voice mail and email messages.

<table>
<thead>
<tr>
<th>Search</th>
<th>Determines which workgroup queues can be transfer targets in the <strong>Transfer</strong> dialog box.</th>
</tr>
</thead>
</table>

**Note:** The **Advanced Access Details** button is enabled when you select a line, station, user, or workgroup queue. Click this button to select or de-select a subset of queue rights or individual rights.

Example 1: For a person, you can select the ability to preview interactions.

Example 2: For a queue, you can give a user the ability to snip other users’ interactions. For more information on snipping interactions, see the *Interaction Recorder and Interaction Quality Manager Technical Reference* in the CIC Documentation Library and *Recording Generation*.

---

### Server Category

<table>
<thead>
<tr>
<th>Group</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station Groups</td>
<td>View</td>
<td>Determines which station groups can be viewed.</td>
</tr>
<tr>
<td></td>
<td>Search</td>
<td>Determines which station groups can be transfer targets in the <strong>Transfer</strong> dialog box.</td>
</tr>
</tbody>
</table>

### Station Logon Category

<table>
<thead>
<tr>
<th>Group</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stations</td>
<td>Login</td>
<td>Determines which stations can be logged in.</td>
</tr>
</tbody>
</table>

### System Category

<table>
<thead>
<tr>
<th>Group</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Directories</td>
<td>View</td>
<td>Determines which general directories can viewed.</td>
</tr>
<tr>
<td>IC Data Sources</td>
<td>View</td>
<td>Determines which data sources the user can configure and reference in database actions in Interaction Process Automation.</td>
</tr>
<tr>
<td>Interaction Reporter</td>
<td>View</td>
<td>Determines which Interaction Reporter reports can be generated.</td>
</tr>
<tr>
<td>Reports</td>
<td>View</td>
<td>Determines which layouts the user can view.</td>
</tr>
<tr>
<td>Layouts</td>
<td>View</td>
<td>Allows a user to log in on behalf of another user.</td>
</tr>
<tr>
<td>Misc Items</td>
<td>View</td>
<td>Determines which phone number classifications can be accessed, such as blocked or long distance.</td>
</tr>
<tr>
<td>Phone Number -</td>
<td>View</td>
<td>Determines which phone number classifications can be used as follow-me numbers.</td>
</tr>
<tr>
<td>Classifications</td>
<td></td>
<td>Determines which phone number classifications can be used as forwarding numbers.</td>
</tr>
<tr>
<td></td>
<td>View</td>
<td>Determines which phone number classifications can be used as forward numbers available through the menu when</td>
</tr>
</tbody>
</table>
logged into voice mail. This access right prevents toll-fraud through the TUI.

<table>
<thead>
<tr>
<th>Access Right</th>
<th>View</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positions</td>
<td>View</td>
<td>Determines which floor plan images (positions) the user can use in Interaction Supervisor iPAD Edition.</td>
</tr>
<tr>
<td>Plugins</td>
<td>View</td>
<td>Determines which plug-ins can be added.</td>
</tr>
<tr>
<td>Response Management</td>
<td>View</td>
<td>Allows access to chat features.</td>
</tr>
<tr>
<td>Status Messages</td>
<td>View</td>
<td>Determines which statuses can be selected from the My Status list or from the Set Status list when changing another user’s status.</td>
</tr>
<tr>
<td>e-FAQ’s</td>
<td>View</td>
<td>Determines which eFAQs and eFAQ controls agents can see.</td>
</tr>
</tbody>
</table>

**User Category**

<table>
<thead>
<tr>
<th>Group</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users</td>
<td>View History</td>
<td>Determines whose interactions can appear in the Interaction Tracker Related Items view in the CIC clients.</td>
</tr>
<tr>
<td></td>
<td>Change Status</td>
<td>Determines which users' status can be changed.</td>
</tr>
</tbody>
</table>

3. Click **Close** to return to the **Security** page
4. Click **Apply** to save changes to the configuration.

**Example**

If an administrator user needs access control rights to view all general directories, do the following:

1. From the **Category** list, select **System**.
2. Under the **General Directories** access control, select the *[All]* check box in the **View** column.
3. Click **Close**.

To assign the same rights to the default user, role, or workgroup, follow the same procedure.

**Caution**: It is strongly recommend not to select the *[All]* check box for the default user, since it would give every user access control to these categories minimizing phone system security. This could also significantly impact system performance on sites with large numbers of users (that is, more than 1,000 users). It is further recommend to limit the number of users who have access control to *[All]* user and station queues, as those items generate the most traffic in large implementations.

**Related topics**

- [Administrator access](#)
- [Assign security rights](#)
To assign security rights

1. In the Security page, click Security Rights to display the Security Rights dialog box. There are two categories of security rights; Application and User. The categories are further divided into groups of related rights. By default, <All> categories is selected to display security rights in both categories. You can optionally locate rights by typing information in Search.

2. Select the rights to assign. The following tables show the available security rights groups, the rights, and the associated descriptions, by category:

<table>
<thead>
<tr>
<th>Application Category</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group</strong></td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Alerting Rights</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Attendant</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Interaction Conference Policy</td>
</tr>
<tr>
<td>--------------------------------</td>
</tr>
<tr>
<td>Create and Modify Conferences</td>
</tr>
<tr>
<td>Interaction Process Automation</td>
</tr>
<tr>
<td>Logon Campaign</td>
</tr>
<tr>
<td>Manually Transition to a Campaign Group</td>
</tr>
</tbody>
</table>
| Modify Configuration General  | View and modify two specific settings on the General tab of the Global Configuration Settings dialog box in Interaction Dialer Manager. The settings are:  
  - Delay in seconds before auto-dispositioning a disconnect interaction  
  - Pause a campaign when the database query failure rate exceeds | |
| Modify Preview Call Behavior   | Modify specific preview call settings on the General tab of the Global Configuration Settings dialog box in Interaction Dialer Manager. The settings are:  
  - If a Preview call fails to connect, play this file to the agent  
  - If a Preview call encounters a busy signal, play this file to the agent | |
| Run Contact List Predefined Actions |                                  | This right allows the user to perform the Predefined Actions from the Data Query section of a Contact List. The actions are:  
  - Bulk Edit  
  - Delete  
  - Make Callable  
  - Make Uncallable  
  - Reset Attempts  
  - Schedule Calls |
<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>View/Modify Contact List Data Query</strong></td>
<td>The View/Modify Contact List Data Query right is required to use the Run Contact List Predefined Actions right.</td>
</tr>
</tbody>
</table>
| **View Configuration General**               | View, but not modify, two specific settings on the General tab of the Global Configuration Settings dialog box in Interaction Dialer Manager. The settings are:  
- Delay in seconds before auto-dispositioning a disconnect interaction  
- Pause a campaign when the database query failure rate exceeds |
| **View Preview Call Behavior**                | View specific preview call settings on the General tab of the Global Configuration Settings dialog box in Interaction Dialer Manager. The settings are:  
- If a Preview call fails to connect, play this file to the agent  
- If a Preview call encounters a busy signal, play this file to the agent |
<p>| <strong>View/Modify Contact List Data Query</strong>      | Determines whether or not the Data Query tab of a Contact List object is visible or not. The Data Query tab queries the contact list to display a list of results in a data grid. Query results can be saved as filters. Users may also apply actions to records displayed in the grid, and commit changes back to the database. |
| <strong>Create/Modify Dialer Campaign Group</strong>       | When using the Advanced Campaign Management feature, this right allows a user to be able to create new and modify existing campaign groups on the Campaign Sequence tab in the Campaigns view. Without this right, users can only view existing campaign groups. |
| <strong>Modify Campaign Group Sequence</strong>            | When using the Advanced Campaign Management feature, this right allows a user to be able to create new and modify existing campaign sequences on the Campaign Sequence tab in the Campaigns view. Without this right, users can only view existing campaign sequences. |
| <strong>View/Modify Agentless Calling Type</strong>        | Determines whether users can select Agentless dialing mode when setting the Calling mode for a Campaign.                                      |
| <strong>View/Modify Automatic Zone Mapping</strong>        | Grants right to select the &quot;Automatically map time zones and all child options&quot; option for a Campaign object. Without this right, these options are unavailable. |
| <strong>View/Modify Line Settings</strong>                 | Enables settings in the Dialer Line Information group box for a Campaign. Options in this frame configure Dialer to adhere strictly to CIC's Dial Plan, or to use one specific line group for campaign calls. |
| <strong>View/Modify Maximum Lines</strong>                 | Determines whether the Maximum Lines per Campaign setting on the Basic Configuration tab of a Campaign is enabled or not. |</p>
<table>
<thead>
<tr>
<th>Interaction Dialer - Global Dialer Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>View/Modify Status</strong></td>
</tr>
<tr>
<td>Enables the Campaign Execution Panel for a campaign entry. Users who have this right can control the running state of a campaign, whether it runs in accordance with a schedule, or in a manually operated state. Users can also recycle the contact list, recycle the campaign, and test to ensure that campaign settings are valid. When not granted, these controls are unavailable.</td>
</tr>
<tr>
<td><strong>Modify Change Auditing</strong></td>
</tr>
<tr>
<td>Grants right to modify Configuration Change Auditing settings under Global Dialer Settings. When enabled, auditing tracks configuration changes made.</td>
</tr>
<tr>
<td><strong>Modify HTTP Server</strong></td>
</tr>
<tr>
<td>Grants right to modify HTTP Server settings under Global Dialer Settings. These settings are used to stream data in and out of a contact list table.</td>
</tr>
<tr>
<td><strong>Modify Outbound Dialer Servers</strong></td>
</tr>
<tr>
<td>Grants right to modify settings on the Outbound Dialer Servers tab under Global Dialer Settings. The user can designate an ODS server to send notifications and e-mails when errors or outages occur, and can set threshold values for individual ODS servers, including Maximum Calls and Maximum Call Rate.</td>
</tr>
<tr>
<td><strong>Modify Phone Number Types</strong></td>
</tr>
<tr>
<td>Grants right to modify Phone Number Types under Global Dialer Settings. Types are user-defined strings that can be associated with contact columns to identify a type of telephone number. Examples of phone number types might be &quot;Work&quot;, &quot;Home&quot;, or &quot;Cell&quot;.</td>
</tr>
<tr>
<td><strong>View Change Auditing</strong></td>
</tr>
<tr>
<td>Grants right to view Configuration Change Auditing settings under Global Dialer Settings. These settings are disabled if the user does not have this right. The Configuration Change Auditing feature tracks configuration changes made using Dialer Manager, or an API such as IceLib.Configuration.Dialer.</td>
</tr>
<tr>
<td><strong>View HTTP Server</strong></td>
</tr>
<tr>
<td>Grants right to view HTTP Server settings under Global Dialer Settings. These settings are used to stream data in and out of a contact list table. Options on the HTTP Server tab are disabled when this right is not granted.</td>
</tr>
<tr>
<td><strong>View Outbound Dialer Servers</strong></td>
</tr>
<tr>
<td>Grants right to view the Outbound Dialer Servers tab under Global Dialer Settings. The user can see which ODS server has been selected to send notifications and e-mails when errors or outages occur. When this right is not granted, options on the tab are disabled.</td>
</tr>
<tr>
<td><strong>View Phone Number Types</strong></td>
</tr>
<tr>
<td>Grants right to view the Phone Number Types tab under Global Dialer Settings. Types are user-defined strings that can be associated with contact columns to identify a type of telephone number. Examples of phone number types might be &quot;Work&quot;, &quot;Home&quot;, or &quot;Cell&quot;. When this right is not granted, options on the tab are disabled.</td>
</tr>
<tr>
<td><strong>View/Modify Data Connections</strong></td>
</tr>
<tr>
<td>Grants right to view and modify Database Connections in Dialer Manager. When this right is not granted, Database Connection options are disabled.</td>
</tr>
<tr>
<td><strong>View/Modify DNC Sources</strong></td>
</tr>
<tr>
<td>Grants right to view and modify the DNC Sources view in Dialer Manager. A DNC Source provides a</td>
</tr>
<tr>
<td>Feature</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>View/Modify Time Zone Map Data</td>
</tr>
<tr>
<td>Lock Policy Sets</td>
</tr>
<tr>
<td>View/Modify Custom Handler Actions</td>
</tr>
<tr>
<td>View/Modify Event Log</td>
</tr>
<tr>
<td>Agent can bid on schedules</td>
</tr>
<tr>
<td>Agent can see rank</td>
</tr>
<tr>
<td>Agent can see relative rank</td>
</tr>
<tr>
<td>Agent can specify schedule preferences</td>
</tr>
<tr>
<td>Agent can submit time off</td>
</tr>
<tr>
<td>Interaction Reporter</td>
</tr>
<tr>
<td>----------------------</td>
</tr>
<tr>
<td>Recorder Policy</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Note: Overriding a finished scorecard can affect reports.

<table>
<thead>
<tr>
<th>Tracker Policy</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add Individuals</td>
<td>Allows users to add individuals in Interaction Tracker.</td>
</tr>
<tr>
<td>Add Organizations</td>
<td>Allows users to add organizations in Interaction Tracker.</td>
</tr>
<tr>
<td>Delete Individuals</td>
<td>Allows users to delete individuals in Interaction Tracker.</td>
</tr>
<tr>
<td>Delete Organization</td>
<td>Allows users to delete organizations in Interaction Tracker.</td>
</tr>
<tr>
<td>Have Private Contacts</td>
<td>Allows users to designate an Interaction Tracker contact as private and prevent other users from viewing or using information for this contact.</td>
</tr>
<tr>
<td>Modify Individuals</td>
<td>Allows users to change or update individuals in Interaction Tracker.</td>
</tr>
<tr>
<td>Modify Interactions</td>
<td>Allows users to change or update interactions in Interaction Tracker.</td>
</tr>
<tr>
<td>Modify Organizations</td>
<td>Allows users to change or update organizations in Interaction Tracker.</td>
</tr>
<tr>
<td>Related Interactions Page</td>
<td>Allows users to view the page that shows related interactions in Interaction Tracker.</td>
</tr>
<tr>
<td>Interaction Tracker Administrator</td>
<td>Gives users the rights to access all pages in Interaction Tracker.</td>
</tr>
<tr>
<td>View Other People's Private Interactions</td>
<td>Allows users to view other users' private interactions in the Related Items view and to have these interactions included in search results in the Find Interaction dialog box. Users can indicate that an interaction is &quot;Private&quot; to prevent other users from recording or listening to it.</td>
</tr>
</tbody>
</table>

User Category

<table>
<thead>
<tr>
<th>Group</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alerting Rights</td>
<td>Email Alerts</td>
<td>Allows users to add alerts to email type actions in Interaction Supervisor. Users must also have the Alert Programming user right to add any type of alert.</td>
</tr>
<tr>
<td></td>
<td>Handler Alerts</td>
<td>Allows users to add alerts to handler type actions in Interaction Supervisor. Users must also have the Alert Programming user right to add any type of alert.</td>
</tr>
<tr>
<td></td>
<td>Memo Alerts</td>
<td>Allows users to add alerts to memo type actions in Interaction Supervisor. Users must also have the Alert Programming user right to add any type of alert.</td>
</tr>
<tr>
<td>Client Rights (in CIC clients)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>-----------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Account Code Verification</strong></td>
<td>Allows users to assign account codes to incoming and outgoing interactions. See also the View Account Codes access control right.</td>
<td></td>
</tr>
<tr>
<td><strong>Can Create Speed Dials</strong></td>
<td>Allows users to create speed dial views.</td>
<td></td>
</tr>
<tr>
<td><strong>Conference Calls</strong></td>
<td>Allows users to create conference calls. See also the Conference Rooms access control right.</td>
<td></td>
</tr>
<tr>
<td><strong>Customize Client</strong></td>
<td>Allows users to customize configuration settings in the CIC clients. It also allows users to add view, however, the ability to display certain views may require additional access control rights.</td>
<td></td>
</tr>
<tr>
<td><strong>Force User Logout</strong></td>
<td>Allows a user to log off another user. From the Workgroup Details view or the Workgroup Directory view in IC Business Manager/Interaction Supervisor, a user with this security right can log off another user from all CIC applications (for example, IC Business Manager and Interaction Connect). For example, if a user left for the day and forgot to log off, a supervisor with this security right can log off another user to release the concurrent license.</td>
<td></td>
</tr>
<tr>
<td><strong>Manage Client Templates</strong></td>
<td>Allows users to create and edit configuration templates in Interaction Client .NET Edition and Interaction Desktop.</td>
<td></td>
</tr>
<tr>
<td><strong>Mini-Mode</strong></td>
<td>Allows users to run the Mini-Mode add-on to Interaction Client .NET Edition and Interaction Desktop. Mini-mode provides a compact view and basic control of your interactions.</td>
<td></td>
</tr>
<tr>
<td><strong>Monitor Columns</strong></td>
<td>Allows users to add the Lstns column and Recs column to a queue view. The Lstns column shows a speaker icon when someone is listening to the conversation. The Recs column shows a red dot icon to indicate that the conversation is being recorded. For more information, see Who can see and listen to recordings.</td>
<td></td>
</tr>
<tr>
<td><strong>Multiple Calls</strong></td>
<td>Determines whether or not users are alerted when a new call arrives in the queue when already on a call. This only occurs on calls into lines that are marked “Allow Deferred Answer.” If users do not have this right, or are already on a call and do not have call coverage set to forward calls when busy, then they are not alerted to the new call and it rolls to voicemail. This setting does not actually prevent multiple calls from being on a queue at the same time. It merely controls whether users are alerted or not. This setting applies only to My Interactions, not to calls to a logged-in station or default workstation.</td>
<td></td>
</tr>
<tr>
<td>Feature</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Orbit Queue</td>
<td>This security right allows a user to park a call on an orbit queue. An orbit queue is a numbered queue that holds a call until another user picks it up.</td>
<td></td>
</tr>
<tr>
<td>Persistent Connections</td>
<td>Allows users the option of keeping remote telephone connected until you log off. Allows users to select Allow Persistent Connection when using a dynamic remote client connection with the Interaction Client .NET Edition and the Interaction Client Web Edition.</td>
<td></td>
</tr>
<tr>
<td>Personal Rules</td>
<td>Allows users to set up Personal Rules or create a Quick Call rule. These rules automatically perform specific actions when triggered by certain interactions.</td>
<td></td>
</tr>
<tr>
<td>Problem Reporter</td>
<td>Allows users to use the Report a Problem option from the File menu in Interaction Client .NET Edition, Interaction Desktop, and Interaction Client Web Edition. This option allows users to send an email message containing problem information to a specified email recipient.</td>
<td></td>
</tr>
<tr>
<td>Receive Voice mail</td>
<td>If users have this right, callers are sent to voice mail when in a DND status (Gone Home, Out of the Office, or some other “not available” status) or when not answering phone. If users don’t have this right, callers are returned to the Interaction Attendant main menu.</td>
<td></td>
</tr>
<tr>
<td>Response Management</td>
<td>Allows users to use Response Management to incorporate a stored response such as a standard greeting or their company’s support website address in e-mail messages, chats, callback requests, or text message.</td>
<td></td>
</tr>
<tr>
<td>Status Notes</td>
<td>Allows users to create a Status Note when they set Status details for themselves or other users. Status Notes provide additional details about status, for example, the date an agent expects to return after vacation.</td>
<td></td>
</tr>
<tr>
<td>Workgroup Queue Statistics</td>
<td>This security right allows a user to use the Workgroup Statistics view in the CIC clients.</td>
<td></td>
</tr>
<tr>
<td>Workgroups/Profiles Tab</td>
<td>Allows users to display the Workgroup and Profiles view. This view lists workgroups and Attendant Profiles by name.</td>
<td></td>
</tr>
<tr>
<td>Handler Rights</td>
<td>Debug</td>
<td></td>
</tr>
<tr>
<td>Command Right</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>Interaction Designer program and who are authorized to update production handlers or create new handlers on the IC server. If this check box is not selected, users who attempt to debug handlers from Interaction Designer will see an appropriate error message.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manage</td>
<td>Allows users to add or remove handlers published to the IC server. A handler’s status can be managed by someone running the Interaction Designer program on a workstation and using the Manage Handlers command on the Tools menu. If this option is not selected, users who attempt to manage handlers from Interaction Designer will see an appropriate error message.</td>
<td></td>
</tr>
<tr>
<td>Publish</td>
<td>Allows users to publish new or updated handlers on the IC server. This applies only to users who have the Interaction Designer program and who are authorized to update production handlers or create new handlers on the IC telephony server. If this check box is not selected, users who attempt to publish handlers from Interaction Designer will see an appropriate error message.</td>
<td></td>
</tr>
<tr>
<td>Assistance</td>
<td>Displays the Assistance button.</td>
<td></td>
</tr>
<tr>
<td>Coach</td>
<td>Displays the Coach button.</td>
<td></td>
</tr>
<tr>
<td>Disconnect</td>
<td>Displays the Disconnect button.</td>
<td></td>
</tr>
<tr>
<td>Hold</td>
<td>Displays the Hold button.</td>
<td></td>
</tr>
<tr>
<td>Join</td>
<td>Displays the Join button.</td>
<td></td>
</tr>
<tr>
<td>Listen</td>
<td>Displays the Listen button.</td>
<td></td>
</tr>
<tr>
<td>Mute</td>
<td>Displays the Mute button.</td>
<td></td>
</tr>
<tr>
<td>Park</td>
<td>Displays the Park button.</td>
<td></td>
</tr>
<tr>
<td>Pause</td>
<td>Displays the Pause button.</td>
<td></td>
</tr>
<tr>
<td>Pickup</td>
<td>Displays the Pickup button.</td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>Displays the Private button.</td>
<td></td>
</tr>
<tr>
<td>Record</td>
<td>Displays the Record button.</td>
<td></td>
</tr>
<tr>
<td>Secure Input</td>
<td>Displays the Secure Input button.</td>
<td></td>
</tr>
<tr>
<td>Secure Recording Pause</td>
<td>Displays the Secure Record button.</td>
<td></td>
</tr>
<tr>
<td>Snip</td>
<td>Displays the Snip button. For more information, see the Interaction Recorder and Interaction Quality Manager Technical Reference in the CIC Documentation Library and Recording Generation.</td>
<td></td>
</tr>
<tr>
<td>Transfer</td>
<td>Displays the Transfer button.</td>
<td></td>
</tr>
<tr>
<td>Voicemail</td>
<td>Displays the Voicemail button.</td>
<td></td>
</tr>
<tr>
<td>My Interaction Rights</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>Coach Interactions</td>
<td>Allows users to coach interactions by adding themselves to other agents' interactions.</td>
<td></td>
</tr>
<tr>
<td>Disconnect Interactions</td>
<td>Allows users to disconnect interactions using the CIC clients instead of hanging up the telephone.</td>
<td></td>
</tr>
<tr>
<td>Initiate Secure Input Interactions</td>
<td>Allows users to initiate Secure Input to collect confidential information from a customer.</td>
<td></td>
</tr>
<tr>
<td>Join Interactions</td>
<td>Allows users to join interactions, thus creating a conference call.</td>
<td></td>
</tr>
<tr>
<td>Listen in on Interactions</td>
<td>Allows users to listen to calls. Both sides of a call can be heard.</td>
<td></td>
</tr>
<tr>
<td>Mute Interactions</td>
<td>Allows users to disable the microphone on the telephone so that the other party or parties cannot hear what is being said during a call. It also enables users to reactivate the microphone.</td>
<td></td>
</tr>
<tr>
<td>Park Interactions</td>
<td>Allows users to park calls on orbit. Note: Can only park calls appearing in My Interactions.</td>
<td></td>
</tr>
<tr>
<td>Pause Interactions</td>
<td>Allows users to use the Pause button to control a recording session. The button can be clicked to pause the recording session. It can be clicked again to resume the recording session.</td>
<td></td>
</tr>
<tr>
<td>Pickup Interactions</td>
<td>Allows users to pick up interactions.</td>
<td></td>
</tr>
<tr>
<td>Private Interactions</td>
<td>Allows users to prevent other CIC client users from recording or listening to their conversation.</td>
<td></td>
</tr>
<tr>
<td>Put Interactions on Hold</td>
<td>Allows users to place selected interactions on hold.</td>
<td></td>
</tr>
<tr>
<td>Record Interactions</td>
<td>Allows users to record interactions. The recordings are stored in files.</td>
<td></td>
</tr>
<tr>
<td>Request Assistance from Supervisors</td>
<td>Allows users to request assistance from supervisors.</td>
<td></td>
</tr>
<tr>
<td>Secure Recording Pause Interactions</td>
<td>Allows users to Secure Pause a Recording to avoid recording sensitive information, such as Social Security numbers or credit card numbers, when recording interactions.</td>
<td></td>
</tr>
<tr>
<td>Snip Interactions</td>
<td>Allows users to create snippet recordings of their own interactions. <strong>Note:</strong> If a user needs to create snippet recordings of another user's interactions, you must assign the appropriate access control rights. For more information, see Assign access control rights. For more information, see the Interaction Recorder and Interaction Quality Manager Technical Reference in the CIC Documentation Library and Recording Generation.</td>
<td></td>
</tr>
<tr>
<td><strong>Remote Access Rights</strong></td>
<td><strong>User Rights</strong></td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>----------------</td>
<td></td>
</tr>
<tr>
<td>Transfer Interactions</td>
<td>Allows users to transfer interactions.</td>
<td></td>
</tr>
<tr>
<td>Transfer Interactions to Voicemail</td>
<td>Allows users to transfer calls to voicemail.</td>
<td></td>
</tr>
<tr>
<td>Email Access via TUI</td>
<td>Allows users to participate in e-mail interactions through the Telephone User Interface (TUI).</td>
<td></td>
</tr>
<tr>
<td>Fax Access via TUI</td>
<td>Allows users to participate in fax interactions through the Telephone User Interface (TUI).</td>
<td></td>
</tr>
<tr>
<td>Mobile Office User</td>
<td>Allows users access to the Mobile Office feature.</td>
<td></td>
</tr>
<tr>
<td>Outlook TUI User (Requires Mobile Office User)</td>
<td>Allows users access to Microsoft Outlook through the Telephone User Interface (TUI).</td>
<td></td>
</tr>
<tr>
<td>Voicemail Access via TUI</td>
<td>Allows users to participate in voicemail interactions through the Telephone User Interface (TUI).</td>
<td></td>
</tr>
<tr>
<td>Alert Programming</td>
<td>This right controls whether or not users can add, edit and remove alerts. When this right is assigned, context menus over statistic-based values in Supervisor provide the ability to add, edit and remove alerts. Without this right, users can only view alerts.</td>
<td></td>
</tr>
<tr>
<td>Directory Administrator</td>
<td>Allows users to edit public directories that were created by other users.</td>
<td></td>
</tr>
<tr>
<td>Follow Me</td>
<td>Allows users to call-forward multiple numbers, long distance numbers, and international numbers.</td>
<td></td>
</tr>
<tr>
<td>Intercom Chat</td>
<td>Allows users to have intercom chats between other users on the same IC server.</td>
<td></td>
</tr>
<tr>
<td>IP Phone Provisioning Administrator</td>
<td>Allows users to provision IP phones in the Managed IP Phones container.</td>
<td></td>
</tr>
<tr>
<td>Remote Control</td>
<td>Allows users to remotely run applications and utilities that are Notifier clients, for example, IC System Manager and Switchover Control Panel.</td>
<td></td>
</tr>
<tr>
<td>Require Forced Authorization Code</td>
<td>Requires users logged into station phones to enter a code that authorizes toll number calls.</td>
<td></td>
</tr>
<tr>
<td>TIFF Faxes</td>
<td>Allows users to use TIFF (Tag Image File Format) for faxes.</td>
<td></td>
</tr>
<tr>
<td>Trace Configuration</td>
<td>Allows users to configure tracing using IC System Manager or IC Trace utility.</td>
<td></td>
</tr>
<tr>
<td>Video</td>
<td>Reserved for future use.</td>
<td></td>
</tr>
<tr>
<td>View Interaction Details</td>
<td>Allows users to use Interaction Details view in the Interaction Tracker category. This view allows Interaction Supervisor users to search for interactions and examine the details.</td>
<td></td>
</tr>
</tbody>
</table>

3. Click **Close** to return to the Security page
4. Click **Apply** to save changes to the configuration.
Example

If a user needs security rights to join interactions creating conference calls, do the following:

1. Select "User" from the Category drop-down list.
3. Under "My Interactions" security rights, select the check box in the Has Right column for Join Interactions.
4. Click Close.

To assign the same rights to the default user, role, or workgroup, follow the same procedure.

Related topics

Administrator Access

Access Control

Overview of security

Configuration property inheritance

ACD

Utilization

You can set these utilization options at the workgroup or user level (user settings override workgroup settings). Agents can handle multiple phone calls, email messages, callbacks, chats, and other interactions simultaneously and in any combination. Using the ACD Utilization settings, you can configure how much of an agent's attention would be required for each of the interaction types as a percentage.

For example, if, as an administrator, you set the Chat category for an agent to 25%, it would mean that the agent could handle up to four chat events simultaneously. Indicating 100% for an event type would mean that the agent could handle only one such event at a time.

The percentages might vary from agent to agent based on their experience. Agents are available to the extent that the sum of the percentage utilization of all their current interactions is less than 100.

For example, if an agent is configured so that phone calls are set to 100 percent, chats to 25 percent, and email messages to 10 percent, then the agent could, at any given time, process one phone call, or four chats, or two chats and five email messages, or one chat and seven email messages, and so forth.
Note: Once an interaction enters a conference or enters an ACD queue as the consult portion of a consult transfer, utilization is no longer recognized. If an interaction is transferred to an ACD Queue, utilization is only recognized if the transfer is a blind transfer.

Note: If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

**Interaction Type**

The **Interaction Type** list displays the interaction types assigned to this workgroup or user, including Call, Callback, Chat, Email, Generic Object, or Work Item.

**% Utilization**

The **% Utilization** list shows the percentage of an agent's attention required for each interaction type.

When you add an Interaction Type, the percent utilization you assign to that interaction appears in this list. By default, the **% Utilization** is 100%.

**Tip:** Set the percent utilization for Calls to **51% or more** when either or both of the following conditions apply:

- You have selected **Auto answer** for the agent.
- You have selected **Exempt held interactions** for the agent.

Under the above conditions and at less than 51% utilization, if an agent is on a call and another call comes in, the CIC client puts the first call on hold automatically and connects the incoming call.

Since calls on hold (held interactions) are exempt and do not count against the agent’s percent utilization, the CIC client will continue putting active calls on hold automatically and connecting new calls to that agent.

Setting 51% or more utilization ensures that an agent handles only one call at a time. Setting it at 50% allows the CIC client to assign two calls simultaneously to the agent, one active and one on hold (achievable by some agents).

**Note:** Calls at 50% or less utilization with a maximum assigned of 1 will only allow 1 call.

**Max. Assign.**

The **Max. Assign.** list displays the maximum number of interactions allowed for this interaction type. By default, the value of **Max. Assign** is "1" for Call interaction type. The default value of **Max. Assign** for all other interaction types is "0".

**Edit**
Select an interaction type and click **Edit** to see the **Edit** dialog where you can change the percent utilization for a Call, Chat, Email, or other interaction type.

**Skills**

You can assign skills to each agent in addition to any **Inherited Skills** from the workgroup he or she belongs to. The agent's total skill set is the union of **Inherited Skills** plus the agent skills in this list. You can also override the agent's inherited skill's **Proficiency** and **Desire to use** levels.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

**Proficiency**

Type a value of 1 - 100 to indicate the minimum proficiency of skill level that an agent must have in order to receive an ACD call that requires this skill. 100 represents the highest skill level required. You define the skill attributes, which include proficiency level, for an agent on the ACD configuration page. The default value is 1. By default, the weight for proficiency is equal to 1, so this value is included in the ACD skills calculation.

**Desire to Use**

Type a value from 1 - 100 to indicate the minimum desire to use level agents must have in order to receive an ACD call that requires this skill. 100 is the highest possible desire; the higher the number, the more often the user wants to use the skill. Remember, desire to use is different than knowledge or ability. An agent can have a high level of proficiency (ability), but very little desire to use that ability. The default value is 0.

**Notes:** A user inherits the desire setting for a skill from any workgroup(s) to which the user belongs. However, you can override this with a user-level proficiency setting.

By default, the weight for Desire to Use equals 0, so the value that you specify is evaluated only as a qualifier instead of as the specified Desire to Use range for the ACD interaction. The Desire to Use setting is considered for ACD skill calculations when ACD customization points (such as CustomACDInitiateProcessing) are used. The weight for Desire to Use must be set to a value greater than 0 in order for it to be considered in ACD skills calculations. For more information on skills-based routing using the ACD Specify Interaction Skill Tool, see the ACD Processing Technical Reference in the CIC Documentation Library on the IC server or the white paper, ACD Processing: CIC's Automatic Communication Distribution in the documentation directory on the IC server.

**Related topics**

- Utilization
- Options
- Options2
- Statistics
Use this page to set ACD options for the user.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

**Auto-Answer ACD Interactions**

Select this check box if you want CIC to automatically connect ACD interactions to an agent's phone. When a interaction alerts on a user's queue, you can use the Alert tool in Interaction Designer to play a tone, a wave file, or both to inform the agent about the incoming interaction. These are called "whisper tones." This is useful if you are using auto-answer but want to warn an agent that another interaction is about to connect to his or her queue. If this box is selected, an agent must be at his or her station to be automatically connected to a interaction.

Clear this check box if you want to alert an agent and not automatically connect the interaction. When the agent's CIC client rings, he or she must manually click the Pickup button or pick up the handset to answer the interaction.

**Note:** In other CIC applications, the "whisper tones" feature is referred to as "Coach."

**Cost**

Type a positive number from 1 to 100 to define the cost attribute for this agent. The higher the cost number, the more expensive this agent appears to the ACD processing. If you want to consider employee cost when distributing ACD calls, assign a cost to each ACD agent according to their relative expense in the company or group. Then make analogous changes in the ACDProcessCall tool to increase the weight for Cost. The default value is 0.

**Agent Greeting**

Select the Enable check box to activate the agent’s greeting ("smile") prompt played for callers at the beginning of every ACD call to this agent. To select a prompt (.wav) file, click the Browse button, navigate to the directory containing the recording, and select a .wav file (for example, \ICServer\IC\Resources\AgentGreeting_MarkM.wav). See Queue Announcements for more information.

**Tip:** For more information on ACD processing, see the white paper ACD Processing: CIC’s Automatic Communication Distribution and the ACD Processing Technical Reference in the CIC Documentation Library.

**Options2**

Use this page to set additional ACD options for the user.
Note: If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

Attribute1

Any unique agent attribute that can be used to qualify an agent to receive a call. Leave this field blank if the ACD handlers do not use it. Otherwise enter any whole number.

Attribute2

Any unique agent attribute that can be used to qualify an agent to receive a call. Leave this field blank if the ACD handlers do not use it. Otherwise enter any whole number.

Attribute3

Any unique agent attribute that can be used to qualify an agent to receive a call. Leave this field blank if the ACD handlers do not use it. Otherwise enter any whole number.

Whisper Tone Level

Move the slider bar to adjust the 'whisper' tone the agent hears when there is an ACD call to the workgroup. Adjusting the slider bar to the right results in a whisper tone at a higher volume level.

ACD Statistics

You can set ACD statistic shift start options for a user or for a workgroup.

Call Statistics

The Call Statistics fields appear only in the workgroup configuration since these fields affect only call statistics for Workgroup (that is, ACD) queues that belong to an ACD Workgroup.

Statistics Period

The is the number of minutes used to define the "current period" and the "previous period" statistics on the Queues page in Interaction Supervisor. The statistics period includes every X number of minutes from midnight to the current time, where X is the number in the field. The default time is 30 minutes, which means the "current period" and "previous period" changes on every half-hour boundary.

Estimated Call Time Interval
The ACD Statistics (Call or Queue) tools in a handler that provides callers with estimated wait time feedback, uses this number of minutes in its wait time calculation. This is a rolling interval, which means the interval is the number of minutes prior to each use of the estimated wait time function as it is invoked on the IC server. The ACD Statistics tools calculate the estimated wait time for a caller in a queue by taking the average time all callers waited in the queue during the current interval (for example, the previous 30 minutes from the time the ACD Statistics tool in a handler was invoked). The default setting for the interval is 30 minutes.

**Statistic Shift Starts**

This list of times determines the beginning time and duration of each shift for this user or the members of the current workgroup. These times are used to define (relative to the current time) the "current shift" and the "previous shift" on the Queues page in Interaction Supervisor. The default statistic shift is a 24 hour shift starting at midnight (0:00), meaning the statistics are relative to one day (or 24 hours).

Use the **Add** and **Delete** buttons to add or remove shift times. To change a shift time, first delete it and then add a new time to replace it.

**Default User**

**Default User - ACD Options**

Use this page to configure default ACD Options for users.

**Whisper Tone Level**

Move the slider bar to adjust the 'whisper' tone the agent hears when there is an ACD call to the workgroup. Adjusting the slider bar to the right results in a whisper tone at a higher volume level.

**Apply to All Users**

Click this button to apply the whisper tone level to all new and existing users.

**Incoming Faxes**

Select the format from the drop-down list, of faxes received in Interaction Client Web Edition. The options are <None> (default), PDF or PNG.

**Non-ACD Alerting Actions**
You can specify different kinds of application actions for ACD calls and non-ACD calls. To configure actions for ACD calls, see the ACD Actions page. For applications to respond to non-ACD calls, specify the following actions.

**Alerting Action**

Select an action to start each time a non-ACD call enters an alerting state (for example, the station rings) in a user or workgroup queue. Actions in this list are defined in the Actions container. For the complete procedure, click here.

**Disconnected Action**

Select an action to start each time a call moves from the Connected state to a Disconnected state. Actions in this list are defined in the Actions container in the Interaction Administrator hierarchy.

**Parked Interactions**

Use this section to set the maximum time that a parked call, chat, email, or generic object will wait on silent hold, and to specify the extension that interaction will be transferred to when the time has elapsed.

**Timeout (minutes)**

Set the maximum time in minutes here that a parked call should wait before transfer to the specified extension.

**Extension**

Set the destination extension here for a parked call that has reached its timeout.

**Tracing...**

Tracing allows users to set trace levels for various IceLib (Interaction Center Extension Library)-based client applications through Interaction Administrator. Click Tracing... to display the Tracing Configuration page.
You can configure security for the default user, for roles, for a user, or for a workgroup.

Because users inherit one or more properties from the default user, roles and workgroup, the Security page is available from each of these containers. See Configuration Property Inheritance for an explanation of how these properties are related in each container.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes related to user security are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

For more information on the types of security available for people, see the links under Related topics.

**Related topics**

Overview of the master administrator rights

Overview of administrator access rights

Overview of access control rights

Overview of security rights

Configuration property inheritance

**Roles**

**Add a role**

**To add a role**

1. In the People container, click the Users subcontainer.
2. In the list view, right-click and then click New.
3. In the Entry Name box, type the role name and click OK. For more information, see Role name.
4. In the Role Configuration dialog box, complete the tabs. See the links under Related topics for complete information.
5. Click OK.

**Related topics**
Role name

**Configuration**

**Client Configuration**

**Security**

**Password Policies**

**Custom Attributes**

**History**

**Configuration**

Use this tab to assign users and workgroups to the role you are creating.

1. To add a user to this role, in the **Users** list, click **Add User**.
2. To delete a user from this role, select the user and click **Delete**. You can select multiple users at a time.
3. To add a workgroup to this role, in the **Workgroup** list, click **Add Workgroup**.
4. To delete a workgroup from this role, select the workgroup and click **Delete**. You can select multiple workgroups at a time.

**Note:** Workgroup membership is not inherited by a user assigned to a role. Adding a workgroup to a role, and then assigning the role to a user, does not mean the user automatically is assigned to the workgroup.

**Related topics**

**Overview of roles**

**CIC Client Configuration**

Use this tab to select the template for the role.

1. From the **Client Configuration** list, select the template to assign.

**Note:** You can also configure templates at the user level. For more information, see [Configure a CIC client for a user](#).
You can configure security for the default user, for roles, for a user, or for a workgroup.

Because users inherit one or more properties from the default user, roles and workgroup, the Security page is available from each of these containers. See *Configuration Property Inheritance* for an explanation of how these properties are related in each container.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes related to user security are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

For more information on the types of security available for people, see the links under *Related topics*.

**Related topics**

Overview of roles

Configure a CIC client for a user

Overview of security for people

Password Policies

These password policy options can be set at the user or role level. The default password policy has pre-selected settings and other rights. You can change these values in the Password Policy container. The settings displayed depend on whether you are configuring password policies for user or role.
For more information about password policies, see the *Security Precautions Technical Reference* in the CIC Documentation Library on the IC server.

**For Users**

**Inherited**

A password policy is a set of rights. When a password policy is added to a role, the user assigned that role, automatically takes on those rights. The inherited password policies are displayed in this list.

**Owned**

To assign a password policy to a user, in the **Owned** list click **Add**.

To delete a policy that is assigned in the **Owned** list, select the password policy and click **Delete**. You can select multiple policies to delete.

**For Roles**

A password policy is a set of rights. When a password policy is added to a role, users assigned that role take on those rights.

The **Available Password Policies** list shows the policies available to assign to the role. Select an available policy and click the **Add** button to assign the policy to this role. It appears in the **Currently Selected Password Policies** list.

To remove a policy from a role, click the **Remove** button. You can select multiple policies to add or remove.

**Related Topics**

- [Creating Policies](#)
- [Password Policies](#)

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**Custom attributes**

The Custom Attributes page allows you to add customized attributes so that you can reference your own variables and settings through the IceLib interface.
The page contains a list for the attributes and displays a **Name** and a **Value** column, and has the following buttons:

**Add**

Click **Add** and select an existing custom attribute from the pull-down list, enter a new custom attribute. If creating a new attribute, use a unique name, otherwise the existing attribute will be overwritten.

**Edit**

Click **Edit** to change the value of an existing custom attribute.

**Delete**

Click **Delete** to delete an existing custom attribute.

**Manage Attributes**

Click **Manage Attributes** to open a dialog box that displays a list of custom attributes. Click **Add** or **Delete** to manage the appearance of the custom attributes in the pull-down list.

The custom attributes are saved in the path of the root container. This **Path** is displayed at the bottom of the dialog box.

**History**

This page provides a way to manually document configuration changes and when they occurred. Changes made in Interaction Administrator are also automatically logged in the Interaction Administrator Change Notification Log (Log ID 7). Later, authorized users can run reports against this log to summarize all configuration changes.

**Note:** For more information on the Interaction Center Extension Library (IceLib), see the **System APIs section** in the CIC Documentation Library on the IC server.
This date is automatically updated each time you click the OK button, presumably after you make changes to the configuration. To avoid updating this date, exit the page by clicking the Cancel button.

**Note:** If you click Cancel, none of the changes made to this page will be preserved.

In addition, the history is updated when changes are made to the record elsewhere in Interaction Administrator. For example, when a user change his or her password, the Last Modified date is updated.

**Note:** Changes to the licenses for a user or a station do not update the Last Modified date.

**Date Created**

This date is automatically set when the user creates the initial configuration for this page. If the page was initially created during setup, the date could be blank.

**Notes**

Type notes about configuration settings and changes. If you change the configuration page and click OK, the Last Modified date is updated.

You must manually enter the date beside each entry in the Notes field to identify the date of each note.

To create a new line in the Notes field, press Enter.

**Users**

**Add users**

![User name]

Interaction Administrator displays a list of valid domain user names associated with each mailbox user profile on the network mail server (for example, Exchange Server or Notes server). Default CIC user names are identical to each network account that has an email user profile.

To specify a user name, you can type a name in the box, or to retrieve a list of existing users for a domain, click the ![...].

You can type a user name not found in the list of email users, but that name must be registered as a valid network account and email user account before the user can receive calls on the CIC system. This name must contain only valid (alpha-numerical) characters.

**Notes:**

Do not use these characters: \\ : * < > |
If you copy an existing user and paste to create a new user, any workgroups the original user is a member of are not copied to the new user. The problems with users inheriting rights and memberships are too complicated and require the administrator to deliberately assign workgroup membership to users created this way.

You can choose Interaction Message Store (formerly Voicemail Only or FBMC) to store and track user voice mails and faxes. If you chose Interaction Message Store as your voice mail option, it was installed and configured during Interaction Center installation.

Do not exceed 64 characters.

Related topics

Add a user

Add User Assistant

Search Options

Discover users from a mail server

Use this page to select how users will be imported for the mail provider's directory. The Add User Assistant searches all enabled mail providers with directory lookup enabled. The options are:

- **Search for all users**

  Add User Assistant will import each user in the address list you pick. The members of the address list and their attributes (email address, address, etc.) serve as the source of information to be replicated into CIC user entries in IC Directory Services. Click **Next** to search for all users.

  If no address lists are defined but you wish to use one, exit the Add User Assistant, define an address list on the email server, and start the Add User Assistant again.

  You can make changes to these users in the User Worksheet after the Add User Assistant completes.

  **Note:** If the Address List is very large (e.g., several thousand accounts), you will notice a significant delay (and potential failure) during installation.

- **Search only for users in a distribution list**

  To further reduce a subset of users, use this option to select a distribution list within the address list. Click **Find** to get distribution lists.
A distribution list is typically much smaller than the address list; set up for the convenience of users when messages are frequently sent to the same group of individuals, for example, a department.

If no distribution lists are defined but you wish to use a subset list, quit the Add User Assistant, define a distribution list on the email server, and restart the Add User Assistant again.

You can make changes to these users in the User Worksheet after the Add User Assistant completes.

**Discover users from Windows**

Use this page to query for existing Windows users in your current domain. If not in a domain, these will be the users local to the machine. Click **Find** to begin the search.

The results are displayed showing **Windows Users**, **Display Name** and **Comments**. You may select one user or use the **CTRL** key to select multiple users to import. Click **Select All** to select all users for import. Click **Back** if this is not the correct list of users.

**Search Results from Windows**

Use this page to review the results of your Windows user search.

The results are displayed showing **Windows Users**, **Display Name** and **Comments**. You may select one user or use the **CTRL** key to select multiple users to import. Click **Select All** to select all users for import. Click **Back** if this is not the correct list of users.

**Import users from a CSV list**

Click **Browse...** to select the CSV User List that contains your CIC users and their attributes. If you receive the User CSV Import Errors dialog box, you should correct the errors shown in the CSV list and run the import again. You may continue without resolving any errors by selecting the **I want to continue on with these warning-only errors**. Click **Next** to continue.

In most cases you should have your CSV User List completed before you run the Add User Assistant.

**Note:** The CSV file must be in UTF-8 format. For more information, see CSV files with non-English column headings.
Click **Example** to view a sample CSV file.

A Microsoft Excel document (CSV User List.xls) and a sample CSV file (CSV User List.csv) are available on the CIC products disc in Additional Files...CSV Lists.

The User CSV file is formatted in two sections; a header section, and a data section. The header is the first row in the file and contains the names of all columns to import. Open a copy of CSV User List.xls in Excel, and enter the information in the appropriate columns for the users you wish to create. The following columns are supported:

**User Name** (Required): Type a unique user name. That name must be registered as a valid network account and e-mail user account before the user can receive calls on the CIC system.

**First Name**: Type the user's first name.

**Last Name**: Type the user's last name.

**Display Name**: Type the name to display on voicemails and faxes from this user. This information is also used for the Voice-Mail Only messaging account (if Interaction Message Store (Voice Mail Only) was chosen for this IC server.)

**Extension**: Type the user’s extension.

**DID**: Type the user’s Direct Inward Dialing number. This is the number a caller would dial to call this user directly to bypass the autoattendant. Some users may not have a DID.

**Password**: If you type a user password here, it will be used. If you do not type a user password here, the assistant will automatically generate one that meets the default password policy requirements. You will have an opportunity at the end of the import to view those passwords, and to copy them to a document for distribution. **Caution**: Keep these passwords confidential by keeping track of the password report presented at the completion.

**Network ID**: Type the unique identifier for the user's computer workstation. Also include the name of the domain. For example: AcmeDomain\RogerDPC.

**Mailbox**: Type the e-mail address known by the mail provider. For example, use an “SMTP:” prefix for SMTP, like SMTP:ictwin@twin.local. Use a "GMAIL:" prefix for Gmail, like GMAIL:user@gmail.com.

If the mail provider is Interaction Message Store (Voicemail only), no mailbox is needed. Instead, type “FBMC” in this column. The assistant will automatically assign a Voice Mail address.

**Roles**: Type the role that users should be assigned. It must be one of the following roles:
These roles each have certain associated dialing privileges, such as Long Distance calling and Emergency dialing. See “Default Roles” for more information. IC Setup Assistant automatically assigns the Operator Role to the default Company Operator.

**Note:** You can add additional roles. IC Setup Assistant will create the role in Directory Services, but no permissions will be assigned to that role. After installation, you can assign the permissions in the Interaction Administrator Roles container.

**Workgroups:** Type the names of the workgroups the user should belong to. After installation, you can further define the workgroups in the Interaction Administrator Workgroups container. IC Setup Assistant creates a default Company Operator workgroup. All users are automatically assigned to the Company Operator workgroup. You can modify this for each user later in Interaction Administrator.

**Station Name:** Type the user’s station name. This should be a computer of the user running a CIC client. The assistant uses this information to assign the correct CIC station account (whose name must be identical.)

**Example CSV:**

```
Client1,Billy,Smith,Billy
Smith,1002,7151002,1234,twinadmin,SMTP:ictwin@twin.local,Agent,MegaSales|MegaMarketing,Guest01,No
```

When your additions are complete, save the document as a .CSV file type and download it to a secure location on the IC server. You can open the new .CSV file in any text editor.

For more information, including user attribute descriptions and instructions for importing the CSV User list in Add Users Assistant, see *Importing CSV Lists in IC* in the CIC Documentation Library.

**Search Results from a CSV List**

Use this page to review the results of your user import. The results are displayed showing User ID, Display Name, Extension, Password and Network ID.

Click Next to import all users in the list.
Use this page to review the results of your mail search. The results are displayed showing User Name, Display Name, First Name and Last Name. Depending on whether you discovered users from an address or distribution list, the Directory searched, and the Distribution list are displayed, along with the Number found of users.

Set extensions for CIC user accounts

Use this page to tell the Add User Assistant how station extensions should be assigned.

I want to skip the automatic assignment of user extensions.

If you select this option, any imported extensions are used.

Automatically assign each user's extension, starting with the specified value

Select this option if you want IC Setup Assistant to automatically generate an extension for each user. You will be able to view the user information once your changes are committed. Enter the Starting Extension. The extensions are incremented by 1.

You might choose this option if you are importing users from an email server, or if you have not entered user extensions in the CSV User List.

Note: If the Enable Regional Dialing option is selected in Regionalization - Location, and a newly created user extension creates an extension conflict, a message is displayed listing duplicate extensions. For later reference when resolving conflicts, click Copy to Clipboard to copy the listing, and then paste the content to a program that supports CSV (like Microsoft Excel).

Set Passwords for IC User Accounts

Use this page to tell the Add User Assistant how to create user passwords. Users will use this password to start the CIC clients and also to access the voice mail messaging menu over the telephone. CIC users can change their passwords over the telephone by accessing their personal options through the voice mail retrieval menu.

For more information about passwords, see the Security Precautions Technical Reference in the CIC Documentation Library on the IC server.

I want to skip the automatic assignment of user passwords

If you select this option, any imported passwords are used. Click Next.
**Note:**

If you select this option, the import process does **not** check that the user passwords in the User Worksheet comply with your **password policies**.

*Assign a single password for each new user account*

Select this option to use the same password for every account. You should recommend that users change their password later by dialing into their voicemail retrieval. Enter the **Password** and click **Next**. The password you enter here must meet the [default password policy](#) requirements. If not, the **Add Users Assistant** displays an error message.

**Notes:**

If you select this option, the import process checks that the selected password complies with your **password policies**. If the password is not compliant, an error message appears.

It is not advisable to use a simple value such as “1234” for the password for security reasons. It is recommended to use the Set Password feature in Interaction Administrator after completing the current tasks.

If you have master administrator rights, you can use the a command line executable to report on password usage within a CIC organization. Run the PWCheckU executable from a command prompt in the IC server path using a user log in switch, for example, “C:\pwchecku -login adminuser 07158609.” For more information about this utility, see the [Product Information site](#).

**Preview Search Results**

Use this page to preview search results of any users found from a mail server search or a Windows users search. If you chose to [set extensions](#) or [set passwords](#) you can view this information as well. Click **Next** to continue.

**Preview Import Results**

Use this page to preview import results of any users imported from a CSV list. If you chose to [set extensions](#) or [set passwords](#) you can view this information as well. Click **Next** to continue.
Completing the Add User Assistant

You have successfully completed the Add User Assistant. Click Finish to review the information in the User Worksheet before applying the changes. Click Back to return to the previous screen.

User Worksheet

Use this page to add users, modify user attributes or delete users. Make changes directly in the worksheet, or select the user attribute then use the shortcut icons below. When you are finished save your changes by selecting Save and Close from the File menu, Ctrl+S, or click .

The User Worksheet automatically opens after you complete the Add Users Assistant. Alternatively, you can skip the Add Users Assistant and use the User Worksheet to quickly add new users. In the User Worksheet, you can add users and specify only the attributes that are most frequently used.

Starts the Add User Assistant if you want to run it again.

Opens the Mailbox Selection dialog box for the selected user.

Opens the Set Extensions dialog box to assign extensions (if you skipped this process before), or reassign extensions if you want to make changes. You can set extensions for one, all, or only selected users.

Opens the Set Passwords dialog box to assign passwords (if you skipped this process before), or reassign passwords if you want to make changes. You can set passwords for one, all, or only selected users.

Use the Tools menu to select Manage Roles or Manage Workgroups.

The following user attributes can be modified:

User Name

Click on this field to add or modify the user name. This is the name that appears before the @ in an email address. Do not use these characters: \ / : * < > |

First Name

Click on this field to add or modify the user's first name.
Last Name

Click on this field to add or modify the user's last name.

Display Name

Click on this field to add or modify the user's display name. This is the name that displayed to users in the CIC clients.

Extension

Click on this field to add or modify the user's extension.

**Note:** If the **Enable Regional Dialing** option is selected in Regionalization - **Location** and a newly created user extension creates an extension conflict, an error message is displayed. The conflict must be resolved before saving the worksheet information.

DID

Click on this field to add or modify the user's DID number.

Password

Click on this field to add or modify the user's password.

Network ID

Click on this field to add or modify the user's network ID.

Mailbox

Use the **button to open the Mailbox Selection dialog box. Review mailbox attributes or make changes to the mailbox attributes for this user.

Roles

Use the button to open the Roles selection box. To add roles to this user, select the role and click **. The role appears in the Selected list. To remove a role from this user select the role and click **. The role appears in the Available list. Multiple roles can be assigned to a user.

Workgroups

Use the button to open the Workgroups selection box. To add workgroups to this user, select the workgroup and click **. The workgroup appears in the Selected list. To remove a workgroup from this user select the workgroup and click **. The workgroup appears in the Available list. Multiple workgroups can be assigned to a user.
Warning: The system creates a workgroup called "_SystemRoutingHub_" for the routing of calls. This workgroup exists for internal reasons only.

**User Workstation**

Use the button to open the list of defined user workstations. Add or modify the workstation assigned to this user.

**Station Name**

Use the button to open the list of defined stations. Add or modify the station assigned to this user.

**Location**

Use the button to open the list of defined locations. Add or modify the location assigned to this user.

Add users with the User Worksheet

You can bypass the Add Users Assistant and add users directly in the User Worksheet.

**Notes:**

In order to use the User Worksheet, you must have sufficient rights to create new users, roles, and workgroups. Specifically, you must have either the Master Administrator right, or you must have all of the security rights to add, edit, and delete users, workgroups, and roles.

If you enabled the Enhanced Interaction Administrator Change log, then the addition of users is tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

**To add users with the User Worksheet**

1. Under People, click the **Users Container**.
2. Right-click in the right pane.
3. Select **User Assistant and Worksheet**...
4. On the first page, select **Skip the search and add or modify user entries within the worksheet**.
5. Add the users and attributes directly in the worksheet.
6. To save your changes, from the **File** menu, click **Save and Close**.

**Note:** At any time you can click the button to run the **Add Users Assistant**.

The import process checks that any user passwords in the User Worksheet comply with your password policies. If a password is not compliant, an error message appears.
Add a user

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then the addition of the user is tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

To add a user in the **User Configuration** dialog box

1. In the **People** container, click the **Users** subcontainer.
2. Right-click the **Users** subcontainer and then click **New**.
3. In the **Entry Name** box, type the user name and click **OK**.

**Notes:**

Do not use these characters: `\ / : * < > |`

If you copy an existing user and paste to create a new user, any workgroups the original user is a member of are not copied to the new user. The problems with users inheriting rights and memberships are too complicated and require the administrator to deliberately assign workgroup membership to users created this way.

You can choose Interaction Message Store (formerly Voicemail Only or FBMC) to store and track user voice mails and faxes. If you chose Interaction Message Store as your voice mail option, it was installed and configured during Interaction Center installation.

Do not exceed 64 characters.

4. In the **User Configuration** dialog box, complete the tabs. See the links under **Related topics** for complete information.
5. Click **OK**.

**Related topics**

**User Worksheet**
Roles

Password Policies

ACD (automatic call distribution)

MWI (message waiting indicator)

Client configuration

Phonetic Spellings

Options

Security

Custom Attributes

History

Configure a user

User Configuration

To define a CIC user account or change an existing user account, type or select the appropriate values in this page for the user.

Note: If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

Extension

Type a unique (logical) extension number associated with this user. When this user logs on to the network at any CIC client workstation, the CIC system detects that user’s presence (by his or her extension) and routes calls to the workstation where the user logged on. If the user is logged on to more than one workstation at the same time, all connected workstations ring when a call is received for that user, regardless of the workstation’s extension number.

Notes: Be sure the user extension numbers do not begin with a number that conflicts with a workgroup extension or other valid queue extension. Extension numbers can be from two to six digits but should avoid the following numbers (in North America): 1800, 1900, 1411, 1911.

If the Enable Regional Dialing option is selected in Regionalization - Location, and a change to a user extension creates an extension conflict, a message is displayed listing duplicate extensions. For later reference when resolving conflicts, click Copy to Clipboard to copy the listing, and then paste the content to a program that supports CSV (like Microsoft Excel).
Mailbox User

If you are using unified messaging (such as Microsoft Exchange or IMAP email client), select an email account to receive voicemail, faxes, and email sent to this user. If a user does not have an email account, he or she will not receive voice mail. The button displays the Mailboxes page that lets you unambiguously specify the mailbox for this user. If this user does not have or require an email account, leave the field blank.

Notes: If you chose Interaction Message Store to store and track user voice mails and faxes, you cannot change the Mailbox User address on this page. When Interaction Message Store is enabled, the name displayed is from information on the Mailbox Info tabbed page. To change Mailbox User information for Interaction Message Store, click the Mailbox Info tab.

User names and addresses must contain only valid (alpha-numerical) characters.

Password

Type a password of any length or any characters (upper and lower case are significant); it is initially displayed as one or more "*" characters. The next time you open the User configuration, the Password and Confirm Password fields will display 16 "*" characters, regardless of the length of the password you entered, as an added security measure. Blank passwords are not allowed. A message appears if you do not enter a password, or if you enter a password that does not satisfy the requirements of the password policy. The default password policy requires that passwords have a minimum of 16 characters.

Keep in mind that remote callers may have to enter this password from a phone key pad. This password is required for some CIC operations, such as remote voicemail retrieval, remote CIC client connections, and Forced Authorization Codes. It is not required for local CIC client use.

Note: If you have master administrator rights, you can use the a command line executable to report on password usage within a CIC organization. Run the PWCheckU executable from a command prompt in the IC server path using a user log in switch, for example, "C:\pwchecku -login adminuser 07158609." For more information about this utility, see the Product Information site.

For more information about passwords, see the Security Precautions Technical Reference in the CIC Documentation Library.

Confirm Password

Retype the password exactly as you did in the Password box.

Preferred Language
Select the preferred language for the prompts for this user. The default setting is <System Default>.

**Default Workstation**

From the Default Workstation list, select the name of the workstation primarily associated with the user’s account. This field will auto-complete the listing. For example, type in the letter "a" to display a listing of all stations that contain the letter "a".

For example, if USER1 is the workstation name associated with User 1’s account, then USER1, or its analog phone, rings on incoming calls even if User One is not logged on to the network unless:

- User 1 has selected a status other than **Available** (for example, **Do Not Disturb**).
- Someone other than User 1 is logged on to the workstation. Example, if User 1’s default station is Station 1, do not route calls addressed to User 1 to Station 1, as long as another user is logged on to that station (whether Station 1 is the name of the PC or the name specified in the IC command line, it doesn't matter). Otherwise, it causes a security breach.

In either case, incoming calls for User 1 go directly to User 1's voice mail.

**Notes:** Do not configure as a user’s default workstation any workstation intended for regular use by more than one person.

You cannot select a remote station name as the default workstation. Remote users must log on to IC to receive calls.

The workstation needs to have the **Ring Always** setting enabled to properly set the default workstation for the user.

**IC Privacy Name**

This field is used for creating an alias for agent names in chat and other displays.

**NT Domain User**

Type the domain qualified user log on name for this CIC user (for example, CorpDomain\SonyaM). Click the **Browse** button to browse domains and users, and to validate. CIC uses this field to automatically authenticate that the CIC user has a valid account in the network domain. With the appropriate value in this field, the CIC user logged in to the domain with this name can start any CIC application and CIC automatically authenticates this user as a form of security. This prevents non-IC users from starting a CIC application (such as a CIC client) and running it on the network.
If this field is blank, IC attempts to validate a CIC user from a cached list of valid CIC accounts created the first time each user logs on to IC. If IC cannot reconcile a CIC user account with a known Windows user account, the log on will fail, or an application may present an IC logon dialog to give the user an opportunity to enter valid IC and account names and passwords.

**Outbound ANI**

Enter the ANI/Caller ID for the system to send when this user makes an outbound call.

*Notes:* This option overrides the Outbound ANI setting in Station Options.

This Outbound ANI option does not override a call placed with a specific Calling Party Number and Calling Party Name. Call Forwarding and Follow-me numbers placed as outbound calls use the Forwarded Parties ANI and Name where allowed.

**Exclude From Directory**

Select this check box to exclude the user from the company directory listing.

**Location**

Select the physical [location](#) for this user. By default, <Default Location> is used.

**Time Zone**

Select the time zone to associate with this user. The system uses this offset to make date and time announcements for messages such as voicemail and vacation until date status.

**Use Location Time Zone**

To automatically set the user's time zone based on the user's location, select this check box.

**Home Site**

Select the **Home Site** using the button which allows the selection of site IDs as defined by the peer sites.

**Current Site**

This is the **Current Site** for this user, and is read-only.
Tip: To create a GIF image photo for this user to appear in a Chat Window during an IC Web Chat session, see the "Agent Photo" section in Interaction Web Tools Technical Reference in the CIC Documentation Library.

Related topics

Users overview

Configure a user

Enable Regional Dialing

Forced Authorization Codes

Peer site concepts

Status Messages

Licensing

Use this page to assign licenses to the user.

Note: If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

License Allocation Method

Click the type of license allocation to use for this user. By default, Assignable method is used.

The Assignable method provides a way to allocate licenses to users, workgroups and stations, with the exception of a Basic Station license. The Basic Station license can only be allocated to stations.

The Concurrent method provides a way to allocate licenses to users only and is based on the number of simultaneous users accessing a feature or function. This license method allows users to acquire available licenses during logon instead of based on configuration. With the concurrent license method, the license is not allocated until the user logs in to the application. CIC maintains a list of users, and licenses available and in use.

Client Access License

To allow the user to use the CIC clients, assign this license. Without this license assignment, the user cannot run the CIC clients.
ACD Access License

Select this check box if this user is an ACD user, then select the type of ACD license. These are the available types of ACD licenses:

- **Media 1**: This license allows 1 interaction type at a given time.
- **Media 2**: This license allows 2 interaction types at a given time.
- **Media 3 Plus**: This license allows 3 or more interaction types at a given time.

If **Media 1** or **Media 2** type of ACD licenses is selected, you can click **Interaction Types** and select the type of interaction from the list to apply to the license. **Interaction Types** is grayed-out and not available if **Media 3 Plus** is selected.

**Notes**: Failure to have a ACD Access License assigned to the user will prevent that user from being ACD active.

If the station (Station A) is assigned a Basic Station license and two different users (User A and User B) each have all other necessary rights (i.e., Client Access) assigned to them, then both users can simultaneously log in to that station, (User A and User B can both be logged into Station A at the same time). If the second user to login does not have the necessary licenses assigned, then the second user login will fail.

IPA License

Select the **IPA License** check box if this user is an Interaction Process Automation user, and then select the type of license to assign to that user.

These are the available types of Interaction Process Automation licenses:

- **Direct Routed Work Items** ([I3_ACCESS_IPA_USER]) license: Enables you to launch any process to which you have rights. It also enables you to receive Work Items that are directly routed to you.
- **Group Routed Work Items** ([I3_ACCESS_IPA_USER_ACD]) license: Enables you to receive Work Items that are either routed to you directly or as a member of a workgroup (similar to an ACD queue).
- **Process Monitor** ([I3_ACCESS_IPA_MONITOR]) license: Enables you to view process status and details in the Process Monitor or to use Process Reporting in IC Business Manager Applications.
- **Process Designer** ([I3_ACCESS_IPA_DESIGNER]) license: Enables you to use the Process Designer to create and modify Interaction Process Automation processes.

**Note**: Each license in this list enables you to use the Interaction Process Automation features included in all the previous licenses in the list. That is, the Group Routed Work Items license includes the Direct Routed Work Items license. The Process Monitor license includes both of the Routed Work Items licenses. The Process Designer license includes all the other licenses.

For more information about designing processes, refer to the *Interaction Process Automation Technical Reference* and the Process Designer online help.
**Enable Licenses**

Select this check box to set the license settings to Active. If unchecked, the licenses settings on this page are ignored by the system. This is a way to turn off licensing for a user, but keep the license settings.

**Additional Licenses**

This list displays additional licenses that are available. Select the licenses you wish to assign to this user.

Click **OK** to save your changes. These license assignments are immediately reflected in the license counts in the Licenses Allocation container list.

**Related topics**

Configure a user

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**Personal Info**

The **Personal Info** page displays the user's mailbox information.

If the user's mailbox was selected from a directory service (Exchange for example), then the personal information displayed here is populated by that directory service, and is read-only. If the user's mailbox was selected without using a directory service (No Mailbox, Interaction Message Store, or IMAP), then the personal information can be entered manually for display in the Company Directory.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

**To complete the personal information for a user**

1. Click the buttons at the top of the Personal Info tab to access all of the pages of personal information fields.

**Related topics**

Configure a user

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**User Workgroups**
If one or more workgroups are defined in the Workgroups container of Interaction Administrator, they appear in the user’s **Available Workgroups** list. If this user is a member of any workgroup, that workgroup name appears in the **Currently Selected Workgroups** list.

Moving users in and out of workgroups on this page accomplishes the same result as adding and removing users from workgroups in the [Workgroups](#) container. In the same way, if a workgroup has a queue, use one of these pages to add or remove users from the workgroup queue.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see **About the Enhanced Interaction Administrator Change Log**.

### Available Workgroups

Workgroups in this list are defined in the Workgroups container. To add the user to one of the **Available Workgroups**, which is indicated by the workgroup name appearing in the **Currently Selected Workgroups** list, do one of the following:

- Double-click the workgroup name, *or*
- Select a workgroup name and click **Add**.

### Currently Selected Workgroups

Workgroups in this list are defined in the Workgroups container. To remove a user from one of the **Currently Selected Workgroups**, which is indicated by the workgroup name appearing in the **Available Workgroups** list, do one of the following:

- Double-click the workgroup name, *or*
- Select the workgroup and click **Remove**.

**Related topics**

- Users overview
- Configure a user
- Workgroups overview
- [Roles](#)

You can assign multiple roles to a user or multiple users to a role.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see **About the Enhanced Interaction Administrator Change Log**.
Inherited

A role is a set of permissions. When a role is added to a workgroup, the workgroup takes on those permissions. If a user is a member of that workgroup, the user automatically inherits the roles assigned to the workgroup. The inherited roles are displayed in this list.

Owned

To assign a role to this user, in the **Owned** list click **Add**. Again, you must already have defined one or more roles to add a role in this list.

To delete a role that is assigned in the **Owned** list, select the role and click **Delete**. You can select multiple roles to delete.

**Note:** The only inherited permission that an individual may override is Account Code Required.

**Related topics**

- Configure a user
- Users overview
- Roles configuration

**Password Policies**

Security policies can be configured for use with CIC passwords and apply these policies per role or user. These policy configurations are very similar to password security policies of Windows. You can define password policies, control password types, and set password change rules, and so on.

You can disguise passwords by setting a parameter. In this case, asterisks (*) appear instead of the actual password.

You can set the following password attributes:

- Minimum Number of Unique Passwords Before One Can be Reused
- Minimum Age of Password Before User Can Change It (days)
- Maximum password age (days)
- Password Age Warning Period (days before password expires)
- Minimum password length
- Minimum number of unique DTMF digits
- Allow or not allow sequential digits
- Maximum number of failed logins
- Lockout duration (minutes)
- Failed Login Count Reser Time (minutes)
- User Must Change Password At Next Login

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

Related topics

Configure a user

**MWI**

Use this page to configure the behavior of Message Waiting Indicator (MWI) for a user.

Each PBX phone user must have a CIC user account to receive voice mail.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

**Enable MWI**

Select the check box to indicate this user has an MWI-enabled phone and wishes to use the feature. Clear the check box to disable the MWI feature for this user.

If you enable this feature you must select one of the following options:

- **Send to Default or Logged Workstation:** (default) Select this option to send the indicator to the station the user is logged into. If the user is not logged in, it sends the indicator to the user's default workstation.
- **Send to Following Address:** If you select this option, you must also enter the **Address** or directory number.

**Note:** To fully enable the MWI feature, you must activate MWI for the default station, for the station that user uses, and for the user.

**Related topics**

Activate MWI for the default station
Activate MWI for a station

Configure a user

CIC Client Configuration

To configure a CIC client for a user

1. In the People container, click the Users subcontainer.
2. Double-click the user. The User Configuration dialog box appears.
3. Click the Client Configuration page.
4. Do one of the following:
   - To use a template to configure the client, in the Client Configuration list, select the template to use. Then click OK.
   - To configure a client that is unique to this user, next to Edit user's own, click Configure. For more information on how to complete the configuration, click the links under Related topics.

Note: If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

Related topics

Configure a user

Client Configuration Template

Phonetic spellings

You can set phonetic spelling options for users workgroups. Use this page to define alternate (phonetic) spellings of the user name or workgroup name for Text To Speech (TTS) and Automatic Speech Recognition (ASR).

Note: If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

Text To Speech

Type the phonetic spelling of the user's or the workgroup's name.

The TTS spelling should be a single-valued attribute. Spell the name like it sounds. For example if you have a user name spelled "Rose," but it is pronounced "Rosy," then enter "Rosy."
Automatic Speech Recognition

Enter the user's or workgroup's phonetic spelling of the name. You can specify multiple spelling entries for ASR. The ASR spelling attribute should be a multi-valued attribute.

The ASR phonetic spelling values are used by the Reco Create Company Directory Grammar. You can specify any valid grammar token, including nicknames or different spellings of a user’s name.

For example, assume a user is called “John Smith.” This is the first name and last name known to the CIC system, and this spelling entry is used by default for the company directory grammar. To add spelling entries to increase the grammar coverage, add the following alternate spelling entries:

- Johnny Smith
- John Robert Smith
- John R Smith

*Note:* Be careful not to add too many alternate spelling entries. If the grammar coverage becomes too broad, or if the company directory contains too many similar names, the recognition quality degrades.

You can also include phonetic spelling entries for a specific language. To do this, at the end of the phonetic spelling entry, type `!language identifier`.

For example, the following spelling entry indicates that it is for the English language.

Johnny Smith !en-us

*Note:* You can use only one language identifier for each spelling entry. The language identifier must be the last characters of the spelling entry. Any languages that you specify must be installed on all ASR servers, or the company directory grammar will not compile.

Related topics

Configure a user

User Options

Incoming Faxes

If you configure a user as fax-capable in Interaction Administrator (User Configuration--Options-->Fax Capability), then callers to that DID hear ring-back while the handler listens
for a fax. The handler then places the call on the queue. If you do not configure a user as fax-capable, the call goes directly to that user queue.

**Note:** If you create new users by importing them or by using Setup Assistant, the default Fax capability setting for those users is false.

**Tip:** See Tell Me the Difference Between DID Fax and DID Non-fax Users.

Select the format from the **Web Client Fax Format** drop-down list, of faxes received in Interaction Client Web Edition. The options are <None> (default), PDF or PNG. This setting is only available if you do not select the **Default** check box (this check box indicates you want to use the default system setting).

### Unified Messaging

Select the server destination from the drop-down list for messages when using SIP diversion, or click Advanced Options to specify to use the CIC user extension (default), or to use other number for Unified Messaging (UM).

**Note:** For UM users to receive voice mail, faxes, and email, each user will have a uniquely named email account, which you specify in Mailboxes Selection. For more information on configuring CIC to use UM, see Unified Messaging Integration with Interaction Center in the Technical Reference Documents section in the CIC Documentation Library on the IC server.

### Non-ACD Interactions

Select the **Auto Answer Non-ACD Interactions** check box if you want CIC to automatically connect non-ACD interactions to an agent's phone. When a interaction alerts on a user's queue, you can use the Alert tool in Interaction Designer to play a tone, a wave file, or both to inform the agent about the incoming interaction. These are called "whisper tones." This is useful if you are using auto-answer but want to warn an agent that another interaction is about to connect to his or her queue. If this box is selected, an agent must be at his or her station to be automatically connected to a interaction.

Clear this check box if you want to alert an agent and not automatically connect the interaction. When the agent's CIC client rings, he or she must manually click the Pickup button or pick up the handset to answer the interaction.

**Note:** This setting applies to DID/DNIS or ACD calls, but does not apply to non-ACD workgroups calls.

### Alerting Action

Select an action to start each time a non-ACD call enters an alerting state (for example, the station rings) in a user or workgroup queue. Actions in this list are defined in the Actions container. For the complete procedure, click here.
**Disconnected Action**

Select an action to start each time a call moves from the Connected state to a Disconnected state. Actions in this list are defined in the Actions container in the Interaction Administrator hierarchy.

**Incoming Interactions**

Set the **Timeout** in minutes and/or seconds that an incoming interaction rings at the CIC client station before the interaction quits alerting and proceeds to the next step in the handler (for example, goes to voicemail or changes an ACD agent’s status to "ACD-Agent not answering" and offers the interaction to another agent). The **Default** check box indicates the timeout value is the system default of 30 seconds. You can change the value by de-selecting the **Default** check box and using the up and down arrows to adjust the number (7 seconds is the minimum). Use the drop-down list to select Seconds, Days, Hours or Minutes.

**Parked Interactions**

Use this section to set the maximum time that a parked call, chat, email, or generic object will wait on silent hold, and to specify the extension that interaction will be transferred to when the time has elapsed.

**Timeout (minutes)**

Set the maximum time in minutes here that a parked call should wait before transfer to the specified extension.

**Extension**

Set the destination extension here for a parked call that has reached its timeout.

**Tracing...**

Tracing allows users to set trace levels for various IceLib (Interaction Center Extension Library) -based client applications through Interaction Administrator. Click Tracing... to display the Tracing Configuration page.

**Overview of security for people**

You can configure security for the default user, for roles, for a user, or for a workgroup.

Because users inherit one or more properties from the default user, roles and workgroup, the Security page is available from each of these containers. See *Configuration Property Inheritance* for an explanation of how these properties are related in each container.
For more information on the types of security available for people, see the links under Related topics.

Related topics

Overview of the master administrator rights
Overview of administrator access rights
Overview of access control rights
Overview of security rights

Configuration property inheritance

Custom attributes

The Custom Attributes page allows you to add customized attributes so that you can reference your own variables and settings through the IceLib interface.

Note: If you enabled the Enhanced Interaction Administrator Change log, then all of your changes to the Custom attributes page in the User Configuration dialog box and the Workgroup Configuration dialog box dialog box are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

The page contains a list for the attributes and displays a Name and a Value column, and has the following buttons:

Add

Click Add and select an existing custom attribute from the pull-down list, enter a new custom attribute. If creating a new attribute, use a unique name, otherwise the existing attribute will be overwritten.

Edit

Click Edit to change the value of an existing custom attribute.

Delete
Click **Delete** to delete an existing custom attribute.

**Manage Attributes**

Click **Manage Attributes** to open a dialog box that displays a list of custom attributes. Click **Add** or **Delete** to manage the appearance of the custom attributes in the pull-down list.

The custom attributes are saved in the path of the root container. This **Path** is displayed at the bottom of the dialog box.

---

**Note:** For more information on the Interaction Center Extension Library (IceLib), see The **System APIs section** in the CIC Documentation Library on the IC server.

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**History**

This page provides a way to manually document configuration changes and when they occurred. Changes made in Interaction Administrator are also automatically logged in the Interaction Administrator Change Notification Log (Log ID 7). Later, authorized users can run reports against this log to summarize all configuration changes.

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**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes to the History page in the User Configuration dialog box and the Workgroup Configuration dialog box are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

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**Last Modified**

This date is automatically updated each time you click the **OK** button, presumably after you make changes to the configuration. To avoid updating this date, exit the page by clicking the **Cancel** button.

---

**Note:** If you click **Cancel**, none of the changes made to this page will be preserved.

In addition, the history is updated when changes are made to the record elsewhere in Interaction Administrator. For example, when a user change his or her password, the **Last Modified** date is updated.

---

**Note:** Changes to the licenses for a user or a station do not update the Last Modified date.

---

**Date Created**

This date is automatically set when the user creates the initial configuration for this page. If the page was initially created during setup, the date could be blank.
Notes

Type notes about configuration settings and changes. If you change the configuration page and click OK, the Last Modified date is updated.

You must manually enter the date beside each entry in the Notes field to identify the date of each note.

To create a new line in the Notes field, press Enter.

Workgroups

Add a workgroup

Note: If you enabled the Enhanced Interaction Administrator Change log, then the addition of the workgroup is tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

To add a workgroup

1. In the People container, click the Workgroups subcontainer.
2. Right-click and then select New.
3. In the Entry Name box, type the workgroup name and click OK.

Note: Do not exceed 64 characters.

4. In the Workgroup Configuration dialog box, complete the tabs. See the links under Related topics for complete information.

Related topics

Configuration
Files
Members
Roles/Supervisors
Wrap-up Codes
ACD (automatic call distribution)
Overview of workgroups

Workgroup name

Type a name that describes the purpose and/or nature of the group. For example, if a workgroup queue is solely for ACD calls, use "ACD" as part of the workgroup name, e.g., "ACD - DB Support".

A workgroup name should be no more than 50 characters long (25 characters with a double-byte character set). It must start with an alphabetic character and contain no colon (:) or backslash (/). It may contain spaces.

**Note:** Profile names in Interaction Attendant should not contain the name of a workgroup to prevent routing errors. See the **Custom Inbound Call Profile Node** help in the Interaction Attendant help for more information.

Do not exceed 64 characters.

**Related topics**

Add a workgroup

Configure a workgroup

Files
Audio Configuration

Use this page to select the on hold audio or in-queue audio (as configured in Media Server) to play to the caller.

**Note:** The optimal format for .wav files depends on your system configuration. A safe format to use (which is also optimal in many configurations) is 8 kHz mono mu-law PCM.

*Use Random Wave File*

Select this option to play random wave files from the Resources folder on the IC server for in-queue audio for this workgroup.

*Use Wave File*

Type a parameter or the drive, path, and .WAV file name found on the IC server. For example, C:\I3\IC\server\sounds\support.wav, where C: is the local drive of the IC server. Use this to specify a unique wave file to play in-queue audio for this workgroup.

*Use Audio Source*

If you are implementing the Audio Sources feature to identify a single audio stream to be played to calls waiting in the workgroup queue, select an audio source from the drop-down menu. See Audio Sources for complete audio source configuration instructions.

Select **Only play this audio source for ___ seconds**, and enter the number of seconds to limit the length of the audio playing time.

For more information on Media Server, see *Interaction Media Server* in the Technical Reference Documents section of the CIC Documentation Library on the IC server.

Workgroup Members

Select the users you wish to belong to this workgroup. You can optionally specify a fixed linear hunt order for alerting Workgroup members when the workgroup has a queue, and it is not an ACD queue.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

Available Users

Names in the **Available Users** list are registered on the server but are not members of this workgroup. To add one of these users to this workgroup, which is indicated by the user’s name appearing in the **Currently Selected Users** list, do one of the following:
• Double-click a user’s name, or
• Select a user's name and click Add.

Currently Selected Users

Names in the Currently Selected Users list are members of the current workgroup. To remove a user from this workgroup, which is indicated by the user’s name appearing in the Available Users list, do one of the following:

• Double-click the user’s name, or
• Select the user’s name and click Remove.

Maintain Order

Select this check box to preserve the order of the Currently Selected Users list. Handlers can optionally use this Currently Selected Users list as an ordered (linear) hunt group for alerting users in workgroup queues (not ACD queues). The Alert Workgroup tool includes a check box that allows you to alert all users in a workgroup at the same time, or in a sequential order. If the Alert Workgroup tool specifies a sequential order, and the Maintain Order check box is selected, workgroup members will be alerted in the order specified in the Currently Selected Users list, starting at the top.

To arrange the order of user selection

1. Click the Maintain Order check box at the bottom of the Currently Selected Users list to create a fixed order of user selection.
2. Click on the name of the user to be first in order to receive calls in this workgroup queue.
3. Click the Up button until that user's name is at the top of the list.
4. Select the name of the user to be second in order to receive calls in this workgroup queue.
5. Click the Up button until that user’s name is second from the top of the list.
6. Select each user's name and click the Up or Down button to determine the order in which each user is selected to receive calls that alert on this workgroup queue.
7. Click OK to save this order and exit.

For additional information, see Alert Workgroup tool in Interaction Designer Help.

_roles Supervisors_

Use this page to assign roles and supervisors to this workgroup. Assigning a role to a workgroup gives the role's permissions to the workgroup members. Assigning a supervisor to a workgroup, associates that supervisor with the supervisor alerts for this workgroup.
Note: If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

Roles

To assign a role to this workgroup, in the Roles box click Add. You must already have defined one or more roles in the Roles container.

To delete a role, select the role and click Delete. You can select and delete multiple roles.

Supervisors

If agents need to alert a supervisor, they can type a message and broadcast it to all CIC clients.

To assign a user as a supervisor for this workgroup, in the Supervisor box click Add. This feature affects the CIC clients.

Related topics

About roles

Wrap-up Codes

Note: If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

To configure wrap-up codes for a workgroup

1. To prompt workgroup members to enter a wrap-up code for every interaction, select the Wrap-up Active check box.
2. In the Keypad wait time box, type the number of seconds that the TUI displays a message to prompt the agent to enter a wrap-up code. When the agent enters the wrap-up code, the TUI removes the prompt. The default is 30 seconds.

Note: The CIC clients also prompt the agent to enter a wrap-up code. The agent can chose whether to use the TUI or the CIC client to enter the wrap-up code. If this is confusing, you can turn off the TUI prompt. To do this, type 0 in the Keypad wait time box.

3. In the Client wait time box, type the number seconds that the CIC client displays a message to prompt the agent to enter a wrap-up code. When the agent enters the wrap-up code, the CIC client removes the prompt. The default is 30 seconds.
4. In the Prompt name box, type the name of the file that instructs the user to enter data.
You can set these utilization options at the workgroup or user level (user settings override workgroup settings). Agents can handle multiple phone calls, email messages, callbacks, chats, and other interactions simultaneously and in any combination. Using the ACD Utilization settings, you can configure how much of an agent's attention would be required for each of the interaction types as a percentage.

For example, if, as an administrator, you set the Chat category for an agent to 25%, it would mean that the agent could handle up to four chat events simultaneously. Indicating 100% for an event type would mean that the agent could handle only one such event at a time.

The percentages might vary from agent to agent based on their experience. Agents are available to the extent that the sum of the percentage utilization of all their current interactions is less than 100.

For example, if an agent is configured so that phone calls are set to 100 percent, chats to 25 percent, and email messages to 10 percent, then the agent could, at any given time, process one phone call, or four chats, or two chats and five email messages, or one chat and seven email messages, and so forth.

Note: Once an interaction enters a conference or enters an ACD queue as the consult portion of a consult transfer, utilization is no longer recognized. If an interaction is transferred to an ACD Queue, utilization is only recognized if the transfer is a blind transfer.

Note: If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

Interaction Type

The Interaction Type list displays the interaction types assigned to this workgroup or user, including Call, Callback, Chat, Email, Generic Object, or Work Item.

% Utilization

The % Utilization list shows the percentage of an agent's attention required for each interaction type.
When you add an Interaction Type, the percent utilization you assign to that interaction appears in this list. By default, the % Utilization is 100%.

**Tip:** Set the percent utilization for Calls to **51% or more** when either or both of the following conditions apply:

- You have selected **Auto answer** for the agent.
- You have selected **Exempt held interactions** for the agent.

Under the above conditions and at less than 51% utilization, if an agent is on a call and another call comes in, the CIC client puts the first call on hold automatically and connects the incoming call.

Since calls on hold (held interactions) are exempt and do not count against the agent’s percent utilization, the CIC client will continue putting active calls on hold automatically and connecting new calls to that agent.

Setting 51% or more utilization ensures that an agent handles only one call at a time. Setting it at 50% allows the CIC client to assign two calls simultaneously to the agent, one active and one on hold (achievable by some agents).

**Note:** Calls at 50% or less utilization with a maximum assigned of 1 will only allow 1 call.

The **Max. Assign.** list displays the maximum number of interactions allowed for this interaction type. By default, the value of **Max. Assign** is "1" for Call interaction type. The default value of **Max. Assign** for all other interaction types is "0".

Select an interaction type and click **Edit** to see the **Edit** dialog where you can change the percent utilization for a Call, Chat, Email, or other interaction type.

**Workgroup ACD Skills**

Workgroup queues can be used to deliver regular calls and ACD calls. Regular calls can appear on a workgroup queue and be answered by any workgroup member monitoring that queue. ACD calls are routed to the appropriate workgroup based on caller input. All members of that workgroup (call agents) are expected to have a core set of skills required to handle any call on that queue. Further ACD processing directs the call to the most appropriate agent who is a member of that workgroup based on each agent's User ACD configuration. This page defines the minimal skill set required by all members of this workgroup who handle ACD calls.
If this workgroup does not have a queue or does not handle skills-based ACD calls, no skills are required.

Skills

This field contains skill names required for members of this workgroup who handle skills-based ACD calls.

To enter a skill for this workgroup:

1. Click **Add** to add a skill requirement.
2. Select a skill name from the list and click **OK**.

Skill names are created in the Skills section in the People container.

Proficiency

Type a value of 1 - 100 to indicate the minimum proficiency of skill level that an agent must have in order to receive an ACD call that requires this skill. 100 represents the highest skill level required. You define the skill attributes, which include proficiency level, for an agent on the **ACD configuration** page. The default value is 1. By default, the weight for proficiency is equal to 1, so this value is included in the ACD skills calculation.

Desire to Use

Type a value from 0 - 100 to indicate the minimum desire to use level agents must have in order to receive an ACD call that requires this skill. 100 is the highest possible desire; the higher the number, the more often the user wants to use the skill. Remember, desire to use is different than knowledge or ability. An agent can have a high level of proficiency (ability), but very little desire to use that ability. The default value is 0.

Notes: A user inherits the desire setting for a skill from any workgroup(s) to which the user belongs. However, you can override this with a user-level proficiency setting.

By default, the weight for Desire to Use equals 0, so the value that you specify is evaluated only as a qualifier instead of as the specified Desire to Use range for the ACD interaction. The Desire to Use setting is considered for ACD skill calculations when ACD customization points (such as CustomACDInitiateProcessing) are used. The weight for Desire to Use must be set to a value greater than 0 in order for it to be considered in ACD skills calculations. For more information on skills-based routing using the ACD Specify Interaction Skill Tool, see the **ACD Processing Technical Reference** or the white paper, **ACD Processing: CIC's Automatic Communication Distribution** in the Documentation Library.

Related topics

Skills

Utilization
ACD Statistics

You can set ACD statistic shift start options for a user or for a workgroup.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

**Call Statistics**

The Call Statistics fields appear only in the workgroup configuration since these fields affect only call statistics for Workgroup (that is, ACD) queues that belong to an ACD Workgroup.

**Statistics Period**

The is the number of minutes used to define the "current period" and the "previous period" statistics on the Queues page in Interaction Supervisor. The statistics period includes every X number of minutes from midnight to the current time, where X is the number in the field. The default time is 30 minutes, which means the "current period" and "previous period" changes on every half-hour boundary.

**Estimated Call Time Interval**

The ACD Statistics (Call or Queue) tools in a handler that provides callers with estimated wait time feedback, uses this number of minutes in its wait time calculation. This is a rolling interval, which means the interval is the number of minutes prior to each use of the estimated wait time function as it is invoked on the IC server. The ACD Statistics tools calculate the estimated wait time for a caller in a queue by taking the average time all callers waited in the queue during the current interval (for example, the previous 30 minutes from the time the ACD Statistics tool in a handler was invoked). The default setting for the interval is 30 minutes.

**Statistic Shift Starts**

This list of times determines the beginning time and duration of each shift for this user or the members of the current workgroup. These times are used to define (relative to the current time)
the "current shift" and the "previous shift" on the Queues page in Interaction Supervisor. The default statistic shift is a 24 hour shift starting at midnight (0:00), meaning the statistics are relative to one day (or 24 hours).

Use the Add and Delete buttons to add or remove shift times. To change a shift time, first delete it and then add a new time to replace it.

Routing

Adding an ACD Email Routing Mailbox

Use this page to add an ACD email routing mailbox.

Mailbox

Click the browse button to open the Mailbox Selection dialog box.

Use this mailbox to send outgoing emails

Select this check box to use this mailbox when an agent sends an email message through the CIC clients to a workgroup queue. This outbound email interaction is tracked similar to the way in which an inbound email interaction is tracked in CIC.

Use this mailbox to receive emails

Select this check box to receive workgroup queue emails in this mailbox.

Inbound Folder

Select the folder for routed email from the list. This is the receiving folder in the associated mailbox. CIC polls the inbox every few seconds to see if a new email has entered.

Allow to Receive Encrypted Email

Select this option to support the use of the S/MIME type in email. Selecting this check box enables support of email encryption, but other configuration, such as installing certificates, is necessary. For more information see Interaction Center Security Concepts in the Technical Reference Documents section in the CIC Documentation Library.

Related topics

Mailbox selection

Attendant mailboxes
ACD Actions

These ACD actions options can be set at the user or workgroup level. ACD calls directed to an agent's station can initiate DDE, custom screen pop, or web browser screen pop actions when the call rings on an agent's station, is disconnected, or transferred from the agent's station. For example, when an ACD call alerts the agent's station, a database application can start. When the call is disconnected or transferred, either of those actions can initiate another database application specifically used for completing records or follow up on the call. The Actions property page specifies which actions are used with ACD calls to this workgroup or user. Each workgroup or user may use different actions or no actions at all.

Alerting Action

Select a custom screen pop, web browser screen pop, or DDE action to start on an agent's workstation each time a call enters an alerting state (for example, the station rings) in this workgroup queue. Actions in this list are defined in the Actions container.

Disconnected Action

Select a DDE action to start on an agent's workstation each time a call moves from the Connected state to a Disconnected state (that is, the call terminates) in this workgroup queue. Actions in this list are defined in the Actions container.

No-answer Status

Select a status message from the list to display in an agent's My Status box when an agent is alerted by an ACD interaction and does not answer it. The selected status message should have the "Status is Do Not Disturb" attribute set on the Status Message Configuration page.

Note: The default setting is ACD - Agent Not Answering unless another status has been specified by the workgroup. If a user is a member of multiple workgroups, and just one of those workgroups is configured to change members' status to 'agent not answering' when there is no answer, then the no-answer behavior applies to this user for all workgroup memberships.

Revert to Available After

Set this time interval (in seconds) to automatically return an agent's status to what the status was prior to going to Agent Not Answering. If the status has been changed in the meantime, the agent's status will not be reset. The default value is 0 which does not automatically revert the status.
Transfer Action

Select a DDE action to start on an agent's workstation each time a call is not answered or is transferred by the agent in this workgroup queue. Actions in this list are defined in the Actions container.

If an agent does not pick up an alerting ACD call, the call times out and the agent's status is automatically changed to ACDAgentNotAnswering. The Alerting Action may need to be terminated, or some other action performed if the agent does not pick up the call. When the agent's status is ACDAgentNotAnswering, the agent is not assigned any more calls until he or she changes the status to Available.

If an agent transfers a call using a CIC client, the same Transfer Action may optionally be invoked if the Execute Transfer Action on the User Transfer check box is selected.

Execute Transfer Action on User Transfer

Select this check box to automatically invoke the Transfer Action DDE command when an agent manually transfers a call from his or her station. Leave the check box blank to perform no DDE action when an agent manually transfers a call. If a Transfer Action is defined and this check box is blank, the Transfer Action is invoked only when an ACD call is not picked up at an agent's workstation and then transfers to another agent.

Incoming Transfer Action

Select a DDE action to start on an agent’s workstation when that agent receives an ACD call transferred from another agent. This allows an agent who starts an ACD call to transfer that call to another agent and allows the second agent to see the appropriate DDE action when the call alerts.

This action is valid only when the transfer is from one user to another user (not from a user to a workgroup, line, station, or other type of queue).

On Call Status

Select a status message from the list to assign to an agent (and display in an agent’s My Status box) while the agent is on an ACD call. After the call disconnects, the agent’s status changes to Follow up (or the Wrap Up Status setting) for the designated period before returning to the agent's status before the call (for example, Available).

Wrap-up Status

Use this page to configure the behavior of after call work status for this workgroup.
**Status**

Select a status message from the list to assign to an agent (and display in the agent's My Status box) while the agent is in the After Call Work (ACW) time. The ACW time begins after an ACD call is terminated; this is when the optional DDE Disconnected Action begins. When the specified ACW period ends, the agent's status message is set to Available again. The selected status message should have the "Status is ACW (After Call Work)" attribute set on the Status Message Configuration page.

**Note:** If an agent is in an After Call Work (ACW) status at the time a Switchover occurs, the agent's status will not automatically be set to Available after the specified ACW period ends. The agent will need to manually change his status to Available. Supervisors should check for agents who have forgotten to do so after the Switchover event.

**Time**

Type the number of seconds to allow a CIC client user to finish any After Call Work (ACW) associated with the previous call before becoming available to receive a new call. For example, a value of 180 seconds allows call agents three minutes between the time they end a call and the time they appear on the available list for taking a new call.

If you specify no time, each Workgroup member is considered available to receive calls as soon as the current call is disconnected.

You cannot set a Wrap-Up Time until you select a compatible Status in Wrap-Up Status entry box.

**Exempt held interactions**

Click this box to allow agents who have ACD interactions on hold to receive new ACD interactions within the parameters listed below. The default CIC client behavior is for the agent with held interactions to be unavailable and for the agent with the highest computed score among those remaining in the workgroup to receive the next ACD interaction.

This feature does not apply to **direct interactions** that an agent puts on hold.

**Max number of exempt interactions**

Type the maximum number of interactions an agent in a given workgroup can have on hold and still receive another ACD interaction. The default is 1.

For example, if you set this parameter to 3, then a workgroup agent could have three interactions on hold and still receive an additional ACD interaction. An agent with four interactions on hold would **not** receive another interaction until the number of interactions on hold dropped to three or fewer.
Grace Period before new interaction

Type the period of pause in seconds before the workgroup agent receives the next interaction. The default is 10 seconds.

Agent score change amount

Type the value you want to add to the computed agent score for each interaction on hold. You might use this to ensure a more even distribution of interactions among the workgroup members. The default is -10.

For example, if Agent A has a score of 75 with one interaction on hold and Agent B has a score of 70 with no interactions on hold, applying the Agent Priority change would add -10 (for each held interaction, in this case one call) to Agent A's score, reducing it to 65. Agent B, with no held interactions and a score of 70, would then receive the next ACD interaction.

Direct calls

If Agent C, with a score of 80, receives a direct (non-ACD) call and puts the call on hold, the CIC client regards Agent C as unavailable while that direct call is connected because the Exempt held interactions feature is not applied to direct calls.

Workgroup ACD Options

Select the Use Availability Time in Skills Calculation check box to change the calculation of how skills are configured. By default this check box is selected so skills are calculated on a formula that uses Availability Time, in addition to Desire to Use and Proficiency. Interaction Attendant uses skill settings in the skills-based routing.

Phonetic spellings

You can set phonetic spelling options for users workgroups. Use this page to define alternate (phonetic) spellings of the user name or workgroup name for Text To Speech (TTS) and Automatic Speech Recognition (ASR).

Note: If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this page are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

Text To Speech

Type the phonetic spelling of the user's or the workgroup's name.
The TTS spelling should be a single-valued attribute. Spell the name like it sounds. For example if you have a user name spelled "Rose," but it is pronounced "Rosy," then enter "Rosy."

**Automatic Speech Recognition**

Enter the user's or workgroup's phonetic spelling of the name. You can specify multiple spelling entries for ASR. The ASR spelling attribute should be a multi-valued attribute.

The ASR phonetic spelling values are used by the Reco Create Company Directory Grammar. You can specify any valid grammar token, including nicknames or different spellings of a user’s name.

For example, assume a user is called “John Smith.” This is the first name and last name known to the CIC system, and this spelling entry is used by default for the company directory grammar. To add spelling entries to increase the grammar coverage, add the following alternate spelling entries:

- Johnny Smith
- John Robert Smith
- John R Smith

**Note:** Be careful not to add too many alternate spelling entries. If the grammar coverage becomes too broad, or if the company directory contains too many similar names, the recognition quality degrades.

You can also include phonetic spelling entries for a specific language. To do this, at the end of the phonetic spelling entry, type `!language identifier`.

For example, the following spelling entry indicates that it is for the English language.

Johnny Smith !en-us

**Note:** You can use only one language identifier for each spelling entry. The language identifier must be the last characters of the spelling entry. Any languages that you specify must be installed on all ASR servers, or the company directory grammar will not compile.

**Related topics**

Configure a user

**Secure Input Forms: Workgroups**

Use this page to make the secure input forms available to a workgroup and give workgroup members access to the form.
Click the form in the **Available Forms** list, and click **Add** (or just double-click the form) to add it to the **Currently Selected Forms** list.

**Note:** If the dialog box does not include the **Secure Input Forms** tab, verify that you have enabled secure input and defined at least one secure input form. Those two steps add the tab to the dialog box.

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**Workgroup Options**

**Incoming Faxes**

If you configure a workgroup as fax-capable in Interaction Administrator (**Workgroup Configuration-->Options-->Fax Capability**), callers to that DID hear "Welcome to CIC," then ring-back while the handler listens for a fax. The handler then places the call on the queue. If you do **not** configure a workgroup as fax-capable, the call goes directly to that workgroup queue.

Select **Use TIFF for faxes sent to this workgroup** for received faxes to be in the Tagged Image File Format. You can also select Interaction Client Web Edition received fax format from the **Web Client Fax Format** drop-down list. The options are <None> (default), PDF or PNG. This setting is only available if you do not select the **Default** check box (this check box indicates you want to use the default system setting).

**Non-ACD Interactions**

**Alerting Action**

Select an action to start each time a non-ACD call enters an alerting state (for example, the station rings) in a workgroup queue. Actions in this list are defined in the Actions container. For the complete procedure, click here.

**Disconnected Action**

Select an action to start each time a call moves from the Connected state to a Disconnected state. Actions in this list are defined in the Actions container in the Interaction Administrator hierarchy.

**Incoming Interactions**

Select the **Warn if chat response time exceeds limit** check box to indicate to a workgroup agent that an ACD-routed chat interaction response time is nearing the limit. When this warning is enabled, you can set the **Response time limit** in seconds that you want to use.
To set the **Operator target**, enter the telephone number or extension to which to send callers that choose zero to exit out of voice mail for this workgroup. See also How Do I Set Up Operator Target?

Set the **Timeout** in minutes and/or seconds that an incoming interaction rings at the CIC client station before the interaction quits alerting and proceeds to the next step in the handler (for example, goes to Voicemail or changes an ACD agent’s status to "ACD-Agent not answering" and offers the interaction to another agent). The **Use Default** check box indicates the timeout value is the system default of 30 seconds. You can change the value by de-selecting the **Use Default** check box and using the up and down arrows to adjust the number (7 seconds is the minimum). Use the drop-down list to select Seconds, Days, Hours or Minutes.

**Parked Interactions**

Use this section to set the maximum time that a parked call, chat, email, or generic object will wait on silent hold, and to specify the extension that interaction will be transferred to when the time has elapsed.

**Timeout (minutes)**

Set the maximum time in minutes here that a parked call should wait before transfer to the specified extension. The **Use Default** check box indicates the timeout value is the system default of 1 minute. You can change the value by de-selecting the **Use Default** check box and using the up and down arrows to adjust the number (1 minutes is the minimum).

**Extension**

Set the destination extension here for a parked call that has reached its timeout.

The **Use Default** check box indicates the extension for parked interactions is default workgroup extension as set in workgroup configuration. You can change the value by de-selecting the **Use Default** check box and using the up and down arrows to adjust the extension number (0 is the minimum).

**Callbacks**

- To enable the callback feature in the CIC clients for this workgroup, select the **Enable callback feature in the Interaction Client** option. If you select this option, all members of the workgroup can manually initiate callbacks.
- To enable CIC to automatically make callback attempts, select the **Enable callback retries** option.
  - In the **Maximum number of retries** field, select the maximum number of callback attempts that CIC should make for a given interaction.
  - In the **Time between retrying callbacks (min)** field, select the number of minutes between callback attempts.
Tracing...

Tracing allows users to set trace levels for various IceLib (Interaction Center Extension Library) -based client applications through Interaction Administrator. Click Tracing... to display the Tracing Configuration page.

Overview of security for people

You can configure security for the default user, for roles, for a user, or for a workgroup.

Because users inherit one or more properties from the default user, roles and workgroup, the Security page is available from each of these containers. See Configuration Property Inheritance for an explanation of how these properties are related in each container.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes related to user security are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

For more information on the types of security available for people, see the links under **Related topics**.

**Related topics**

Overview of the master administrator rights

Overview of administrator access rights

Overview of access control rights

Overview of security rights

Configuration property inheritance

Custom attributes
The Custom Attributes page allows you to add customized attributes so that you can reference your own variables and settings through the IceLib interface.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes to the Custom attributes page in the User Configuration dialog box and the Workgroup Configuration dialog box dialog box are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

The page contains a list for the attributes and displays a **Name** and a **Value** column, and has the following buttons:

**Add**

Click **Add** and select an existing custom attribute from the pull-down list, enter a new custom attribute. If creating a new attribute, use a unique name, otherwise the existing attribute will be overwritten.

**Edit**

Click **Edit** to change the value of an existing custom attribute.

**Delete**

Click **Delete** to delete an existing custom attribute.

**Manage Attributes**

Click **Manage Attributes** to open a dialog box that displays a list of custom attributes. Click **Add** or **Delete** to manage the appearance of the custom attributes in the pull-down list.

The custom attributes are saved in the path of the root container. This **Path** is displayed at the bottom of the dialog box.

**Note:** For more information on the Interaction Center Extension Library (IceLib), see The **System APIs section** in the CIC Documentation Library on the IC server.

**History**

This page provides a way to manually document configuration changes and when they occurred. Changes made in Interaction Administrator are also automatically logged in the Interaction
Administrator Change Notification Log (Log ID 7). Later, authorized users can run reports against this log to summarize all configuration changes.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes to the History page in the User Configuration dialog box and the Workgroup Configuration dialog box dialog box are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

**Last Modified**

This date is automatically updated each time you click the OK button, presumably after you make changes to the configuration. To avoid updating this date, exit the page by clicking the Cancel button.

**Note:** If you click Cancel, none of the changes made to this page will be preserved.

In addition, the history is updated when changes are made to the record elsewhere in Interaction Administrator. For example, when a user change his or her password, the Last Modified date is updated.

**Note:** Changes to the licenses for a user or a station do not update the Last Modified date.

**Date Created**

This date is automatically set when the user creates the initial configuration for this page. If the page was initially created during setup, the date could be blank.

**Notes**

Type notes about configuration settings and changes. If you change the configuration page and click OK, the Last Modified date is updated.

You must manually enter the date beside each entry in the Notes field to identify the date of each note.

To create a new line in the Notes field, press Enter.

**Director**

**Director: Configuration Options**

Use this page to set Director configuration options.

**Note:** The Director tab and the associated overflow, skills, and error handling options in Workgroup Configuration appear only if Interaction Director is installed and a valid license exists.
Configuration

When the Configuration button is clicked, the following settings related to Enterprise Groups and interactions appear:

Enable Director Processing on this workgroup

This per-workgroup check box enables Director processing for that workgroup. When this box is checked, all calls entering that workgroup will be processed via Director, instead of local ACD.

Enterprise Group

Use this text edit control to specify the Enterprise Group for the workgroup to query. The workgroup does not have to be a member of the Enterprise Group on the Director server.

Enterprise Group browse button

Opens the Browse Enterprise Group dialog box, so that you can select from a list, instead of typing a name manually.

Priority

Per workgroup, specifies an interaction priority which all interactions in this queue will initially inherit. Values can range from 1 to 100. The default priority is 50; higher numbers indicate higher priority.

In Queue Timeout

Specifies the number of seconds that Director will wait for an Agent to pick up the call before performing in-queue timeout actions (running a handler). Director notifies CIC when this time limit passes. CIC can take any action (via a customized handler) such as playing a prompt, transferring the call, and so on.

Related topics

Interaction Director: Workgroup Configuration

Overflow Options

Skill Options

Error Handling Options

Overflow Options
Use this page to set the overflow options for Interaction Director.

**Note:** The Director tab and the associated overflow, skills, and error handling options in Workgroup Configuration appear only if Interaction Director is installed and a valid license exists.

**Overflow**

When the Overflow button is clicked, a summary of workgroup overflow options appears, listing conditions that will be evaluated when an interaction enters the system via this Queue. These post-call routing rules (conditions) are evaluated in top-down order. A transfer is invoked for the first condition that fails. Overflow rules can be edited or reordered (prioritized) from the summary page.

**Note:** Overflow conditions specify when an interaction should not be queued, for example, when too many interactions are waiting, when wait time is too high, when an interaction can be serviced immediately, and when there is no viable destination within an enterprise group.

These conditions within the Director system result in some action other than queuing the interaction. The conditions on this tab are evaluated for a newly arrived interaction before it is accepted (i.e. enqueued) by Director. There are five separate conditions: Calls Waiting, Average Wait Time, Longest Wait Time, Immediate Assignment, and No Viable Destination. The first three conditions can be evaluated at any rollup level (Queue, Enterprise Group, Server, System) yielding a great deal of flexibility. For each condition a transfer target can be specified. It indicates where the interaction should go when that condition is triggered. The conditions can be ordered.

**Condition**

This column lists conditions that will be evaluated when an interaction enters the system via this Queue.

**Summary**

Displays a logical summary of the configured condition, or "Not Used" if the condition is not enabled.

**Edit**

This button opens the condition for editing using a dialog box specific to the type of condition:

*Overview on Number of Calls Waiting*

This dialog sets an overflow condition based on *number of calls waiting*. When this condition is enabled, you can transfer the call to a specific queue or extension when the number of calls waiting in the Queue, Enterprise Group, Server, or system exceeds a configurable limit.

*Overview on Average Wait Time*
This dialog sets an overflow condition based on *average wait time*. When this condition is enabled, you can transfer the call to a specific queue or extension when the average wait time for the Queue, Enterprise Group, Server, or system exceeds a configurable number of seconds.

**Overview on Longest Wait Time**

This dialog sets an overflow condition based on *longest wait time*. When this condition is enabled, you can transfer the call to a specific queue or extension when the longest wait time for the Queue, Enterprise Group, Server, or system exceeds a configurable number of seconds.

**Overview on no Immediate Assignment Possible**

This dialog sets overflow processing that occurs if Director cannot *assign* the call immediately to a monitored server. When this condition is enabled, you can transfer the call to a specific queue or extension.

**Overview on no Viable Destination**

This dialog sets overflow processing that occurs if there are no viable destinations within an Enterprise Group. "No Viable Destinations" is different from "No Immediate Assignment Possible" in that the latter implies that while there are candidate destinations, all agents might be busy or do not meet the criteria, while the former says there are no candidate destinations at all. This could happen for a variety of reasons, but an example would be that perhaps the Enterprise Group has no members configured, or more likely, all of the member queues are down due to connection loss. In this case, you would not want to make the interaction wait whereas if it is simply a matter of no agents being available you would. When this condition is enabled, you can transfer the call to a specific queue or extension.

**Up/Down**

Changes the evaluation order of conditions. Topmost conditions are evaluated first.

**Related topics**

- Configuration
- Skill Options
- Error Handling Options

**Skill Options**

Use this page to set Director workgroup skills.

**Note:** The Director tab and the associated overflow, skills, and error handling options in Workgroup Configuration appear only if Interaction Director is installed and a valid license exists.
**Skills**

When the Skills button is clicked, the tab summarizes workgroup skills associated with the Enterprise Group. Skills are evaluated to influence the routing of calls to queues in an Enterprise Group. All interactions that enter the system via this workgroup will initially require the listed skills. The following columns are displayed:

**Skill Name**

The name of a skill assigned at the workgroup or queue level. Director scores required Skills against the skills of logged in Agents when it determines an interaction's target destination.

**Proficiency**

This column lists for each skill, *proficiency* values from minimum to maximum, whether or not the bias is positive or negative, and the value of Importance, a weight assigned to this particular skill proficiency.

**Desire to Use**

This column lists *desire to use* values from minimum to maximum, whether or not the bias is positive or negative, and the value of Importance, a weight assigned to this particular desire.

**Add**

Click **Add** to open the Enterprise Group Skill Specification dialog box, so that you can define the attributes of a new required skill.

**Edit**

Click **Edit** to open the selected skill for editing using the Enterprise Group Skill Specification dialog box.

**Delete**

Click **Delete** to remove the selected skill. You are not asked to confirm this operation.

**Related topics**

- [Configuration](#)
- [Overflow Options](#)
- [Error Handling Options](#)

**Error Handling Options**

Use this page to set Director error handling options.
Note: The Director tab and the associated overflow, skills, and error handling options in Workgroup Configuration appear only if Interaction Director is installed and a valid license exists.

Errors

When the **Errors** button is selected, the tab displays options that set flow of control when connectivity between Director and an IC server is lost while calls are waiting. When the IC server detects that Director is not reachable, it acts in accordance with the options specified here. The possible actions are wait forever, wait a while and then transfer the call somewhere, or wait a while and let local ACD handle it in place. The following options appear:

**Enable Error Handling**

This option enables configuration of error processing.

**Leave in queue, letting local ACD handle the interaction**

This option tells the IC server not to pass the call to Director or post-call routing. The call will remain in the queue until it is dispatched by local ACD. In short, CIC will transfer the interaction to local ACD in the event of an error.

**Transfer to the following target**

This option sends the call to the specified workgroup, user name, extension, or external telephone number, or any other transfer type supported by the Extended Blind Transfer (XBT) tool.

Target is passed to a handler. If a Workgroup or User name was specified, the handler passes it to the Extended Blind Transfer tool. If the specified target was not a workgroup, the handler checks to see if it is a user name. If the target was not a workgroup or user name, the entry is passed through dial plan to XBT. If the transfer succeeds, no additional processing occurs. If the transfer fails, the call is transferred to the System queue, where the caller will hear Main Menu prompts again.

**Wait time before taking any action**

The number of seconds to wait before performing the error recovery action, or 0 to disable delay. In releases before Director 2.3.1, Director would immediately take whatever recovery action was specified when an error occurred. The delay itself was not configurable. In Director 2.3.1 and later, you can configure a time threshold. If the situation rectifies itself within the time allotted, routing resumes where it left off. This can result in less churn in the waiting interaction if a short network glitch occurs.
Password Policies

Creating Policies

Use this page to create new password policies. Complete the following steps to create new policies or configure the default policy:

1. From Interaction Administrator, select Policies.
2. Double-click the Default Policy or right-click on the right-hand side of the screen or choose New to create a new password policy.
3. Configure the options for the password policy on the following tabs:

Password Policy

1. Enter a description for the password policy in the Description field.
2. Click the check box next to User must change password next login if you want the system to prompt the user to change his or her password during the next login.
3. Click Apply.

Password

The password tab includes the following options:

- **Minimum Number of Unique Passwords Before One Can Be Reused:**

  Determines the minimum number of unique passwords a user must reach before reusing a password. The default setting is 24.

- **Minimum Age of Password Before User Can Change It (days):**

  Determines the period of time (in days) that a password must be used before the user can change it. You can set a value between 1 and 999 days, or you can allow changes immediately by setting the number of days to 0. The default setting is 2.

If the Maximum Password Age (days) is more than 0, the Minimum Password Age must be less than or equal to the Maximum Password Age.

Configure the minimum password age to be more than 0 if you want the Password History policy to be effective. Without a Minimum Password Age, users can cycle
through passwords repeatedly until they get to an old favorite. Note that if the **Password History** is set to 0, the user does not have to choose a new password. For this reason, **Password History** is set to 1 by default.

- **Maximum Password Age (days):**

  Determines the period of time that a password can be used before the system requires the user to change it. You can set passwords to expire after a number of days between 1 and 999, or you can specify that passwords never expire by setting the number of days to 0. The default is 180.

- **Password Age Warning Period (days before password expires):**

  Determines the period of time that reminders will be generated about soon-to-expire passwords. These reminders will be provided in both the CIC clients and through the TUI. This value is ignored if the Maximum Password Age is zero. If this value is greater than or equal to the Maximum Password Age, nagging will occur frequently. You can set this value to zero to suppress warnings. The default is set to 14.

- **Minimum Password Length:**

  Determines the least number of characters that a password may contain. You can set a value of between 1 and 24 characters, or you can set the number of characters to 0 to specify that no password is set for the user, effectively disabling the user account. The default value is 8.

  **Note:** The **Minimum number of unique DTMF digits** must be less than the **Minimum password length**. If the value of the Minimum number of unique DTMF digits is greater than the value of the Minimum password length, you will receive a warning message.

- **Minimum Number of Unique DTMF Digits:**

  Determines the minimum number of unique DTMF digits required to be in the password. You can set a value between 1 and 12 digits. The default is 4. While CIC passwords can be composed of digits, punctuation and upper and lower case letters, they are mapped to the 12 standard DTMF digits (0-9, * and #) when entered through the telephone keypad.

  **Note:** The **Minimum number of unique DTMF digits** must be less than the **Minimum password length**. If the value of the Minimum number of unique DTMF digits is greater than the value of the Minimum password length, you will receive a warning message.

- **Allow All Sequential Digits**

  This check box allows you to allow or disallow sequential digits in users’ passwords. If unchecked, passwords which consist of a sequence (ascending or descending) of consecutive DTMF digits, will not be allowed. This prohibits passwords like “1234” or “9876”, but will allow passwords like “1245”. While CIC passwords can be composed of digits, punctuation and upper and lower case letters, they are also mapped to the twelve
standard DTMF digits (0-9, *, and #) when entered through a telephone keypad. This mapped string is used when enforcing the **All Sequential Digits Allowed** policy. The default is set to No, or unchecked.

- **Minimum Number of Uppercase Characters**

  Determines the minimum number of uppercase characters required to be in the password.

- **Minimum Number of Lowercase Characters**

  Determines the minimum number of lowercase characters required to be in the password.

- **Minimum Number of Numeric Characters**

  Determines the minimum number of numeric characters required to be in the password.

- **Minimum Number of Special Characters**

  Determines the minimum number of special characters that are required to be in a user's password. If you complete this box, you must also complete the **Required Special Character Options** box with the special characters that will be counted towards your required minimum number.

- **Required Special Character Options**

  Determines which special characters count towards the required minimum number of special characters. Special characters include: ~!@#$%^&*_-+=`|(){}[]:;"'<>?,./

  If you complete this box, you must also complete the **Minimum Number of Special Characters** box.

  **Note:** Users can include other special characters in their passwords. However, only the special characters that you specify in this box count toward the required minimum number of special characters. For example, suppose you require a minimum number of 3 special characters, and you specify the required special characters as !@#$&^ and then a password of JOe@#$%1234 is not acceptable because while it contains 3 special characters, it does not contain 3 of the special characters that you require.

**Account Lockout**

The Account Lockout tab includes the following options:

- **Maximum Number of Failed Login Attempts Before Account is Locked Out:**

  Determines the maximum number of failed login attempts that will be permitted. If this limit is exceeded, an “Account Locked Out” error will be reported until the failed login attempt counter gets reset by an administrator or until the **Account Lockout Duration** has expired. The default setting is 5.

- **Lockout Duration (minutes):**

  Determines the number of minutes a locked-out account remains locked out before automatically becoming unlocked. The available range is 1 to 99,999 minutes. You can
specify that the account will be locked out until an administrator explicitly unlocks it by setting the value to 0. If a **Maximum Number of Failed Login Attempts** is defined, the **Account Lockout Duration** must be greater than or equal to the **Account Lockout Reset Time**. The default setting is 30.

- **Failed Login Count Reset Time (minutes):**

  Failed Login Count Reset Time defines the minutes since the last failed attempt, that the count gets reset to the Lockout Duration. If the Lockout Duration is not 0, then after whatever time the duration is set to has elapsed since the account was locked out, the account gets "unlocked" and the valid password will work. The default setting is 30.

  There are a certain number of failed attempts before the account is locked out as defined by **Maximum number of failed login attempts before account is locked out**. Once you have made that many attempts with incorrect passwords, the account is locked out, and no password will work.

  Assuming the account has not been locked out, i.e., the user has not made more than the **Maximum Number of Failed Login Attempts**, once the **Failed Login Count Reset Time** has elapsed since the last attempt with an incorrect password, the count gets reset to 0.

  **Example:** If **Failed Login Count Reset Time** is 1440 minutes (24 hours) and the **Maximum Number of Failed Login Attempts** is 3, the user can try to login with an incorrect password three times before the account is locked out. If he tries three times, then waits 24 hours (the **Failed Login Count Reset Time**), the count goes down to 0 and he gets three more attempts with incorrect passwords before the account gets locked out. The **Failed Login Count Reset Time** is counted from the last login attempt with an incorrect password. If the **Failed Login Count Reset Time** is 0, the count never gets reset automatically. In this example, even if the user waits a day or a week, the fourth time he tries to login with an incorrect password, the account gets locked out.

  Using this same example, if the **Account Lockout Duration** is 1440 minutes (24 hours), once the user tries to login with a incorrect password more than three times, the account gets locked out and he cannot login even with the correct password. After 24 hours from the last login with an incorrect password that triggered the lockout, the account gets unlocked and the user can login with the correct password. He now has 3 chances with incorrect passwords until the account gets locked again. If **Account Lockout Duration** is 0, the account remains locked until an administrator unlocks it from the User container in Interaction Administrator, by right-clicking on the user and choosing **Reset Failed Login Count**. In this case the count is set to 0 as if the time had elapsed. The administrator may reset this count anytime.

**Users/Roles**

From the Users/Roles tab you can apply policies to users and/or roles. From this page, you can add and delete users, as well as add and delete roles.
**History**

This page provides a way to manually document configuration changes and when they occurred. Changes made in Interaction Administrator are also automatically logged in the Interaction Administrator Change Notification Log (Log ID 7). Later, authorized users can run reports against this log to summarize all configuration changes.

**Last Modified**

This date is automatically updated each time the user clicks the OK button, presumably after making changes to the configuration property sheet. To avoid updating this date, exit the page by clicking the Cancel button.

**Note:** If you click Cancel, none of the changes made to this configuration will be preserved.

**Date Created**

This date is automatically set when the user creates the initial configuration for this policy. If the policy was initially created by IC Setup Assistant, the date could be blank.

**Notes:** Type notes about configuration settings and changes. If you change the configuration settings and click OK, the Last Modified date is updated.

You must manually enter the date beside each entry in the Notes field to identify the date of each note.

To create a new line in the Notes field, press Ctrl+Enter.

**Password Policy Configuration**

Use the Policies Configuration page to define new policies. To configure the password policies options, double-click **Configuration** on the right-hand side of the screen. The Password Policies Configuration page appears with the following options:

**Combining Policies**

Because several password policies can be assigned to a user, through direct assignment or because he or she is assigned to a role which has a policy assigned to it, multiple policies get combined. You must then decide how you want the different policies to be interpreted. This is done through a check box which allows you to choose the most restrictive or least restrictive policy when checking new passwords and when the user has more than one policy. For example:

- Policy A: Password Maximum Age = 10, Minimum Length = 4, Assigned to User A
- Policy B: Password Maximum Age = 20, Minimum Length = 6, Assigned to Role B
- User A is assigned to Role B
Both Policy A and Policy B apply to User A. The values will be combined based on the choice on the **Combining Policies** page.

If **Most Restrictive** is chosen, when a new password is checked for User A, the **Maximum Age** will be 10 days and the **Minimum Length** will be 6. If **Least Restrictive** is chosen, **Maximum Age** will be 20 and **Minimum Length** will be 4.

The example was for just two policies, but any number of policies might apply to a user, and they would all be combined in this way.

1. Click the appropriate check box for the restriction level you want when combining policies for a given user:
   - Most restrictive
   - Least restrictive
2. Click **Apply**.

**History**

This page provides a way to manually document configuration changes and when they occurred. Changes made in Interaction Administrator are also automatically logged in the Interaction Administrator Change Notification Log (Log ID 7). Later, authorized users can run reports against this log to summarize all configuration changes.

**Last Modified**

This date is automatically updated each time the user clicks the OK button, presumably after making changes to the configuration. To avoid updating this date, exit the page by clicking the Cancel button.

**Date Created**

This date is automatically set when the user creates the initial configuration for this page. If the configuration was initially created by the IC Setup program, the date could be blank.

**Notes**

Type notes about configuration settings and changes. If you change the configuration page and click **OK**, the **Last Modified** date is updated.

You must manually enter the date beside each entry in the **Notes** field to identify the date of each note. To create a new line in the **Notes** field, press Ctrl+Enter.
Type a unique policy name that will represent a set of attributes and permissions that you want to assign to specified users or a role.

**Schedules**

*Schedule Configuration*

Use this page to set dates and times to activate telephone-based menus. Telephone-based menus (or simply menus) are the set of choices callers select by pressing buttons on a telephone keypad. In CIC, menus that are configured to run on certain days and at certain times are known as scheduled menus.

You might schedule a menu to run on a holiday, every Tuesday, after hours, or during lunch. However before you schedule a menu, you must have created the menu using the Scheduled Menus feature of Interaction Attendant. For more information on Scheduled Menus, see the Interaction Attendant help.

**Description**

Type information that identifies the menu or type of scheduled event. The description displays in the Interaction Administrator list view window when the Schedule container is selected.

**Keywords**

Type a unique name that categorizes the schedule. For example, if the schedule is one of many schedules for the Support department, you might want to specify "support" as the keyword. Then, all schedules with the keyword "support" are associated. The Get Schedules tool uses these keywords for retrieving a list of schedule-specific menus. For more information on the Get Schedules tool, see the Interaction Designer help.

Use a comma to separate more than one keyword.

**Schedule is Active**

Select this check box to activate the schedule. When the schedule is active, it is available as a candidate for evaluation by the system. Clear the check box to deactivate the schedule.

**Periodicity**

Click one of the following tabs to apply the type of schedule (or periodicity). The periodicity tab that is displayed when opening or closing the schedule configuration page, is the type of schedule that is active for the schedule entry. You can also see the type of schedule each entry is by looking at the Periodicity column:
One Time
Sets a menu to run for the specified time period, which plays the menu as often as needed.

Note: The One Time schedule should not be confused with the Unplanned schedule type in available in Interaction Attendant. An unplanned schedule allows you to specify an indefinite end time, staying active until it is turned off. See Unplanned Schedules in the Interaction Attendant help for more information.

Daily
Sets a menu to run every day at a specific time for a specified length of time

Weekly
Sets a menu to run every week on certain days or every week in a sequence of days

Monthly
Sets a menu to run on relative and specific days of the month

Yearly
Sets a menu to run on specific and relative days during the year

The type of schedule determines the order in which CIC selects the schedule to play. The order of priority is as follows:

- **Unplanned**: Highest priority (See the note above under One Time.)
  - One Time
  - **Yearly**
  - Monthly
  - Weekly
  - **Daily**: Lowest priority

If there is more than one schedule that matches in priority, then the start and end times are compared. The schedule containing the closest comparable times is the higher priority.

Related Topics

Schedules

[Linking a menu to a schedule](#)

[One Time](#)

[To set dates and times for menus](#)
You can schedule a menu to play at any time, day, week, month, or year. However, before you set the time and date that activates the menu, you must have created the menu using the Schedule feature of Interaction Attendant.

After you have created the menu in Interaction Attendant, follow these steps:

1. In Interaction Administrator, under People, select Schedules, and right-click and select New. Or click the Insert key.
2. Type a name for the schedule, and then click OK. The Schedule Configuration window appears.
3. In the Description box, type information that best describes the scheduled event. The description appears in the Interaction Administrator list view window when the Schedule container is selected.
4. In the Keywords box, type a unique name that will be used to categorize the schedule. If you have more than one keyword, use commas to separate them. The Get Schedules tool uses the keyword to retrieve a list of schedule-specific menus. For information on the Get Schedules tool, see the Interaction Designer online Help.
5. Select the button that describes the frequency of event you want to schedule – One Time, Daily, Weekly, Monthly, and Yearly.
6. Fill in the appropriate fields, and then click OK. The schedule is added to the Interaction Administrator list view window. From this window, you can modify or delete the schedule.

Related topics

Schedules

Schedule Configuration

One Time

Linking a menu to a schedule

Once a menu is created using Interaction Attendant, and a schedule configured using the Schedules container in Interaction Administrator, you will need to establish a link between the menu and the schedule. Follow these steps:

1. Start Interaction Attendant. From the Start menu, point to Programs, and then Interactive Intelligence. Click Interaction Attendant. The Interaction Attendant window appears.
2. On the File menu, click Connect to Server. The Logon to Server dialog appears.
3. Type the name of the server, your user ID, and password.
4. Click OK.
5. In the tree structure, select the name of an existing profile or schedule form.
7. Click the System tab.
8. In the System Schedule list, use the down arrow to find the schedule you want to link to.
9. Click Show Schedule to view the schedule in read-only mode.

**One Time**

You can set a menu to run for the specified time period (required), which plays the menu as often as needed.

**Note:** The One Time schedule should not be confused with the Unplanned schedule type in available in Interaction Attendant. An unplanned schedule allows you to specify an indefinite end time, staying active until it is turned off. See Unplanned Schedules in the Interaction Attendant help for more information.

**Occurs**

Sets the menu to run one time during a 24-hour period as follows:

- One time, but not all day.
  
  Use the Start boxes to select the date and time you want the menu to become active. Use the End boxes to select the date you want the menu to become inactive.

  **Note:** If you configure both the start time and the end time as 12:00 am, CIC treats the end time as midnight at the end of the specified date (24:00) rather than midnight at the start of the specified date (00:00).

- One time, all day.
  
  Use the Start boxes to select the date and time you want the menu to become active, and then select the All Day option.

**Secure Input Forms**

Add a secure input form

**Note:** Remember to enable the Secure Input feature. For more information, see Enable secure input.

**To add a secure input form**
1. In the People container, click the Secure Input Forms subcontainer.
2. In the list view, right-click and then click New.
3. In the New Secure Input Form box, type a meaningful and unique name for the secure input form name.
4. From the Form type list, select one of the following:
   - Simple: Select this type to enable the form to receive text input.
   - Custom: Select this type if you have the CIC client add-in to create custom secure input forms. Custom forms receive input with attributes that you specify in your code. For more information, see the Secure Input Technical Reference in the CIC Documentation Library.
5. Click OK.
6. In the Secure Input Form Configuration dialog box, complete the tabs. See the links under Related topics for complete information.

Related topics
- Configure general information
- Enable secure input
- Overview of secure input forms

Configure general information

Use this tab to configure general information about secure input forms.

Note: You must enable the secure input forms feature before any secure input forms are available for agents to use. Secure input is available in Interaction Desktop. For more information, see Enable secure input.

To configure general information
1. In the Dialog title box, type a title for the secure input form. Agents will see this text in the title bar of the dialog box that contains the secure input form.
2. In the Description box, type a description for the secure input dialog box. The CIC clients display the description when an agent selects the secure input form.
3. From the IVR Handler list, select a handler to start the secure session. The list includes only published handlers that begin with the Secure Input initiator.
4. To add a form field, next to the **Input fields** list, click **Add**. For more information, see *Add form field*.

5. To edit a form field, select it in the **Input fields** list and then click **Edit**.

6. To remove a form field, select it in the **Input fields** list and then click **Remove**.

7. To change the position of a form field, select it in the **Input fields** list and then use the **Move up** and **Move down** buttons as necessary.

### Related topics

- **Enable secure input**

*Define a form field*

*Overview of secure input forms*

**Enable secure input**

You must enable the Secure Input feature in order for agents to use your secure input forms. You can enable secure input in the when you add or edit a secure input form. If you need to create multiple secure input forms, you can wait to enable secure input until all of the forms are available.

**Note:** Secure input is available in Interaction Desktop.

**To enable secure input**

1. In the **People** container, click the **Secure Input Forms** subcontainer.
2. Do one of the following:
   - Add a new secure input form. For more information, see *Add a secure input form*.
   - In the list view, right-click an existing secure input form and then click **Properties**.
3. At the top of the **Secure Input Form Configuration** dialog box, locate the text that indicates that the Secure Input feature is disabled. Click the **click here to enable Secure Input** link.
4. Click **OK**.

**Note:** You can also enable secure input in the **Telephony Parameters** tab of the **Server Configuration** container.

### Related topics
Add a secure input form

Configure general telephony parameters for your IC server

Custom attributes

The Custom Attributes page allows you to add customized attributes so that you can reference your own variables and settings through the IceLib interface.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes to the Custom attributes page in the User Configuration dialog box and the Workgroup Configuration dialog box dialog box are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

The page contains a list for the attributes and displays a **Name** and a **Value** column, and has the following buttons:

**Add**

Click **Add** and select an existing custom attribute from the pull-down list, enter a new custom attribute. If creating a new attribute, use a unique name, otherwise the existing attribute will be overwritten.

**Edit**

Click **Edit** to change the value of an existing custom attribute.

**Delete**

Click **Delete** to delete an existing custom attribute.

**Manage Attributes**

Click **Manage Attributes** to open a dialog box that displays a list of custom attributes. Click **Add** or **Delete** to manage the appearance of the custom attributes in the pull-down list.

The custom attributes are saved in the path of the root container. This **Path** is displayed at the bottom of the dialog box.

**Note:** For more information on the Interaction Center Extension Library (IceLib), see the System APIs section in the CIC Documentation Library on the IC server.
This page provides a way to manually document configuration changes and when they occurred. Changes made in Interaction Administrator are also automatically logged in the Interaction Administrator Change Notification Log (Log ID 7). Later, authorized users can run reports against this log to summarize all configuration changes.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes to the History page in the User Configuration dialog box and the Workgroup Configuration dialog box are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

**Last Modified**

This date is automatically updated each time you click the OK button, presumably after you make changes to the configuration. To avoid updating this date, exit the page by clicking the Cancel button.

**Note:** If you click Cancel, none of the changes made to this page will be preserved.

In addition, the history is updated when changes are made to the record elsewhere in Interaction Administrator. For example, when a user change his or her password, the **Last Modified** date is updated.

**Note:** Changes to the licenses for a user or a station do not update the Last Modified date.

**Date Created**

This date is automatically set when the user creates the initial configuration for this page. If the page was initially created during setup, the date could be blank.

**Notes**

Type notes about configuration settings and changes. If you change the configuration page and click OK, the **Last Modified** date is updated.

You must manually enter the date beside each entry in the Notes field to identify the date of each note.

To create a new line in the Notes field, press Enter.

**Disable secure input**

**To disable secure input**
1. In the `<IC Server>` container, in the list view window, double-click Configuration. The Server Configuration dialog box appears.

2. Click the Telephony Parameters tab.

3. In the list, select General. The general telephony parameter options appear in the right side of the tab.

4. Clear the check box for the Enable Secure Input option.

5. Click OK.

Related topics

Overview of secure input forms

Configure general telephony parameters for your IC server

Wrap-up Codes

View wrap-up codes

The View Wrap-up Codes page displays wrap-up codes in a list in the master view, and displays details of the currently selected wrap-up code in the details view. You can take actions on the wrap-up codes in the list view, such as add, delete, and copy and paste, and you can add a new code. You can change the way the list is displayed, such as change visible columns, sort by column, and filter.

To view wrap-up codes

1. Click the View Wrap-up Codes action under the User Management category or click View Wrap-up Codes in the breadcrumbs, if available.
2. The View Wrap-up Codes page appears.
3. The details of the selected wrap-up code appear in the details view.

Related topics

Add a wrap-up code
Add a wrap-up code

To add a wrap-up code

1. Right-click in the master view area and select **New** or click the **New** button in the master view toolbar.
2. Complete the wrap-up code configuration in the details tabs.

Related topics

Configure a wrap-up code

The wrap-up codes details tab contains name, digits, label, category, access control group, and multi-language label information the code. Click the name of the details tab for field descriptions.

To configure a wrap-up code

1. Click the **Configuration** details tab to display the details view.
2. Complete the following information in the first section:
   - Type the **Name** of the new code.
   - Type the **Code label**. This is label appears in the CIC clients.
   - Select the wrap-up code category to which the new code belongs.
     - The default category is `<Default Wrap-up Category>`. New categories are defined in Wrap-up Category configuration.
   - To display the access control groups membership available, click the icon, and select the **Access Control Group** from the list to assign to the code.
• If the outbound call reached the intended party, this option is applied to the wrap-up code. *This setting is reserved for Interaction Dialer use.*

3. Click the **Multi-language labels** section expander to display (or hide) the language section's contents, and complete the following information:

• Click to open the **Add languages** dialog box.

Select one or more languages in the **Available** items list, and click **Add** to assign the language to the **Selected** items list. You can also click **Add all** to add all languages. To filter the list of languages, type in the filter field above the list.

• Type in the string value associated with the language selected.

<table>
<thead>
<tr>
<th>Language</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azeri (Cyrillic)</td>
<td>Azeri_translation</td>
</tr>
<tr>
<td>Bulgarian (Bulgaria)</td>
<td>Bulgarian_translation</td>
</tr>
</tbody>
</table>

**Note:** You must specify a value or the multi-language label is not saved.

4. Save the new code or modified code.

• If necessary, the new code or changes made to an existing code can be reverted.

**Related topics**

Wrap-up codes: configuration field descriptions

**Configure advanced information**

The **Advanced** details tab contains the custom attributes and history of the wrap-up code. Click the name of the details tab for field descriptions.

**To configure advanced information**

1. Click the **Advanced** details tab to display the details view.
2. Click the **Custom Attributes** section expander to display the custom attributes section's contents and then complete the following information:
   • To create a custom attribute, click + and type an attribute name. You must also enter a value for the new attribute.

| Fax     | 5551212 |
3. Click **History** section expander to display (or hide) the history section's contents, and complete the following information:

- View the **Created** and **Modified** dates for this wrap-up code.
- Type or view information in the **Notes** field for the wrap-up code.

4. Save the wrap-up code.

   If necessary, the new wrap-up code or changes made to an existing wrap-up code be reverted.

**Related topics**

Wrap-up codes: advanced field descriptions

**Wrap-up Categories**

View wrap-up categories

The **View Wrap-up Categories** page displays wrap-up categories in a list in the master view, and displays details of the currently selected wrap-up category in the details view. You can take actions on the wrap-up categories in the list view, such as add, delete, and copy and paste, and you can add a new category. You can change the way the list is displayed, such as change visible columns, sort by column, and filter.

**Note:** You cannot delete the default wrap-up category.

**To view wrap-up categories**

1. Click the **View Wrap-up Codes** action under the **User Management** category or Click **View Wrap-up Categories** in the breadcrumbs, if available.
2. The **View Wrap-up Categories** page appears.
3. The details of the selected wrap-up category appear in the details view.

**Related topics**

Add a wrap-up category
Add a wrap-up category

To add a wrap-up category

1. Right-click in the master view area and select **New** or click the **New** button in the master view toolbar.
2. Complete the wrap-up category configuration in the details tabs.

Related topics

Configure a wrap-up category

The wrap-up categories details tab contains name, category label, access control group, record status, phone number status, options, and multi-language label information the category. Click the name of the details tab for field descriptions.

To configure a wrap-up category

1. Click the **Configuration** details tab to display the details view.
2. Complete the following information in the first section:
   - Type the **Name** of the new category.
   - Type the **Category label**. This is label appears in the CIC clients.
   - To display the access control groups membership available, click the icon, and select the **Access Control Group** from the list to assign to the category.
   - **Record status**: *This setting is reserved for Interaction Dialer use.*
   - **Phone number status**: *This setting is reserved for Interaction Dialer use.*
• Select **The interaction connected to an actual person** check box to indicate that the interaction associated to this wrap-up category was answered by a person (versus voice mail, recorded message, and so on). *This setting is reserved for Interaction Dialer use.*

• **Increment the attempts counter**: *This field is reserved for Interaction Dialer use.*

• **The interaction was successful**: *This field is reserved for Interaction Dialer use.*

3. Click the **Multi-language labels** section expander to display the language section's contents, and complete the following information:

   1. Click ✦ to open the **Add languages** dialog box

   Select one or more languages in the **Available** items list, and click **Add** to assign the language to the **Selected** items list. You can also click **Add all** to add all languages. To filter the list of languages, type in the filter field above the list. Type in the string value associated with the language selected.

<table>
<thead>
<tr>
<th>Language</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azeri (Cyrillic)</td>
<td>Azeri_translation</td>
</tr>
<tr>
<td>Bulgarian (Bulgaria)</td>
<td>Bulgarian_translation</td>
</tr>
</tbody>
</table>

   **Note:** You must specify a value or the multi-language label is not saved.

4. Save the new category or modified category.

   If necessary, the new category or changes made to an existing category can be reverted.

**Related topics**

Wrap-up categories configuration field descriptions

**Configure advanced information**

The **Advanced** tab information for custom attributes and history for the wrap-up category. Click the name of the details tab for field descriptions.

**To configure advanced information**

1. Click the **Advanced** detail tab to display the details view.
2. Click **Custom Attributes** section expander to display (or hide) the custom attributes section's contents, and complete the following information:

- To create a custom attribute, click + and type an attribute name. You must also enter a value for the new attribute.

![HomeFax 5551212](image)

3. Click **History** section expander to display (or hide) the history section's contents, and complete the following information:

- View the **Created** and **Modified** dates for this category.
- Type or view information in the **Notes** field for the category.

4. Save the new code or modified category.

   If necessary, the new category or changes made to an existing category can be reverted.

**Related topics**

Wrap-up categories: advanced field descriptions

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**CIC Client Buttons**

**CIC Client Button Name**

Type a descriptive label to use as a client button. This label is associated with the new button in the CIC clients.

**CIC Client Button Configuration**

Use this page to configure the behavior and appearance of a button in the CIC clients. You can configure a custom button to be specific per interaction type, and optionally display it on the appropriate interaction dialog box(es). The custom button can be shown on the queue toolbar and/or on any one of the interaction dialog boxes (email, chat, call, etc...). Additionally, a button can be configured to apply to an "interaction type" which causes a queue-based custom button to be enabled only when one of the correct interaction types is selected in the queue view.

**Tip:** Show me how to create a TUI Access button.
Select this check box to enable this customer button in the CIC clients.

**Description**

Enter a description of this CIC client button. This description is used as a tool tip text when CIC client users mouse-over the button.

**Icon**

You may select an icon to display on the button. Click **Change Icon** to open a file browser to search for a *.ico file.

**Availability Section**

Use the options in this section to define where the custom button is located and when it is enabled.

**Enabled**

Select when the button is enabled from the pull-down menu. "Interaction Selected" or "Active Interaction Selected" options only affect the queue toolbar. This is because an interaction form represents only one interaction, which is assumed to be the selected interaction, and forms cannot be shown for inactive interactions. An active interaction is any interaction that is not in the disconnected state. The default option is "Always".

**Location**

Select where the button should appear from the pull-down menu. The options are Queue (queue toolbar), Interaction Form, or Both.

**Interaction Types**

Select the check box for each interaction type that the button should be enabled. Select "All" if the button should be enabled for every interaction (depending on the option chosen for the **Enabled** setting). If only certain interaction types are selected, the button is available only on those interaction type forms (if the **Location** is set to "Interaction Form" or "Both"), and it is enabled only when an interaction of the selected types is in the queue (depending on the **Enabled** and **Location** settings).

**Deactivate After Use**

Select this check box is you wish the button to disable or be grayed out after the first-time use per session.

**Action Section**

Use the options in this section to define what action happens when the custom button is clicked.
**Handler Notification**

Select this option to send a notification to launch a custom handler. This option passes to the handler the interaction ID of the selected interaction (if any), the ID of the user that pressed the button, and the station from where the request was made. The handler should then perform whatever action is required as customized.

**Launch Application**

If **Launch Application** is selected, the blind path to the executable application (*.exe) must be defined. Enter the path relative to the local CIC Client workstation (e.g., C:\Program Files\Interactive Intelligence\application.exe), or enter a UNC path (e.g., \hydra\icapplications\application.exe).

Note: When launching an application, the following command line parameters are used:

- Button ID
- Interaction ID
- Username
- Station

**Code Example:**

```java
Process customApp = new Process();
customApp.StartInfo.FileName = _CustomButton.LocalApplication;
// Use quotes in command string to allow for names with spaces

customApp.StartInfo.Arguments = String.Format("/BUTTON={0}" "/OBJECT={1}" "/USER={2}" "/STATION={3}"", ShellEscape(_CustomButton.Id), interactionId, ShellEscape(userName), ShellEscape(stationName));
```

**User Notification**

Select this check box to display a toast to the user indicating that the custom button was clicked.

**Related Topics**

- Client Button Entry Name
- Client Buttons

**Client Configuration**

= Rank client configuration templates and designate the default template
The first template in the list is selected when a user inherits multiple templates. When a user does not inherit a template, then the default template is used.

To rank client configuration templates and designate the default template

1. In the **People** container, click the **Client Configuration** subcontainer.
2. In the list view, right-click **Configuration** and then click **Properties**.
3. In the **Templates** list, select a template. Use the **Move Up** and **Move Down** buttons to position it in the list.
4. To designate a template as the default template, click **Set as Default**.
5. Click **OK**.

Related topics

Overview of client configuration templates

Add a client configuration template

Templates

Add a client configuration template

Before you assign a client configuration template to a user, you must first add the template. For more information on CIC client configuration, see the help for the CIC clients.

To add a client configuration template

1. In the **People** container, click the **Client Configuration** subcontainer.
2. Click the **Templates** subcontainer.
3. Right-click and then select **New**.
4. In the **Entry Name** box, type the template name and click **OK**.
5. In the **Client Configuration** dialog box, use the tree structure to navigate through and complete the configuration options. For more information, see the links under **Related topics**.

Related topics

- Alerting
- Voicemail/Fax Paging
- My Interaction Ring Sounds
- Calls
- Follow Me
- Call Coverage
Alerting

Use this section to configure the following properties.

Alerting Method

Select the way the agent is alerted when a voicemail or fax arrives.

Do Not Send Me Alerts

Select this option when you don't want agents to receive alerts when a voicemail or fax is delivered to their Inbox or phone.

Email Address

Select this option to send an alert notification to an email address when a voicemail or fax is delivered to an Inbox or phone. Enter the full email address (for example: joe.user@inin.com).

Telephone Number

Select this option to send an alert notification to a designated telephone number when a voicemail or fax is delivered to an Inbox or phone. Enter the telephone number using the area code for long distance calls.

Pager Number

Select this option to send a pager notification when a voicemail is delivered to an Inbox or phone. Enter the pager number and ID if applicable. Enter the ID if applicable.
**Alerting Reason**

Define the criteria for alert notifications by using these options:

**I receive a voice mail**

Use this option to receive alerts when voicemail messages are delivered to an Inbox or phone.

- **Any voice mail**: Receive alerts for all voicemails.
- **Only urgent voice mails**: Receive alerts for voicemails marked as urgent.

**I receive a new fax**

Use this option to receive alerts when faxes are delivered to an Inbox or phone.

**Alerting Time**

Use the following options to restrict when alerts are received.

**Any time of day**

Receive alerts any time of day.

**Only between**

Receive alerts only between these times:

- **Start**: Specify the start time for receiving alerts.
- **End**: Specify the end time for receiving alerts.

**Allow user to modify any of these values**

Select this check box to allow users assigned to this template and the master administrator to change any of these settings.

**Related topics**

- [Add a client configuration template](#)
- [Client configuration template options](#)

**My Interaction Ring Sounds**
Use this section to configure the following properties. Custom ring sounds are supported in Interaction Desktop.

**Calls**

Select the location of the .wav file to play when calls ring in the CIC clients.

**Chats**

Select the location of the .wav file to play when chats arrive in the CIC clients.

**Emails**

Select the location of the .wav file to play when emails arrive in the CIC clients.

**All Other Interactions**

Select the location of the .wav file to play when all other interactions arrive in the CIC clients.

**Allow user to modify any of these values**

Select this check box to allow users assigned to this template and the master administrator to change any of these settings.

Related topics

Add a client configuration template

Client configuration template options

**Calls**

**Follow Me**

Use this section to configure the following properties for the Follow Me feature.

*Note: You can also configure call forwarding for stations. For more information see Station call forwarding options.*

**Phone Number**

Enter the telephone number for the CIC clients to call if the agent is not available.
**Time Out**

Enter the number of seconds for the CIC clients to ring a follow-me routing number before moving to the next number in the list or transferring the call to voicemail. If no number is entered in this field, the CIC client defaults to 15 seconds.

**Use Pin**

Select this option to force call recipients to enter the CIC password to accept the call.

**Screen calls**

Select his option for the CIC clients to require callers to record their name. When a CIC client contacts the agent, the callers name will be played before the agent accepts the call.

**Allow user to modify any of these values**

Select this check box to allow users assigned to this template and the master administrator to change any of these settings.

**Related topics**

- Station call forwarding options
- Add a client configuration template
- Client configuration template options

---

**Call Coverage**

Call coverage allows an agent to forward calls to voice mail, another number, or another agent when the agent changes his or her status to a DND status. When CIC forwards a call to another agent, the original extension information appears with the call so that the agent can see where the call was originally intended to go.

**Note:** You can also configure call forwarding for stations. For more information see Station call forwarding options.

**Coverage Options**

The Call Coverage section contains the following items:

- **Forward**

  Select this option to send all calls, internal calls, external calls, or unknown calls to a Call Coverage number.
If I'm "Do Not Disturb," Forward

Select this option to send all calls, internal calls, external calls, or unknown calls to a Call Coverage number, when status is Do Not Disturb (DND), including not being logged into the CIC clients. This behavior depends on the configuration of DND statuses.

If I'm on the Phone, Forward

Select this option to send all calls, internal calls, external calls, or unknown calls to a Call Coverage number, when an agent is on the phone.

If I Don't Answer, Forward

Select this option to send all calls, internal calls, external calls, or unknown calls to a Call Coverage number, when an agent does not answer.

Coverage Number

The Call Number section contains the following items:

Send My Calls To:

Enter the phone number that interactions are sent to when one of the Coverage Options above in the Coverage Options section is selected. This number must be an internal number or a CIC extension.

If a Caller Leaves Voicemail, Send it to:

Click this drop-down menu to choose to send voice mail messages to the internal telephone number or CIC extension set, or to voice mail. The internal number or extension must have a mailbox assigned. If no mailbox is assigned to this number, then the system will not allow the changes.

For example, when the My Mailbox option is selected, any message left by a caller is sent to that agent's voice mail. If the other option (the number you entered in Send my calls to) is selected, then this gives ownership of the call (or any voice mail) to that coverage number.

Allow user to modify any of these values

Select this check box to allow users assigned to this template and the master administrator to change any of these settings.

Related topics

Station call forwarding options

Add a client configuration template
Client configuration template options

Personal Prompts

Use this section to configure the following properties.

*Activate out of office message*

Check this option to activate the **Out of Office** message. Agents should record their **Out of Office** message before they use this option for the first time.

*Activate agent greeting*

Select this check box to activate the Agent Greeting message. Agents should record their Agent Greeting Message before they use this option for the first time.

*Record Out of Office Message*

Use this button to record a message played to callers when the agent's status is set to one of the unavailable statuses (i.e. any status other than **Available** or **Available, Forward** or **Available, No ACD**). Also select the **Activate out of office message** option.

*Record No Answer Message*

Use this button to record a message played to callers when agents do not answer their calls.

*Record Follow Me Message*

Use this button to record a message to play to callers if agent status is set to Available, Follow Me.

When status is set to Available, Follow Me, the **Follow Me** message plays to callers while the CIC client consecutively calls the agent at a series of numbers that have been set up to find the agent and eventually connects the agent to the caller.

*Record Name*

Use this button to record agent name. This recording is played anytime someone calls the agent.

*Record Agent Greeting*

Use this button to record a message to play to callers before the agent answers an ACD call. This greeting, also known as a "smile", is intended for use by call center agents who are members of a workgroup and are receiving ACD calls. This feature is best used with the **Auto Answer Calls** (user/agent attribute set in Interaction Administrator). When used with **Auto Answer Calls** enabled, your **Agent Greeting** plays to the caller as the agent is being alerted. The length of the **Agent Greeting** is limited to 10 seconds, and therefore, is considered an introduction or "smile".

**Note:** Once recorded, the Agent Greeting will be played to all ACD callers alerting on the agent's queue. To disable this greeting, click **Disable**.
Record Available, Forward message

Use this button to record a message to play to callers when agent status is set to "Available, Forward."

Allow user to modify any of these values

Select this check box to allow users assigned to this template and the master administrator to change any of these settings.

Related topics

Add a client configuration template

Client configuration template options

IP Phone

Use this page to set the default behavior of the Do Not Disturb (DND) button on an IP phone in the CIC clients.

Note: This feature applies to users that are logged into a managed IP phone that supports DND button status synchronization.

When I turn the DND button on, set my status to:

Select a status that is configured as a DND status from the pull-down menu that you want your status to appear as when you enable the DND button on your IP phone. Do Not Disturb is the default DND status.

When I turn the DND button off, set my status to:

Select My Last Available Status (default) to display your status as the last status you had that is configured as an available status, or choose The Following Status and select a status that is configured as an available status from the drop-down menu.

Allow user to modify any of these values

Select this check box to allow users assigned to this template and the master administrator to change any of these settings.
Related topics

Add a client configuration template

Client configuration template options

Emails

Use this section to configure email behavior options in the CIC clients.

Spelling

Select the **Always check spelling before sending email** option to automatically check ACD-routed email messages after clicking send. Once the spell check is complete, the message is sent.

HTML Email

Select this option to automatically download and display any images included in ACD-routed email messages.

Allow user to modify any of these values

Select this check box to allow users assigned to this template and the master administrator to change any of these settings.

Related topics

Add a client configuration template

Client configuration template options

Monitored Appearances

The options in this page allow you to set up monitored appearances to observe the activity of several personnel at the same time. This feature is particularly helpful if a person has a number of personnel for whom he or she manages calls.
For example, receptionists or secretaries can use monitored appearances to continuously observe a manager’s queue, control interactions, and perform tasks on his or her behalf, such as picking up or transferring calls and creating conferences.

**Add**

Click this button to add a user to monitor, then set the following options for the appearance:

**Settings**

Use this section to set up alerting options for a monitored appearance.

**Label**

To change the way the name appears in the Monitored Appearances page, in the Label box, type a new name. To list this monitored user on the My Interactions tab, select the **Active** check box.

To remove the user from the list, click to remove the checkmark from the Active check box.

**Ring telephone for calls**

Select this option to make the phone ring when a monitored user receives a phone call at his or her extension.

**Ring Computer**

Select this option to receive an audible alert through the computer’s speakers when the monitored user receives a telephone call at his or her extension.

**Note:** If the **Ring when on phone** option is selected, incoming calls for the monitored user ring on the computer when he or she is already on the phone.

**Pop Client**

Select this option to make the CIC client appear on top of any other applications that are running when the monitored user receives an incoming interaction.

**Display Desktop Alerts**

Select this option to display a desktop alert (toast) when a monitored user receives a telephone call.

**Call Ring Sound**

Use this option to select the sound used by the computer when **Ring Computer** is selected and the monitored user receives a phone call.
Tip: Click the button next to the Call Ring Sound box to test the sound.

Click **Remove** to remove a monitored appearance. To change the order of monitored appearances, select the name of a monitored appearance and click **Move Up** or **Move Down** as needed.

**Allow user to modify any of these values**

Select this check box to allow users assigned to this template and the master administrator to change any of these settings.

**Related topics**

[Add a client configuration template](#)

Client configuration template options

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**Queues Pages**

Use this page to configure which queue pages appear in the CIC client interface, including station and user queues.

**Note:** The queue pages options are used only by Interaction Client .Net Edition.

**Allow User to Modify Any of These Values**

Select this check box to allow users assigned to this template and the master administrator to change any of these settings.

**Related topics**

[Add a client configuration template](#)

Client configuration template options

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**Directories Pages**
Use this page to configure which directory and workgroup views appear in the CIC clients.

**Note:** The directories pages options are used only by Interaction Client .Net Edition.

**Allow user to modify any of these values**

Select this check box to allow users assigned to this template and the master administrator to change any of these settings.

**Related topics**

Add a client configuration template

Client configuration template options

**General**

Use this page to show the actual status icon in the system tray, choose whether or not to open a dialog box each time an interaction is dragged from the My Interactions queue to another call in the My Interactions queue, sort account codes by account number, and pop Interaction Tracker for unresolved contacts.

**Hide disconnected interactions**

Select this check box to remove interactions from the My Interactions page immediately after you disconnect them.

**Show actual status icon in system tray**

Select this check box to replace the icon of the CIC client with an icon associated with agent status.

**Confirm drag and drop operations**

Select this check box to confirm drag and drop operations such as dragging and dropping calls on another call to create a conference call.

**Confirm single click dialing**
Select this check box to display a confirmation dialog box anytime you initiate a call by single-clicking on a number in your Call History, or Company directory. This gives you the opportunity to click Yes or No before the call is dialed.

**Sort Account Codes by account number**

Select this check box to sort account codes by account number within the CIC client.

**Automatically play voice mail interactions**

Select this check box to automatically play .wav files that are attached to an email message when that message is opened.

**Minimize to the notification area instead of the task bar**

Select this check box to remove the icon for Interaction Desktop from the Windows taskbar when the user closes the CIC Client workspace.

*Note:* This setting has no effect if the user has already pinned the Interaction Client application to the Windows taskbar. If the application is pinned, the task bar icon remains when the user closes Interaction Client.

**Allow user to modify any of these values**

Select this check box to allow users assigned to this template and the master administrator to change any of these settings.

*Related topics*

**Add a client configuration template**

Client configuration template options

**Plugins**

Use this page to select the check box associated with the plugin that you want to be visible to the user.

*Note:* When you enable a plugin, some necessary files are downloaded from the IC server to the CIC clients. Subsequently, plugin availability is determined by comparing information on the IC server with corresponding information in the CIC clients. Therefore, if a user runs disconnected, or the server connection fails, or if the user...
changes to another IC server, previously enabled plugins may not be available or only the plugins that were loaded when the user last closed CIC client may be available.

**Allow user to modify any of these values**

Select this check box to allow users assigned to this template and the master administrator to change any of these settings.

**Related topics**

Add a client configuration template

Client configuration template options

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**Search Results**

Selecting **All** is the least restrictive search configuration where all results found based on the search terms will be returned. **Strict** is the most restrictive search configuration where the search results will only contain the most closely matched entries, similar to keyword matches. Note that relevant entries that contain misspelled words or less common terms may not be included in the search results for **Strict** searches.

**Allow user to modify any of these values**

Select this check box to allow users assigned to this template and the master administrator to change any of these settings.

**Related topics**

Add a client configuration template

Client configuration template options
Use this page to configure Interaction Tracker related interactions and interaction history behavior in Interaction Desktop.

Show Interactions from the Previous:

Use this option to set the previous timeframe for interactions to appear in the Interaction Client .NET Edition and the Interaction Desktop Client. The default setting for this option is Week. The other options are Month and 3 Months. The interactions tracked are associated with how Interaction Tracker is configured in Interaction Administrator.

Maximum Number of Interactions to Show

Use this option to set the maximum number of interactions to show based on the Show Interactions from the Previous: setting above. The default maximum number of interactions to display is 10. The other options are 50 and 100.

Allow user to modify any of these values

Select this check box to allow users assigned to this template and the master administrator to change any of these settings.

Note: The Related Interactions feature is available only for installations that have the Tracker feature license and that use SQL Server for the Tracker database.

Related topics

Add a client configuration template

Client configuration template options

This page allows you to enter information about and changes made to this client configuration template.
You can add an account code in Interaction Administrator Web Edition. The account codes settings are configured in detail tabs. In the details view, you can click the section expanders to display or hide the sections' contents.

To add an account code:

1. Right-click in the master view area and select New or click the New button in the master view toolbar.

   The New Item appears in the details view.

2. Complete the following general account code configuration:
   - Type the Code representing the account code.
   - Type a Description for the new account code. This information appears in the CIC clients.
   - To display the access control groups membership available, click the icon, and select the Access Control Group from the list to assign to the skill.

3. Click Custom Attributes section expander to display the custom attributes section's contents, and complete the following information:
   - To create a custom attribute, click + and type an attribute name. You must also enter a value for the new attribute.

4. Click History section expander to display (or hide) the history section's contents, and complete the following information:
   - View the Created and Modified dates for this code.
   - Type or view information in the Notes field for the code.
5. Save the new account code or modified account code.

If necessary, you can revert the new account code or the changes that you made to an existing account code.

**Notes:** To use account codes, they must be enabled at the system level, enabled for each dial plan object, and the user must have access to account codes.

To save a new account code, all required information must be entered. Details tabs containing incomplete or erroneous information, are shown with an error message.

**Related topics**

- Account codes: field descriptions
- Account code settings: field descriptions
- Enable account codes

**Account codes: field descriptions**

This topic contains the descriptions for each field in the **Account Codes** details view under the **View Account Codes** page.

**Code**

This is a set of numbers zero through 9 (up to a maximum of 50 digits) to use as an account code. These numbers are associated with the account name.

**Note:** Because account codes are treated as strings, not numbers, by the database program, account codes with leading zeros will appear first in reports.

For example, account numbers 1, 3, 20, 213, 0214, 1234, and 001235 would be sorted as 001235, 0214, 1, 1234, 20, 213, and 3.

**Description**

Type a name for the account code. The name is added next to the account code shown in Interaction Administrator list view.

**Access Control Group**
An access control group (ACG) is a group of administrative rights. When an ACG is added to the account code, the account code takes on those ACG's rights. The account code can be assigned to only one ACG.

**Note:** Access Control Groups appear if they have been configured in your environment. If Access Control Groups have not been configured, this field is not displayed.

**Custom Attributes**

Use customized attributes to reference other variables and settings through the IceLib interface. When adding a new attribute, use a unique name, otherwise an existing attribute with the same name will be overwritten. Click **Edit** to change the value of an existing custom attribute, or **Delete** to delete an existing custom attribute.

**History**

History provides a way to manually document configuration changes and when they occurred. Changes made in Interaction Administrator are also automatically logged in the Interaction Administrator Change Notification Log (Log ID 7). Later, authorized users can run reports against this log to summarize all configuration changes.

**Created**

This date is automatically set when the user creates the initial configuration for this account code. If the account code was initially created during setup, the date could be blank.

**Modified**

This date is automatically updated each time the user clicks the OK button, presumably after making changes to the account code configuration. To avoid updating this date, exit the property sheet by clicking **Revert**.

**Note:** If you click **Revert**, none of the changes made to this account code since the changes were last saved are preserved.

**Notes**

Type notes about configuration settings and changes. If you change the configuration and click **Save**, the **Last Modified** date is updated.

You must manually enter the date beside each entry in the **Notes** field to identify the date of each note.

**Related topics**

*Add an account code*
Account codes global settings

Account code settings: field descriptions

This topic contains the descriptions for each field in the Account Code Settings master view under the Account Code Global Settings page.

Enable Account Codes

This setting activates the account codes feature for the CIC system.

Custom Attributes

Use customized attributes to reference other variables and settings through the IceLib interface. When adding a new attribute, use a unique name, otherwise an existing attribute with the same name will be overwritten. Click Edit to change the value of an existing custom attribute, or Delete to delete an existing custom attribute.

History

History provides a way to manually document configuration changes and when they occurred. Changes made in Interaction Administrator are also automatically logged in the Interaction Administrator Change Notification Log (Log ID 7). Later, authorized users can run reports against this log to summarize all configuration changes.

Created

This date is automatically set when the user creates the initial configuration for this account code configuration. If the account code configuration was initially created during setup, the date could be blank.

Modified

This date is automatically updated each time the user clicks the OK button, presumably after making changes to the account code configuration. To avoid updating this date, exit the property sheet by clicking Revert.

Note: If you click Revert, none of the changes made to this account code configuration since the changes were last saved are preserved.

Notes

Type notes about configuration settings and changes. If you change the configuration and click Save, the Last Modified date is updated.

You must manually enter the date beside each entry in the Notes field to identify the date of each note.
Client Templates
Publish a client template

You can publish a client template to make it available to roles, workgroups, or user.

**To publish a client template to roles, workgroups, or users**

1. In the **People** container, open the **Client Templates** subcontainer. The **Client Templates** page appears.
2. Under **Select template targets**, do one of the following:
   - Click **Select Users** to select the users who should receive the template.
   - Click **Select Roles** to select the roles that should receive the template. All of the users that have the roles that you select will receive the template.
   - Click **Select Workgroups** to select the workgroups that should receive the template. All of the users in the workgroups that you select will receive the template.
3. Under **Select a template to apply**, click the template that you want to publish. The following predefined templates are available:
   - All Channel Agent. This template provides all available channels to the agent.
   - Basic Chat Agent. This template enables the agent to participate in online chat sessions.
   - Basic Email Agent. This template enables the agent to send and receive emails.
   - Basic Email Agent with preview. This template enables the agent to send and receive emails and to preview incoming calls.
   - Default template. This is the standard template that is automatically assigned to all new users.
   - Default ICM. This is the standard template that is automatically assigned to all new ICM users.
   - Multi-Channel Agent: This template enables the agent to use chats and emails.

   **Tip:** You can search for templates by name and by application.

4. Click **Apply Template**.
5. Click **Reset**. You can now apply another template if necessary.
Overview of client templates

Response Management
Add a Response Management Library

You can add a response management library that contains response categories and items. The item settings are configured in detail tabs. In the details view, you can click the section expanders to display or hide the sections' contents.

You must create a response management library before creating a category or an item.

To create a library:

1. Right-click in the master view area and select New:

   ![New button](Image)

   ![New button](Image)

   ...Or click the New button in the master view toolbar:

   ![New button](Image)

   The New Item appears in the details view:

   ![New Item](Image)

2. Type the Name representing the library.
3. Type a Description for the new library. This information appears in Interaction Client.
4. Save the library.
To add a category to a library:

1. In the master details view in a library, click the add a response category button.
2. Type a Name representing the category. This information appears in Interaction Client.
3. Save the category.

To add items to the library or category, see Add a response management message or Add a response management file.

Related topics

Response Management

Add a Response Management Message

Use a message item to save standard text responses that CIC client users often refer to when interacting with customers. You can add a response management message item to a library or category.

The item settings are configured in detail tabs. In the details view, you can click the section expanders to display or hide the sections' contents.

To create a message response item:

1. In the Response Management library or category details view, click the to add a response item.
2. In the Type section, select Message.
3. In the composition area, do one of the following:
   - Import an existing HTML file by clicking the Import HTML toolbar button. In the HTML Editor dialog box, locate an HTML file and click Open.
   - Format the text: Use any of the text formatting tools.
   - Add a hyperlink: Create a clickable link: Select some text in your message and click the Create Hyperlink tool, then supply a ScreenTip and a URL address.
4. Optionally, do any of the following in the editor:
   - Import an existing HTML file by clicking the Import HTML toolbar button. In the HTML Editor dialog box, locate an HTML file and click Open.
   - Format the text: Use any of the text formatting tools.
   - Add a hyperlink: Create a clickable link: Select some text in your message and click the Create Hyperlink tool, then supply a ScreenTip and a URL address.
5. In the **Name** text box, type a name for this stored message.

**Note:** Response Management provides a full-text search tool that uses the information in Name, Shortcut, and Labels along with the response item’s content to find a response.

**Tip:** **Name** identifies the response item, but does not have to be unique. If you do not provide a name, it defaults to the first few characters of the message.

6. In the **Shortcut** text box, type a short name, abbreviation or code for this response.

**Tip:** Use this Shortcut to insert a response item where needed by typing the shortcut and then pressing Ctrl+Space. The shortcut does not have to be unique. For example, you could use the shortcut "Hi" for all the variations of your standard greeting.

7. In the **Labels** text box, type a space-separated list of words that identify or classify this response item.

8. Click **Save**.

**Note:** To save a new item, all required information must be entered. Details tabs containing incomplete or erroneous information, are shown with an error message:

**Tip:** You can edit or delete multiple files or messages by selecting consecutive items with the Shift key and click, or multiple items with the Control key and click.

**Related topics**

Section expanders

Response Management
Add a Response Management Library

Add a Response Management File

Add a Response Management File

Use a file item as a pointer to a file on the network that you frequently share with customers. You can add a response management file item to a library or category.

The item settings are configured in detail tabs. In the details view, you can click the section expanders to display or hide the sections' contents.

To create a file response item:

1. In the Response Management library or category details view, click the + to add a response item.
2. In the **Type** section, select **File**.
3. Do one of the following:
   - Click Browse. In the Open dialog box, locate and select the appropriate file and then click Open.
   - Use Windows Explorer to locate and select the appropriate file and then drag and drop the file in the **Drop file here** area.
4. In the **Name** text box, type a name for this file.

   **Note:** Response Management provides a full-text search tool that uses the information in Name, Shortcut, and Labels, and the response item's content to find a response.

   **Tip:** Name identifies the response item, but does not have to be unique. If you do not provide a name, it defaults to the first few characters of the file's directory path.

5. In the **Shortcut** text box, type a short name, abbreviation or code for this response.

   **Tip:** Use this Shortcut to insert a response item where needed by typing the shortcut and then pressing Ctrl+Space. The shortcut does not have to be unique. For example, you could use the shortcut “TS” for all your files containing troubleshooting tips.
6. In the **Labels** text box, type a space-separated list of words that identify or classify this response item.
7. Click **Save**.

**Note**: To save a new item, all required information must be entered. Details tabs containing incomplete or erroneous information, are shown with an error message.

**Tip**: You can edit or delete multiple files or messages by selecting consecutive items with the Shift key and click, or multiple items with the Control key and click.

**Related topics**

**Section expanders**

**Response Management**

*Add a Response Management Library*

*Add a Response Management Message*

**Import a Response Management Document**

You can import response management documents from CIC 3.0 to a later release.

**Note**: You can import only response management documents that were created with CIC 3.0. Do not use this feature to import XML documents that were created outside of CIC.

1. Under the **Response Management** subcontainer, click the Import Documents subcontainer.
2. To complete the **Response document path** field, click **Browse** to navigate to the document that you want to import.
3. Click **Import**.
4. Optionally click the response management document in the list to preview it.
5. In the **Name** field type a descriptive name that agents will see.
6. Click **Save**.
To add a skill

1. In the People container, click the Skills subcontainer.
2. In the master view area, right-click and select New, or click the New button in the master view toolbar.
3. In the Name box, use a word or phrase to identify the skill. You can use blank spaces (for example, Spanish speaker, Database expertise, and so on).
4. Configure general information.
5. Configure advanced information.

Configure general information

Use the Configuration tab to configure the access control group, workgroups, and users for a skill.

Note: You can assign skills to workgroups and users in the Skills container as described in the following procedure. You can also assign skills to users in the Users container and to workgroups in the Workgroups container.

Note: If you enabled the Enhanced Interaction Administrator Change log, then all of your changes on this tab are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

To configure general information

1. In the details area of the Skills window, click the Configuration tab.
2. If the Access Control Group box appears, click the icon to select the ACG for the skill. An access control group (ACG) is a group of administrative rights. When an ACG is
added to the skill, the user that is assigned this skill takes on those ACG's rights. The skill can be assigned to only one ACG.

**Note:** Access Control Groups appear if they have been configured in the Access Control Groups container. If Access Control Groups have not been configured, this field is not displayed.

3. To select the workgroups that have the skill, in the **Workgroups** section, click the button.
4. Select one or more workgroups in the **Available** items list, and click **Add**. Alternatively, click **Add all** to add the skill to all workgroups. To find a specific workgroup, type a simple search in the filter field above the list.

**Note:** You can select only ACD workgroups. If the workgroup you need does not appear here, go to the **Workgroups** container and edit the workgroup's record. On the **Configuration** tab, select the **Workgroup has Queue** checkbox. Then in the corresponding list, select **ACD**.

5. For each workgroup that has the skill, set the proficiency level. To do this, click under the **Proficiency** heading so that the field is active. Then either type a number or use the controls to select a number. The proficiency number represents the minimum proficiency of skill level workgroup members must have to receive an ACD interaction that requires the skill. The proficiency level is a relative number that you assign based on a scale of 1-100, where 100 is the highest level. For more information, see **Proficiency_level**.
6. For each workgroup that has the skill, set the desire to use level. To do this, click under the **Desire to use** heading so that the field is active. Then either type a number or use the controls to select a number. The desire to use number represents the minimum level of interest users must have in order to receive an ACD interaction that requires this skill. The desire to use level is a relative number that you assign based on a scale of 1-100, where 100 is the highest level. For more information, see **Desire_to_use**.
7. To select the users who have the skill, in the **Users** section, click the button.
8. Select one or more users in the **Available** items list, and click **Add**. Alternatively, click **Add all** to add the skill to all users. To find a specific user, type a simple search in the filter field above the list.

9. For each workgroup that has the skill, set the proficiency level. To do this, click under the **Proficiency** heading so that the field is active. Then either type a number or use the controls to select a number. The proficiency number represents the minimum proficiency of skill level workgroup members must have to receive an ACD interaction that requires the skill. The proficiency level is a relative number that you assign based on a scale of 1-100, where 100 is the highest level. For more information, see **Proficiency_level**.
10. For each workgroup that has the skill, set the desire to use level. To do this, click under the **Desire to use** heading so that the field is active. Then either type a number or use the controls to select a number. The desire to use number represents the minimum level of interest users must have in order to receive an ACD interaction that requires this skill. The desire to use level is a relative number that you assign based on a scale of 1-100, where 100 is the highest level. For more information, see **Desire_to_use**.
11. Click **Save**.

**Related topics**

Overview of skills

Configure advanced information

You can define custom attributes for skills to further assist the ACD routing process in selecting the most appropriate agents. For more information on how to use custom attributes with skills, see the *IC ACD Technical Processing Technical Reference* in the CIC Documentation Library.

**To configure advanced information**

1. In the Skills window details area, click the **Advanced** tab.

2. To create a custom attribute, under the **Custom Attributes** section, click the **+** button.

3. In the **Name** box, type the attribute name.

4. In the **Value** box, type the attribute value.

5. To add a history note, under the **History** section, in the **Notes** box, type the information that you wish to capture.

6. Click **Save**.

**Related topics**

Overview of skills

Configure general information

Access Control Groups

The **Access Control Groups** (ACGs) page displays the ACGs hierarchy in the master view. It displays details of the currently selected ACG in the details view. In the master view, you can add, edit, and delete ACGs. You cannot delete the default root.

**To add a new ACG**
1. Right-click in the master view area and select **Add Access Control Group**:

...Or click the **New** button in the master view toolbar:

The **New Item** appears in the details view:

![](image)

2. Complete the ACG configuration in the two details tabs. The links below open the topics containing procedures for completing each details tabs configuration:

   - **Members**: You can view membership only. Items must be added to ACGs through the specific item configuration.
   - **Advanced**: Complete the optional custom attributes and history information.

**Note**: To save a new ACG, all required information must be entered. Incomplete or invalid information is shown with a message:

![](image)

**Related topics**

- Access control groups: members
- Access control groups: members field descriptions
- Access control groups: advanced
- Access control groups: advanced field descriptions
Access control groups: members

The Members details tab contains the name of the ACG and the items that belong to the group. Click the name of the details tab for field descriptions.

To complete the ACG's general information

1. Click the Members details tab to display the details view.
2. Type the ACG Name. The name must be unique.
   
   Name: New ACG
   
3. Save the new ACG.

   ![Save button](image)

   ![Revert button](image)

   If necessary, the new ACG or changes made to an existing ACG name can be reverted.

**Note:** The Name and Type area in the details view is empty.

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search</td>
<td>Search</td>
</tr>
</tbody>
</table>

Items must be added to the ACG through the specific item's configuration. The following image illustrates how an
item appears after it is added to the ACG.

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search</td>
<td>&lt;Search&gt;</td>
</tr>
<tr>
<td>&lt;Default Registration Group&gt;</td>
<td>IP Phone Registration Group</td>
</tr>
<tr>
<td>&lt;Default Secure Registration Group&gt;</td>
<td>IP Phone Registration Group</td>
</tr>
<tr>
<td>&lt;Default-Polycom&gt;</td>
<td>IP Phone Ring Set</td>
</tr>
<tr>
<td>&lt;Local Phone Settings&gt;</td>
<td>IP Phone Ring Set</td>
</tr>
<tr>
<td>Administration</td>
<td>Workgroup</td>
</tr>
<tr>
<td>Administrator</td>
<td>Role</td>
</tr>
<tr>
<td>Agent</td>
<td>Role</td>
</tr>
</tbody>
</table>

Related topics

Access group configuration

Access control groups: members field descriptions

Access control groups: advanced

Access control groups: advanced field descriptions

Access control groups: members field descriptions

This topic contains the descriptions for each field in the Members details view under the View Access Control Groups page.

Members

When an item (member) is added to an ACG, the users assigned to the ACG's, take on those rights. The details view here shows the name of the item (Administration) and associated item type (Workgroup):
To search for a specific item in the list, type a digit or digits and select the filter type to apply:

- Contains
- Starts with
- Matches whole word

To search by item type, click <Search>, and select the item type from the list:

- All items belonging to an ACG are displayed in this view only list. Items cannot be added to or deleted from this view. Items must be added or deleted from ACGs from the item configuration. For example, a user must be added to an ACG through the Access Control
Group field in user configuration:

Access Control Group: Root

Related topics

Access group configuration

Access control groups: members

Access control groups: advanced

Access control groups: advanced field descriptions

Access control groups: advanced

The Advanced details tab contains the custom attributes and history of the ACG. Click the name of the details tab for field descriptions.

To complete the ACG's advanced information

1. Click the Advanced details tab.
   The details view appears.
2. Click the Custom Attributes section expander to display (or hide) the custom attributes section's contents, and complete the following information:

   - To create a custom attribute, click and type an attribute name. You must also enter a value for the new attribute.

3. Click the History section expander to display (or hide) the history section's contents, and complete the following information:
   - View the Created and Modified dates for this ACG.
   - Type or view information in the Notes field for the ACG.
4. Save the ACG.

**Note:** If necessary, the new ACG or changes made to an existing ACG can be reverted.

**Related topics**

- Access group configuration
- Access control groups: members
- Access control groups: members field descriptions
- Access control groups: advanced field descriptions

**Access control groups: advanced field descriptions**

This topic contains the descriptions for each field in the **Advanced** details view under the **View Access Control Groups** master view.

**Custom Attributes**

Use customized attributes to reference other variables and settings through the IceLib interface. When adding a new attribute, use a unique name, otherwise an existing attribute with the same name will be overwritten. Click **Edit** to change the value of an existing custom attribute, or **Delete** to delete an existing custom attribute.

**History**

History provides a way to manually document configuration changes and when they occurred. Changes made in Interaction Administrator are also automatically logged in the Interaction Administrator Change Notification Log (Log ID 7). Later, authorized users can run reports against this log to summarize all configuration changes.

**Created**

This date is automatically set when the user creates the initial configuration for this ACG. If the ACG was initially created during setup, the date could be blank.

**Modified**
This date is automatically updated each time the user clicks the OK button, presumably after making changes to the ACG configuration. To avoid updating this date, exit the details view by clicking Revert.

Note: If you click Revert, none of the changes made to this ACG since the changes were last saved are preserved.

Notes

Type notes about configuration settings and changes. If you change the configuration and click Save, the Last Modified date is updated.

You must manually enter the date beside each entry in the Notes field to identify the date of each note.

Related topics

Access group configuration
Access control groups: members
Access control groups: members field descriptions
Access control groups: advanced

About inheritance of configuration properties

To streamline the configuration of people-related records, CIC automatically assigns rights to roles, workgroups, and users based on a system of inheritance.

- All users inherit some initial rights from the default user.
- If you create workgroups, users who are members of a workgroup also inherit rights from that workgroup.
- If you create a role, users who are assigned to the role inherit the rights associated with that role.
- If a user is a member of more than one workgroup, or is assigned more than one role, and if those workgroups and roles include conflicting rights, the user will inherit the union of the rights set in all the workgroups and roles.
Activating configuration changes for users, workgroups, roles, and the default user

Configuration changes made in the configuration pages for users, workgroups, roles, and the default user dynamically update the affected CIC clients while they are actively running.

The following table summarizes how users are affected.

<table>
<thead>
<tr>
<th>Changes made to:</th>
<th>Update Interaction Client in this way:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual User</td>
<td>The user’s active CIC client is immediately updated.</td>
</tr>
<tr>
<td>Workgroups</td>
<td>Users who are members of that workgroup with active CIC clients are immediately updated.</td>
</tr>
<tr>
<td>Roles</td>
<td>Users who have been assigned the role with active CIC clients are immediately updated.</td>
</tr>
<tr>
<td>Default User</td>
<td>All users with active CIC clients are immediately updated.</td>
</tr>
</tbody>
</table>

Related topics
Updating configuration values

System Configuration

System Configuration Pages

Connection Security

Use this page to define connection security settings.

Move the slider to select a level of security for connections between subsystems and the server.

High

- Data is only transmitted through server connections using Secure Sockets Layer (SSL)
- All applications use SSL
- Subsystem connections use SSL and certificates

Medium

- Data is encrypted before being transmitted through regular server connections or server connections using Secure Sockets Layer (SSL)
- You have the ability to configure which applications use SSL
- Subsystem connections use SSL and certificates

Low

- Data is transmitted in cleartext through regular server connections or server connections using Secure Sockets Layer (SSL)
- You have the ability to configure which applications use SSL
- Subsystem connections use SSL and certificates

Configure application connection security...

Configure subsystem certificates...

Configure login authentication...

Certificate Management

Use this page to configure which certificates are used on the IC server.

Subsystem Certificates Configuration

Subsystem certificates are used to allow or deny subsystems from connecting to the server.

Click Modify to manage subsystem certificates.
Email Certificates Configuration

Email certificates are used to securely send and receive email messages and make secure connections to email (IMAP, SMTP, and S/MIME) providers.

Click Modify to manage email certificates.

SIP\TLS Line Certificates Configuration

SIP\TLS line certificates are used to authenticate SIP/TLS connections to and from the server.

Click Modify to manage line certificates.

Prompt Server

Prompt Server File Extensions

Interaction Media Server plays .wav .snd and .au prompt files. These file extensions are configured by default in the Prompt Server File Extensions dialog box. In the typical case, you do not need to add or change the default file extensions. The iniinmodel file extension (with application/xml Content Type) is required for call analysis to work on the Interaction Media Server.

In the more rare case where an IC server sends audio to an MRCP server that supports additional audio formats, you may need to add that file extension and content type here.

Click Add to add a prompt server file extension, or highlight an existing file extension and click Delete to remove it.

Related Topics

Media Servers

Prompt Server

Prompt Server - Add File Extension

Prompt Server - Virtual Directories

Prompt Server - Add Virtual Directory
Use this page to enter the prompt server file extension information.

**File Extension**

Enter a unique prompt server file extension, such as "wav". Extensions are case-insensitive.

**Content Type**

Enter the prompt server file content type in the format of "xxxx/xxx", such as "audio/x-wav". An error is displayed if not entered in the proper format. This information is contained in the HTTP or HTTPS header for the associated file extension.

**Related Topics**

Media Servers

Prompt Server

Prompt Server File Extensions

Prompt Server - Virtual Directories

Prompt Server - Add Virtual Directory

**Prompt Server - Virtual Directories**

Prompt Server provides access to audio files residing in the file system on the IC server. In order to limit access to the IC server file system and provide a degree of security, Prompt Server creates virtual directories for Interaction Media Server to access the files. A media server or other third party server can only access audio files residing in (or in a subdirectory under) one of the virtual directories defined on the Prompt Server configuration page.

By default, Prompt Server creates virtual directories for the common audio resource folders on an IC server, including:

- Recording Directory (x:\server\IC\Recordings)
- Resource Directory (x:\server\IC\Resources)
- Work Directory (x:\server\IC\Work)

By default, handlers use prompts under one of these directories, but you can choose to omit any of these or create additional virtual directories that map to a specific location on the IC server.
The **Use resource directory** option is required for call analysis to work on the Interaction Media Server.

Click [Add](#) to add a virtual directory, or highlight an existing directory and click [Delete](#) to remove it.

**Note:** For security reasons, only prompt files that are located in one of the virtual directories (or the subdirectories) are mapped to URIs.

**Related Topics**

Media Servers

Prompt Server

[Prompt Server File Extensions](#)

[Prompt Server - Add File Extension](#)

[Prompt Server - Add Virtual Directory](#)

**Prompt Server - Add Virtual Directory**

Use this page to add a registered virtual directory and the corresponding root paths.

**Virtual Directory Name**

Enter a unique virtual directory name for the prompt server. The name is case-sensitive.

**Root Server Path**

Enter the file path prefix which this virtual directory references on the local system. Click ... to browse the server directory. If Interaction Administrator is not running on the server, then the browse button is not available.

The root server path is matched against files to be mapped to URIs. CIC uses the virtual directory with the longest matching local root path to compose the URI.

**Related Topics**

Media Servers

Prompt Server
Text to Speech

Default Text to Speech (TTS) voice configuration is performed in the Windows Control Panel Speech Applet.

Use the Text to Speech tab of the System Configuration dialog box to perform the following advanced TTS configuration:

- Set the maximum number of sessions to be allowed at one time
- Add multiple languages and voices

For more information, see Text-to-Speech Engines for the IC Platform Technical Reference in the CIC Documentation Library.

Default TTS Provider

When CIC receives a TTS request, it must select which TTS technology to use to complete the request. The Default TTS Provider field indicates which TTS technology to use when a TTS request does not indicate a specific TTS technology. The options are:

- SAPI: This is a Windows-only API.
- MRCP: This is a standardized TTS protocol. Many third-party TTS vendors support only MRCP.
- Media Server: This is CIC's proprietary Text-to-Speech engine. This option is available only if you have installed a license for it.

Concurrent Session Limit
Enter the maximum number of concurrent sessions to attempt. This limit is either a license-enforced limit or a load-enforced limit. TTS will not attempt to create more sessions than what is defined here. Additional requests will fail and an event log entry will be logged.

**Concurrent Session Warning Level**

Enter the maximum concurrent sessions. When this threshold is exceeded an event log entry will be created. Use this warning level to see when you are getting close to exceeding your license limit so you can plan ahead.

**Number of Sessions Currently in Use**

This is the number of TTS sessions currently in use in the CIC system.

**Volume Control (0 - 100)**

Use the up and down arrow keys to set the volume level for the voice resource. The default value for this field is 100 decibels.

**Voices**

You can choose to write custom applications for multiple languages and voices by creating a voice name parameter for each voice and then making the necessary handler modifications using these voice name parameters.

Click **Add** to add voice resources. Enter the voice name and the registry path. Select the Language from the pull-down list.

For example, you may define "Mary" as the name, "HKEY_LOCAL_MACHINE\Software\Microsoft\Speech\Voices\Tokens\MSMary" as the path, and "English (United States) as the language. Once defined, you can then just pass "Mary" to the TTS defined tool.

There is no limit to the number of voices to add. By default, the system refreshes every 5 seconds.

Click **Edit** to change existing voice resources or **Delete** to remove them.

**Notes:** Only configured voices on the IC server are listed. Each language can only be associated with one voice. Voice configuration settings in this dialog will override the voice configuration settings in the Windows Control Panel Speech applet.

**Display Name Format**

Use this page to configure the way names are displayed in the system. Select one of three options:
• **FirstName MiddleNameOrInitial Last Name**
  For example, Sonya M Mullins
• **LastName, FirstName, MiddleNameOrInitial**
  For example, Mullins, Sonya, M
• **LastNameFirstName**
  For example, MullinsSonya

**Set Asian Names to “LastNameFirstName”**

Use this option to set LastNameFirstName as the default format if an Oriental name is detected.

**Example**

This section displays an example based on the format chosen above.

**Languages**

For sites that support multiple languages (such as English, French, Spanish, etc.), the handlers that play prompts can select which language *(and time zones will be available in a future release)* to use when playing these prompts. Use this page to define the languages available at a site and to specify the default language. Use the prompt editor to record prompts in different languages.

**Include User’s Time Zone in Announcements** *(available in a future release)*

Select this check box to include the user's time zone information in announcements. For example, you may want to include "..10:00 AM savings daylight time...". By default, this option is not enabled.

**Languages**

Click the **Add** button to define a new language for this site.

To remove a language from this site, select a language name and click the **Delete** button.

**Note:** Languages available depend on the language installed by the add-on language pack install. For non-supported language prompts, you can create a language prompt set as prompt handlers, and add the language to IC using the option in this dialog box.

**Default Language**

The languages defined in the Languages box appear in this list box. Select the default language used in all system prompts. In addition, the GetLanguage handler uses this Default Language value if the "Language" attribute is not set on a call.
Notes: If you install a non-English language pack and require call analysis for that language, you must set the Call Analysis Language server parameter on the Interaction Center server. For more information, see “Specify Interaction Media Server call analysis language model” in Interaction Media Server Technical Reference in the CIC Documentation Library.

For more information about the GetLanguage handler and the Play Prompt tool, see Reference (Tools and more) > Tools > Telephony in the Interaction Designer Help.

Mailboxes

Select the default email account (or distribution list) for each of the following roles in CIC message distribution. Handlers can send email to these designated accounts by specifying the Directory Services (DS) attributes for each recipient. See the Mailboxes Configuration online Help for details on how to select a mailbox if you don't know its name.

Note: The actual IC Administrator mailbox should not be used in these fields, as it could result in the administrator's mailbox receiving excessive mail. On your email server, you might create an account and mailbox (that the IC Administrator can log on to and check periodically) to be used in these fields.

Voice Mail Recipient

Select the mailbox account to receive voicemail when the intended recipient is not known or cannot be reached. This prevents voicemail from getting lost because an incorrect or ambiguous email address was used. The DS attribute for this account is: Default Voice Mail Recipient, found in the $CONFIGPATH\Configuration registry key.

Fax Recipient

Select the Mailbox account (or distribution list) to use to receive faxes when they arrive. This account must be a group or individual who is entrusted with the responsibility of reading the cover page on each fax and then forwarding it to the intended recipients. The DS attribute for this account is: Default Fax Recipient, which is found in the $CONFIGPATH\Configuration registry key.

IC Administrator

Select the mailbox account to receive email if a handler needs to report an event. You can customize handlers to send an email notification for any event to the mailbox you select. For example, you could create an email account and mailbox named ICMail, and the CIC administrator could check it periodically for email.
The DS attribute for this account is: **IC Administrator Recipient**, found in the $CONFIGPATH\Configuration registry key.

**Voice Mail TUI XML File**

This setting supports the migration of Voicemail TUI definitions from handlers to XML.

**Default**

By default this option is selected and the standard Voicemail TUI XML file is used that is shipped with CIC. The XML file (and other related files) is stored in a standard directory location (defined by the [Resources Path server parameter](#)) which is populated during installation.

**Custom**

Select this option to create a custom Voicemail TUI XML file. Click the Browse button to browse to the custom XML file location.

<

**Host Server**

The optionally licensed host tools and host server executable provide an interface between CIC and data stored on mainframe or AS400 computers. CIC's host server subsystem supports a specific number of concurrent connections to the host computer, based on the number of licenses purchased.

**Note:** Contact your authorized reseller or Interactive Intelligence, Inc. to purchase a CIC license key for host access tools.

**Maximum number of concurrent sessions:**

Enter a number that corresponds to the maximum number of threads you want CIC’s host server (HostServerU.exe) to support at one time. The largest number you can enter is equal to the number of concurrent session licenses you purchased from Interactive Intelligence, Inc. For example, if you purchased 24 concurrent session licenses for host computer connections, you could set this field to 24, or any number less than 24 if you wanted to restrict the maximum number of concurrent sessions allowed. Licenses are sold in bundles of 10, 24, and 50.

**Host Tools Path:**

By default the Host Tools Path is {SERVER PATH}\HostTools. Use this field if you need to change the default path to a local path. The path you enter here overrides the default path.

**See Also**
**Trace Logs**

Use this tab to configure the behavior of trace logs.

**Log File Compression**

Select this option for the CIC system to compress the prior day's log files at the specified time. This option is turned on by default.

**Log File Compression Time**

Enter the time for the log file compression to start. This option is grayed out unless **Log File Compression is checked** (and enabled). The default time is 12:40 a.m.

**CPU Usage**

Select the type of compression to use. The faster the compression the higher the CPU usage. The options are:

- High (Fastest Compression)
- Medium (Fast Compression)
- Low (slow compression)
- Very Low (very slow compression)

**Disable Logging when there is less than...**

Enter the amount of free space remaining in MB that when reached, will disable logging. The default value is 100 MB.

**Re-enable Logging when there is more than...**

Enter the amount of free space remaining in MB, that when reached, will re-enable logging. This option is only used if logging has been disabled. The default value is 200 MB.

**Note:** By default, CIC retains logs for 8 days.

**Site Information**

Enter site information that Interaction Tracker and other CIC components require.
Interaction Tracker uses the information to create user Organization and Location records during the CIC user import. Tracker uses the records to link interactions to CIC users.

**Organization Name**

Enter the name of your company, for example, "Acme Corporation" or "Acme". The default is OrganizationName.

In a Multi-Site environment, the name should be the same for each site.

**Location Name**

(Optional) Enter an identifier for physical location, for example, "Indianapolis" or "HQ" or "2nd Floor". The location should generally reflect a mailing address.

If you configured for Multi-Site during installation the Site ID is set. You can change this if it does not suit the location scheme for your customer site. (Note that Site ID is not related to physical location.)

*Note*: There are no requirements for how to name a location. Choose the scheme that works best for your customer site.

**ACD Options**

Use this page to configure ACD options at the CIC system configuration level.

**Reset Available Time on ACD Available state change**

Enable this check box to reset agents' time when they change their status from a non-ACD Available state to an ACD Available state. By default this option is disabled.

**Reset Available Time on Logon**

Enable this check box to reset agents' time when they log in to a CIC client. By default this option is disabled.

**Maintain ACD Skills on transfer**

Enable this check box to maintain ACD skills when a call is transferred to a different workgroup or user. By default this option is disabled.

**Interaction Client**

Use this tab to configure which user records a user sees in the CIC clients.
Company Directory and Transfer Dialog Users' Visibility

To ensure that the user sees only members of the workgroups that the user can view or modify, select **Restrict User's Visibility**. If this option is not selected, the user can see all user records.

**Notes:** Whether a user can view or modify a workgroup depends on **access rights**. Interaction Client Web Edition displays only the Company Directory.

---

Update Service

To streamline the configuration of Interactive Update local provider information on CIC client machines, complete the fields on this page. If you do not complete the fields on this page, then you will need to manually configure the local provider on each of your client machines, either during the installation process, through the configuration file, or through Interactive Update.

For complete information on Interactive Update, see the *Interactive Update Technical Reference* in the CIC Documentation Library.

**Important:** In order for this feature to work, IC server, Interactive Update, and the client applications on client machines must all be on 2016 R2 or later versions.

**Update Service Available**

Select this check box to enable Interactive Update to receive the information you specify on this page. Then complete the additional fields in the **Update Service URI** group.

If you deselect this check box, you must manually configure each of your CIC clients.

**Auto-configured**

Interactive Administrator automatically detects the preferred local provider URI for you. If the displayed URI is correct, you do not need to specify a different URI in the **Override** box.

**Notes:**

Depending on your network topology, the auto-configured URI may work from server machines but not from client machines. To provide a different override URI that can be reached from all machines, specify the accessible URI in the **Override** box.

Do not specify a remote provider in this box.
If you multiple local providers, specify only one of them here. All local providers share the same database and the data is managed appropriately.

**Override**

If you want to manually configure the local provider URI that your client machines will use, type its URI here.

**Note:** Be sure to specify a URI that your CIC client machines can reach.

**Administrative Alerts**

If CIC detects that a message delivery failed, CIC contacts the administrator via an email message and a phone message. The message contains the error generated by the system.

Use this page to activate or deactivate the administrative alerts and to configure the email address and phone number that CIC uses to notify the administrator.

**Enable Administrative Alerts**

Use this check box to activate or deactivate administrative alerts.

**Phone Number**

Type the phone number for the system to send the phone alert message.

**Email Address**

Type the email address for the system to send an email alert message.

**Interaction Processor**

Handlers

**Handler Configuration**

Handlers published to the IC server from Interaction Designer appear in the comprehensive list of available handlers under Handler Names. To move a handler from being available (present) on the server to being activated to run on the server, see the Handlers and Monitor Handlers property pages in the Server Configuration dialog box.

**File Name**

Handlers published to the default location are stored in Java class files. In general, you should never need to change the handler’s Java class file name unless instructed by qualified technical support personnel. Each time a handler is published, Interaction Designer appends a new date
Configuring Handlers

It is possible you will never have to change the following default settings for Handlers. If you get any of the messages stated below, we suggest you contact your Interactive Intelligence support representative before changing any of the values.

Maximum Number of Concurrent Handlers

This number determines the maximum number of handlers that can run concurrently. The default, 0, means there is no limit to the number of concurrent Handlers.

If there is a value in this box, and a message appears in the event log stating the Handler has reached its concurrent limit and additional requests to run this handler will be queued up, you can increase the limit. Again, we suggest you contact Customer Support before changing this value.

Note: This limit applies only to first-level handler calls. Handlers called from within another handler via the "Subroutine" initiator are not subject to concurrent handler limits. This is a safety mechanism to ensure that ongoing handler operations do not stall when calling a subroutine due to handler concurrency limits.

Maximum Number of Handlers Queued

When the maximum number of concurrent Handlers is reached, this field indicates how many handler requests can be queued until a slot becomes available.

If the Maximum Number of Concurrent Handlers is set to the default, the Maximum Number of Handlers Queued field is gray, and not available. When it is not available, a large allowable maximum value has been pre-set.

This box becomes available when you put a value in the Maximum Number of Concurrent Handlers box. If you get a message in the event log stating the Handler has exceeded its maximum queue limit and request to run this handler will be discarded, you can increase the limit in this box. Type a number in the box, or if you select No Limit, a -1 appears in the box. Again, we suggest you contact Customer Support before changing this value.

Handler Priority

You can select Low, Normal, or High. The default setting is Normal.

Step Limit
You might need to increase the step limit if you get a message in the error log stating the Handler has exceeded its step limit. If the Handler should not have exceeded this step limit, there may be an infinite loop in the Handler. The default, 0, has a value of 10,000. If you click **No Limit**, a -1 appears in the box. Again, we suggest you contact Customer Support before changing this value.

### Initialization Functions

**Initialization Function Name**

Type the name of an initialization function. Use a meaningful and unique name.

**Initialization Function Configuration**

Type the initialization function's name and the name of the DLL containing the function. Select the **Active** check box to make it available to the Interaction Processor.

**Warning:** Do not modify or remove the default CIC initialization functions or the system might not work.

### Introduction to Table Editor

Interaction Administrator and Interaction Designer (through the Table Lookup tool) both provide access to a table editor that allows you to create simple, indexed, in-memory databases for fast lookups during CIC interaction processing. The tables are stored on the IC server and reside in Virtual Memory (VM) while IC is running. These tables are read-only in the current release.

The Table Editor portrays the table as a set of rows and columns much like a spreadsheet or relational database. You can easily add columns and rows using the toolbar buttons or menu commands. To edit a cell, double-click on it or use one of the keyboard shortcuts. All cell editing is done in place (within each cell). The editor supports multi-level undo and redo operations. When you click on the Save button, CIC re-reads the table into memory and the table values are immediately available for access.

Each column has a label and an index. The label is used to identify each column, and indexed column labels appear in the list of "Columns for Lookup" in the Table Lookup tool in Interaction Designer. Indexes define columns you search quickly for specific values. If a column does not have an index, you cannot use that column as a search key.

Each table is a stand-alone entity. Tables do not obey typical relational operations such as joins and views. Tables are stored on and referenced from the IC server. Each table and column in that
table has a globally unique identifier, a GUID, which uniquely defines each table and each column.

In order to perform a lookup on a table, at least one column in the table must have an index. Table Editor supports two kinds of indexes:

**Unique** - each entry in the column is unique (for example, account number) and it cannot contain duplicate values. Table Editor warns you if it finds duplicates. Lookups on unique index columns are faster than on columns with duplicate values.

**Multiple** - each entry in the column may have one or more occurrences of that value in the column (for example, account type, date, and so on). Lookups on multiple value indexes are slower than on columns with unique indexes.

**What is the difference between an .i3Table and a .i3TableEX file?**

Normally, table data is stored in 2 locations: (1) The column information is stored in the registry; and (2) the data is stored in the .i3Table file. You shouldn't care about these storage structures, they are internal and could change at any time. CIC keeps data in the registry to make lookups/browsing of the different table types quicker.

When you export a table to the .i3TableEx file, it contains the columns found in the registry (1) plus the table data (2). A complete stand-alone 'table'.

CIC stores the data in .i3Table internal format because it may be too big to fit in the registry. We envision large tables may be stored.

**Note:** For the best performance, tables should contain no more than 2,000 records. Also note that table lookups are case sensitive.

### Phone Numbers

#### Old Dial Plans

**Import a dial plan**

You can import an entire CIC phone number plan that was saved (with the Export button) by any IC server. Exported CIC phone number files have a .i3dplan extension and include all of the input conversion objects, dial plan objects, and classification names.

**To import a dial plan**

1. In the System Configuration container, click the Phone Numbers subcontainer.
2. In the list view, double-click Configuration.
3. In the Phone Number Configuration dialog box, on the Regional Dial Plan tab, click Dial Plan.
4. Click Import.
5. Click Browse button to select a .i3dplan file, and then click Next.
6. Click **Next** to navigate through the dialog boxes that display the contents of the dial plan file.
7. When you are presented with import options (replace or skip the merge), select the appropriate check boxes and then click **Next**.
8. Review the changes and then click **Finish**.
9. When the message appears that indicates that you have not yet saved your changes, click **OK**. You save your changes when you click **OK** on the **Regional Dial Plan** dialog box.

**Related topics**

Configure a regional dial plan in Interaction Administrator

Export a dial plan

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**Configure an old dial plan**

**To configure an old dial plan**

1. In the **System Configuration** container, click the **Phone Numbers** subcontainer.
2. In the list view, double-click **Configuration**.
3. In the **Phone Number Configuration** dialog box, on the **Old Dial Plan** tab, click **Dial Plan**.
4. Complete the tabs in the dialog box. For more information, click the links under **Related topics**.

**Related topics**

Overview of input conversion

Configure input conversion

Configure dial plan objects

Simulate a call

---

**Overview of input conversion objects**

When you configure an old dial plan, you can create and modify the objects in the input conversion table. CIC uses the objects in this table to find a match between the raw dialed input (however it was initiated) and the input pattern. If it finds a match, the input is converted into a standardized output pattern. This output pattern number is then used as input in the dial plan
table. If you are unfamiliar with the syntax for specifying input patterns and the output pattern format, see IC Dial Plan, in the CIC Documentation Library.

Related topics

Configure input conversion objects

To configure input conversion objects

1. In the System Configuration container, click the Phone Numbers subcontainer.
2. In the list view, double-click Configuration.
3. In the Phone Number Configuration dialog box, on the Old Dial Plan tab, click Dial Plan.
4. On the Input Conversion tab, configure input conversion object names. Each input conversion object name represents an input pattern and an output pattern pair. The order in which the input conversion object names appear determines the order in which CIC searches for a match between the dialed input and one of the input patterns. Complete the following steps as necessary.
   - To add a new input conversion object, click Add. Type a name in the Entry Name dialog box and then click OK. Then select the object and click Up or Down until the object is in the appropriate position in the list.
   - To create a new object that is similar to an existing object, click an object in the list and then click Copy. Type a name in the Entry Name dialog box and then click OK. Modify the Input Pattern and Output Pattern fields as necessary.
   - To rename an object, select the object and click Rename. Type the new name in the Entry Name dialog box and then click OK.
   - To delete an object, select it and then click Remove.
   - To create a group of similar input conversion objects that map to a group of similar dial plan objects, click Add Many. For example, you can specify a list of exchanges included in local, toll-free dialing. You can enter (or import) the list of exchanges once and create a rule that substitutes these exchanges into the input conversion object and the dial plan object. For more information, see Add Many Input Object Configuration.
   - To export all phone number objects (input conversion, dial plan, classification names, and many input pattern objects) to a file, click Export. The file has the extension .i3pnum (for example, PhoneNumbers.i3pnum). This is a good way to
preserve your entire dial plan data, or to transfer this data to another IC server where you can import it into the local phone number configuration.

- To import an .i3pnum file into IC, click **Import**. This import operation detects new objects (for example, new dial plan objects, new classifications, etc.) and adds them to the existing phone numbers. It also merges identically named objects by replacing them. If any of the imported objects depend on line groups that are not defined in the current system, CIC warns you about this. You must create the expected line groups or modify the dial plan entries to be able to use these imported numbers.

5. In the **Input Pattern** field, enter a string of literal numbers, variables, or both. CIC tries to match the dialed input with this pattern. If it does not find a match with any of the defined input patterns, it passes the number through to the Dial Plan table unchanged.

To create an input pattern, you must be familiar with wildcard pattern syntax. If the following tables and the input assistance prompts (->) do not provide enough detail to help you understand how to use the pattern syntax, see *IC Dial Plan*, in the *Technical Reference Documents* section of the CIC Documentation Library on the IC server.

The input assistance prompt displays a drop-down menu containing the special input characters allowed in the **Input Pattern** field, as well as some commonly used input patterns, which you can select and modify if necessary.

<table>
<thead>
<tr>
<th>Input Patterns</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NxxXXXXXZ</td>
<td>Local toll free calls</td>
</tr>
<tr>
<td>NxxNxxXXXXXZ</td>
<td>Long distance toll calls</td>
</tr>
<tr>
<td>1NxxNxxxxxxxZ</td>
<td>Direct-dial long distance toll calls</td>
</tr>
<tr>
<td>011+Z</td>
<td>Any international number dialed from input containing '+'</td>
</tr>
<tr>
<td>011Z</td>
<td>Any international number without a '+' sign</td>
</tr>
</tbody>
</table>
The most commonly used wildcard characters are:

<table>
<thead>
<tr>
<th>Characters</th>
<th>Variables (wildcards)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 9</td>
<td>‘X’ (or ‘x’) represents a single digit character in that range</td>
</tr>
<tr>
<td>1 - 9</td>
<td>‘Y’ (or ‘y’) represents a single digit character in that range</td>
</tr>
<tr>
<td>2 - 9</td>
<td>‘N’ (or ‘n’) represents a single digit character in that range</td>
</tr>
<tr>
<td>‘0’ - ‘9’, ‘#’, ‘*, ’, ’ ’</td>
<td>‘?’ represents zero or more of these characters. (Note that ‘/’, ‘@’, and ‘+’ are not included).</td>
</tr>
<tr>
<td>Any characters after the required digits</td>
<td>‘Z’ (or ‘z’) represents zero or more trailing characters of any value. Using Z allows the dialer to enter extra characters after the required digits without interfering with the dial string. This wildcard character must be the last character of the pattern; it is an error for it to appear anywhere else (which means there can be only one occurrence of this character in each number).</td>
</tr>
</tbody>
</table>

Phone number templates can consist of all digits, all wildcard characters, some non-dialing characters such as ‘+’, ‘@’, and ‘/’, or any combination of these characters. The ‘/’ character is generally used as a prefix to introduce an extension for direct extension dialing. The ‘@’ character is used as a prefix before an extension, but that extension is not automatically dialed (that is, it is stored as informational data with the number). The ‘+’ is used as a prefix to introduce a country code. These three characters are not actually dialed, but they are preserved as part of the stored phone number. The spaces these characters hold within the number are counted when determining ordinal positions in the formatted number (that is, which number is in the first position, second position, and so on).

6. In the Output Pattern field, enter numbers that represent the unknown dialed digits. To do this, click the button on the right side of Output Pattern field. Select characters from the list of ordinal numbers that appears in the list.

You can enter numbers in two different ways: 1) using the input pattern (that is, wildcard) characters, or 2) using the ordinal positions of wildcard characters (or any characters) in the number. The ordinal positions of characters in the standardized phone number patterns are represented by: (1), (2), (3), and so on. (Ordinal numbers identify the position or order in a sequence, such as 1st, 2nd, 3rd, and so on.)

To illustrate this, consider a pair of input pattern and output pattern templates for local phone numbers.

<table>
<thead>
<tr>
<th>Local Number Input Pattern</th>
<th>Output Pattern--Wildcard List</th>
<th>Output Pattern--Ordinal List</th>
</tr>
</thead>
</table>
Both the wildcard list style (middle column) and the ordinal list style (right column) of the output pattern represent the dialed local number in the same way. To IC, the numbers are interchangeable.

The list to the right of the **Output Pattern** field provides an easy way to specify the ordinal numbers for the input pattern above.

| (5|6|7|8|9|10|11|12)               |
|-------------------------|
| (Selected Digits from Input Pattern) |
| @                        |
| Z                        |
| +                        |
| X                        |
| Y                        |
| N                        |
| NxxNxxNxxZ                |
| NxxNxxNxxNxxZ             |
| 1NxxNxxNxxNxxZ            |

7. In the **Conversion Description** field, explain the purpose of the object. This helps to distinguish the object from similar objects in the table.

8. Click **OK**.

**Related topics**

- Configure an old dial plan
- Overview of input conversion objects
- Add Many Input Object Configuration

---

**Configure dial plan objects**

To configure dial plan objects

1. In the **System Configuration** container, click the **Phone Numbers** subcontainer.
2. In the list view, double-click **Configuration**.
3. In the **Phone Number Configuration** dialog box, on the **Old Dial Plan** tab, click **Dial Plan**.
4. On the **Dial Plan** tab, configure dial plan objects.
   - To add a new dial plan object, click **Add**. Type a name in the **Entry Name** dialog box and then click **OK**. Then select the object and click **Up or Down** until the object is in the appropriate position in the list. This list controls the order in which
CIC searches the input pattern list (from top to bottom), based on the order of the names.

**Notes:** This order is critical to the dial plan processing stage of dialing.

The packaged dial plan objects that come with CIC serve as a good example of the kinds of names and the kind of order you may want to use in your own dial plan.

- To create a new object that is similar to an existing object, click an object in the list and then click **Copy**. Type a name in the **Entry Name** dialog box and then click **OK**. Modify the **Dial Plan Object** fields as necessary.
- To rename an object, select the object and click **Rename**. Type the new name in the **Entry Name** dialog box and then click **OK**.
- To delete an object, select it and then click **Remove**.

5. Complete the **Input Pattern** field. Phone numbers in the **Input Pattern** box on the **Dial Plan** tab are formatted exactly like the numbers in the **Output Pattern** field on the **Input Conversion** tab. This is because the phone number input for dial plan processing is already in a standardized format (in the **Output Pattern** field) based on the results of the input conversion step. However, the input patterns used on the **Dial Plan** tab are not limited to, nor are they necessarily the same as the output pattern used on the **Input Conversion** tab, but they can be identical if necessary. This input pattern table is the key to successfully managing your dial plans.

For example, within the 317 area code, there are long distance exchanges and local exchanges. Depending on your location within the area, there may be just a few local exchanges and many long distance exchanges. In that case, it would be more efficient for you to create an Input Pattern list that includes a pattern for each local exchange and a single general pattern to match all long distance calls within the area. In other locations, the opposite approach may be more efficient.

The **Input Pattern** field displays a list of the special input characters that are allowed in the **Input Pattern** field. It also displays some commonly used input patterns, which you can select and modify if necessary.
The commonly used patterns in the list represent the following types of phone numbers (in the NANP):

<table>
<thead>
<tr>
<th>Input Patterns</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NxxXXXXZ</td>
<td>Local toll free calls</td>
</tr>
<tr>
<td>NxxNxxXXXXZ</td>
<td>Long distance toll calls</td>
</tr>
<tr>
<td>1NxxNxxXXXXZ</td>
<td>Direct-dial long distance toll calls</td>
</tr>
<tr>
<td>011+Z</td>
<td>Any international number dialed from input containing '+'</td>
</tr>
<tr>
<td>011Z</td>
<td>Any international number without a '+' sign</td>
</tr>
</tbody>
</table>

The following **Characters** are represented by these **Variables**:  

<table>
<thead>
<tr>
<th>Characters</th>
<th>Variables (wildcards)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 9</td>
<td>'X' (or 'x') represents a single digit character in that range</td>
</tr>
<tr>
<td>1 - 9</td>
<td>'Y' (or 'y') represents a single digit character in that range</td>
</tr>
<tr>
<td>2 - 9</td>
<td>'N' (or 'n') represents a single digit character in that range</td>
</tr>
<tr>
<td>'0' - '9', '#', '*', ','</td>
<td>'?' represents zero or more of these characters. (Note that '/', '@', and '+' are not included).</td>
</tr>
<tr>
<td>Any characters after the required digits</td>
<td>'Z' (or 'z') represents zero or more trailing characters of any value. Using Z allows the dialer to enter extra characters after the required digits without interfering with the dial string. This wildcard character must be the last character of the pattern; it is an error for it to appear anywhere else (which means there can be only one occurrence of this character in each number).</td>
</tr>
</tbody>
</table>

To specify the ordinal numbers for the input pattern above:
• Select the characters in the **Input Pattern** field you want to convert to ordinal numbers.

• Click the button on the right side of the **Default Dial String** or **Display String** field.

The following list appears.

<table>
<thead>
<tr>
<th>{5}{6}{7}{8}{9}{10}{11}{12}</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Selected Digits from Input Pattern)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>@</th>
<th>Z</th>
<th>+</th>
<th>X</th>
<th>Y</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>NsxxxxxxZ</td>
<td>NsNxxxxxxZ</td>
<td>1NsNxxxxxxZ</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

• Select from the list of ordinal numbers.

6. In the **Standardized Number** field, enter the standard format for all phone numbers. This information is used by applications that perform reverse white pages lookups.

7. In the **Default Dial String** field, enter the actual string of characters sent to the CO to place a call. You can specify the dial string based on the dialing requirements the CO may have on your lines. For example, some areas may require you to dial the local area code, even for non-toll local calls. In the **Default Dial String** field, you can add the local area code as a prefix to all local calls, so that CIC users do not need to dial the local area code. As another example, some trunks may require you to dial a '1' or a '9' prefix before certain numbers, or perhaps you need to add a long distance prefix to specify a long distance carrier (for example, 1010550). You can add any prefix (or suffix) to any type of phone number using the **Default Dial String** field. Users do not need to dial the numbers you include as a prefix in the **Default Dial String** field.

The dial string variable uses the same standardized format syntax described in the **Input Pattern** section on the **Input Conversion** tab. You can use either the wildcard character syntax or the ordinal number. However, if you use the wildcard characters, pay attention to the two conditions where you might have to use the ordinal number syntax in this field, and the potential efficiency of ordinal numbers over wildcard characters. For more information about syntax, see *Ordinal or Wildcard Syntax* or *Dial Plan Phone Numbers* in the CIC Documentation Library on the IC server.

**Note:** Even though the '+', '/ ', and ' ^ ' symbols are not dialable characters, you can include them in a dial string entry if you want to. IC ignores the '+' character when dialing. The '/' precedes digits to dial (for example, an extension) after the main number connects. The ' ^ ' indicates numbers stored with the main number (for example, an extension), but are not dialed.

If you use '/' and '^' together (in either order), IC knows to dial the extension. If you use '^' by itself as a prefix for an extension, IC does not dial the extension.
8. In the **Display String** field, enter the formatted phone number that appears to users when the user is not allowed to edit the phone number before the call is placed. You can control the numbers displayed to end users by the template you use in the **Display String** field. For example, if the standardized form of the number includes a special long distance carrier prefix (for example, 1010550), you can drop that part from the phone number you display to CIC client users.

The display string variable uses the standardized format syntax. You can use either the wildcard character syntax or the ordinal number. However, if you use the wildcard characters, pay attention to the two conditions where you might have to use the ordinal number syntax in this field, and the potential efficiency of ordinal numbers over wildcard characters. For more information about syntax, see *Ordinal or Wildcard Syntax* or *Dial Plan Phone Numbers* in the CIC Documentation Library on the IC server.

9. In the **Default Classification** list, select the descriptive name for the group of phone numbers. Phone number classifications allow you to control the kinds of phone numbers each user, workgroup, or station can dial. You assign dialing privileges by selecting access control rights for workgroups, roles, or stations.

You must select a classification name for each dial plan object. For more information on how to add new classifications, see *Manage dial plan classifications*.

10. In the **Components** box, specify the different parts of a phone number in each dial plan entry that need to be tracked in the report logs (such as area code, long distance prefix, country code, and so on). These components are used for tracking different parts of the phone number in the reporting databases.

    **Note:** If you create new dial plan objects for the Local and Long Distance categories, you must copy the content of the default Components field (such as the ReportingCode1 and ReportingCode2 components) and paste them into your components field. Failure to do this may result in incomplete call data in your reports.

    The default dial plan objects in the Local and Long Distance classifications created during installation contain two components: ReportingCode1 and ReportingCode2. These components represent the digits in the ordinal positions indicated by the ordinal number syntax in the field. For example, the syntax for the first entry is:

    ReportingCode1:{3}{4}{5};

    The part before the colon is the name or label for this component ("ReportingCode1"). The ordinal numbers after the component refer to the 3rd, 4th, and 5th digits in the current dial plan object. In the case of a Local or Long Distance classified number in the NANP, these digits always refer to the area code. The semicolon at the end is simply a separator between components.

    In another example, the syntax for the second component in the Components field is:

    ReportingCode2:{6}{7}{8}
Again, the part before the colon is the component name ("ReportingCode2"). The ordinal numbers after the component refer to the 6th, 7th, and 8th digits in the current dial plan object. In the case of a Local or Long Distance classified number in the NANP, these digits always refer to the local exchange.

If these same digits refer to a different part of the phone number in another location (such as city code, prefecture code, etc.), you can keep these components as they are and they will work for your location. If you need to track other parts of the phone number, you must:

- Create new components in the Components box.
- Customize the CallDisconnectMonitor handler to add the new components to one of the extra columns in the Call Detail report log.
- Modify or add a new column in a Crystal Report template that is based on the Call Detail report log.

11. In the Description box, document the purpose, along with any details, of each dial plan entry. This information will be valuable to other CIC administrators, especially if you have more than one administrator managing IC or more than one person editing the dial plan configuration.

12. To use account codes, select the Account Code Verification option. After you select this option, you can track that call type with a verified account code that the user provides for the outbound call. You can use this feature to track call types for billing purposes.

**Note:** You should not apply Account Code Verification to the 911 and Intercom Dial Plan Objects.

13. Configure dial groups for the object. Dial groups enable you to specify which outbound lines or channels to use for each type (classification) of phone number. For example, international calls may be directed to one dial group that uses lines with the best rate for international calls. Local calls may be directed to another dial group called "Local" over low-cost analog lines from the local CO. If you do not specify a dial group for a dial plan entry, calls placed via that dial plan object use the first available line with a direction of Outbound or Both.

**Note:** All of the lines or channels in a dial group must have identical dialing requirements. For example, in a dial group, you cannot have some lines that require a 9 prefix and other lines that do not.

Do the following, as necessary:

- To add a dial group, click Add Group. Select the dial group and then click OK. If there are no dial groups, create them in the Line Groups container.
- To edit a dial group, select it and then click Edit.
- To remove a dial group, select it and then click Remove.
- To add a secondary dial group to an existing dial group entry, select the dial group and then click Add Group.
Overview of phone number classifications

Phone numbers that can be identified by a pattern in the numbers, or an explicit group of phone numbers with a common purpose are called phone number classifications. For example, internal calls could be identified by the "Internal" classification, toll free (for example, 800 numbers) could be identified by the "Toll Free" classification, and calls to emergency services (such as 911, fire department, police, and hospital) could be identified by the "Emergency" classification.

These named groups of phone numbers are used to control individual users, workgroups, and station dialing privileges in CIC. For example, stand-alone phones may have only Emergency and Internal dialing privileges, while members of the Sales workgroup may have full dialing privileges provided in all classifications.

When CIC users dial a phone number, CIC matches the number dialed with the appropriate classification pattern. It then checks the user's dialing privileges to determine if the user or station is authorized to place the call. In this way, CIC uses phone number classifications to control individual users, workgroups, roles, and station dialing privileges.

You also use classifications to configure forced authorization codes. Administrators set forced authorization codes to require users to enter an extension and a password to make a call.

You create a list of classifications on the **Classifications** dialog box in the **Phone Number Configuration** dialog box. To create the number pattern for the classification, use the **Dial Plan** dialog box.

For more information about phone numbers see the *IC Dial Plan* in the CIC Documentation Library.
Manage phone number classifications

To manage phone number classifications

1. In the **System Configuration** container, click the **Phone Numbers** subcontainer.
2. In the list view, double-click **Configuration**.
3. In the **Phone Number Configuration** dialog box, on the **Old Dial Plan** tab or on the **Regional Dial Plan** tab, click **Manage Classifications**.
4. In the **Dial Plan Classifications** dialog box, do one of the following:
   - To add a classification, click **Add**. Type the name of the classification (for example, "900 Service" or "International"), and then click **OK**. Then continue with the next step.
   - To edit a classification, select it and then click **Edit**. Then continue with the next step.
   - To delete a classification, select it and then click **Remove**.
5. In the **Classification** dialog box, the name of the classification appears in the **Display Text** field. You can change this if necessary.
6. In the **Category** list, select the appropriate category.
7. In the **Alerting** section, select the **Send email and client alerts for calls of this classification** check box, and enter the users to receive the alerts in the **To...** field. You can also click the **To...** button and select the available users from the list that is displayed. Alerting sends an email notification and displays a popup notification in the CIC clients, to the specified users and/or workgroups when a call is made with this classification.
8. As necessary, complete the **Multi-Language Support** tab. For more information, see **Multi-Language Support**.
9. Click **OK**.

**Related topics**

[Configure an old dial plan](#)

[Overview of phone number classifications](#)

[Set up an emergency classification](#)

**Simulate a call**

This property page enables you to test your dial plan configuration by entering real phone numbers in any format you can imagine. Since users may enter phone numbers in a variety of ways (with or without a leading 1, with or without a local area code, etc.), you can test different kinds of input without actually placing a live call to different numbers. This page just simulates calls as if they were dialed from a CIC station; it does not actually place calls to the dialed numbers.
To simulate a call

1. In the **System Configuration** container, click the **Phone Numbers** subcontainer.
2. In the list view, double-click **Configuration**.
3. In the **Phone Number Configuration** dialog box, click **Simulate Call**. This button appears in the following places:
   - On the **Old Dial Plan** tab
   - On the **Simulate Call** tab in the **Old Dial Plan** dialog box
4. Under **Call Input**, in the **Number** field, enter a phone number. You can type letters or digits.
5. Click **Simulate Call**.
   CIC passes your number input through the input conversion objects and dial plan objects you created. The **Call Results** fields display the results.

If you applied the account code verification feature properly to a dial plan object, the box is checked here for information purposes only. You can track that call type by using a verified account code that the user provides for the outbound call. Use this feature to track call types for billing purposes. You should **not** apply account code verification to the **911** and **Intercom** dial plan objects.

The most important results you might look at first are in the three-column list box at the bottom of the **Call Results** group. This box shows which dial group (if any) the call would go out on, the phone number classification for which users would need access rights to dial, and the actual dial string - the number CIC sends to the CO when dialing.

The other call results fields indicate which entries in the **Input Conversion** dialog box and the **Dial Plan** dialog box the input matched.

If you manage to enter a number that does not match any of the standard input conversion objects or dial plan objects, the unknown classification will appear in the three-column list box, and the other call results fields will display the raw number you entered. This indicates that you do not have an Input Conversion object to match this input and the program could not convert the number into an output pattern to process in the dial plan.

**Tip:** To see where each classification is used, go to the **Classifications** dialog box and select **Usage**.

**Related topics**

[Configure an old dial plan](#)
Activate a dial plan

Note: Only one dial plan format (Old Dial Plan or Regional Dial Plan) can be active. CIC uses the active dial plan to perform dial plan lookups and make calls. If necessary, you can modify an inactive dial plan and test it by simulating calls.

To activate a dial plan

1. In the System Configuration container, click the Phone Numbers subcontainer.
2. In the list view, double-click Configuration.
3. In the Phone Number Configuration dialog box, on the Old Dial Plan tab or the Regional Dial Plan tab, click Advanced.
4. Under Active Dial Plan, select the dial plan that you want to activate.
5. Click OK.

Related topics

Overview of old dial plans

Configure a regional dial plan in Interaction Administrator

Select which dial plan to view

If you have both an old dial plan and a regional dial plan, you can select which one to view in the Phone Numbers container.

Note: If you choose to view both dial plans, the Phone Number Configuration dialog box displays a separate tab for each one.

Only one of the plans can be active at a time.

To select which dial plan to view

1. In the System Configuration container, click the Phone Numbers subcontainer.
2. In the list view, double-click Configuration.
3. In the Phone Number Configuration dialog box, on the Old Dial Plan tab or the Regional Dial Plan tab, click Advanced.
4. Under Dial Plan View, select the dial plan that you want to view.
5. Click OK.
6. Close the Phone Number Configuration dialog box.
7. Reopen the Phone Number Configuration dialog box.
Related topics

Activate a dial plan

Overview of old dial plans

Configure a regional dial plan in Interaction Administrator

Regional Dial Plans

Add a dial plan in IC Setup Assistant

You can use IC Setup Assistant to create a North American dial plan or to import and localize a dial plan file.

To add a dial plan in IC Setup Assistant

1. Start IC Setup Assistant and select Dial Plan.
2. Do one of the following:

- Select Import a Dial Plan File.
  Select this option to import an existing dial plan file. For example, a reseller may have created specific complete dial plans for customers in different regions of the country, county, or city. Setup Assistant uses macro substitutions to enable localizers to set up a dial plan for their locale from the imported dial plan file.

  This option is recommended for countries using numbering plans other than the North American Numbering Plan.

  Specify the path to the dial plan file. By default, IC Setup Assistant looks in the `server\IC\Manifest` directory. If the dial plan file is not located in this directory, browse to the appropriate directory.

  Note: IC 2.4 uses a new regional dial plan, enhanced for SIP, with an .i3dplan extension. If you wish to import an older dial plan with an i3pnum extension, you may do so. However, you will not gain the benefits of the new regional dial plan. For information about the new dial plan, see IC Regionalization and Dial Plan in the CIC Documentation Library.

- Select I don't have a dial plan; help me create one.
  Select this option if you want IC Setup Assistant create a dial plan for you. This option is recommended for countries using the North American Numbering Plan. You only need to define a few elements —local area codes and exchanges — and IC Setup Assistant will do the rest to create a North American dial plan.
3. After the new installation is completed, you can modify your dial plan in the **Phone Numbers container** in Interaction Administrator to:

   - Change the default dialing privileges (classifications) set by Setup Assistant.
   - Add extensions, area codes, or change the number of digits dialed.

**Related topics**

- [Configure a regional dial plan in Interaction Administrator](#)

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**Configure a regional dial plan in Interaction Administrator**

To configure a regional dial plan in Interaction Administrator

1. In the **System Configuration** container, click the **Phone Numbers** subcontainer.
2. In the list view, double-click **Configuration**.
3. In the **Phone Number Configuration** dialog box, on the **Regional Dial Plan** tab, click **Dial Plan**.
4. On the **Regional Dial Plan** dialog box, do one of the following:
   - To add a dial plan pattern, click **Add**. When you add a dial plan pattern, you can also configure dial groups. For more information, see **Configure a dial group entry**.
   - To edit a dial plan pattern, select it and then click **Edit**. When you edit a dial plan pattern, you can also configure dial groups. For more information, see **Configure a dial group entry**.
   - To copy a dial plan pattern, select it and then click **Copy**. When you copy a dial plan pattern, you can also configure dial groups. For more information, see **Configure a dial group entry**.
   - To delete a dial plan pattern, select it and then click **Remove**.
5. Configure the lists of phone numbers for the dial plan. For more information, see **Configure named lists of phone numbers**.
6. Configure the classifications for the dial plan. For more information, see **Manage phone number classifications**.
7. Test the dial plan. For more information, see **Simulate a call**.
8. Click **OK**.

**Related topics**

- [Configure the pattern of a regional dial plan](#)
- [Configure a dial group entry](#)
- [Import a dial plan](#)
When you configure a regional dial plan, you must configure its pattern.

To configure the pattern of a regional dial plan:

1. In the **System Configuration** container, click the **Phone Numbers** subcontainer.
2. In the list view, double-click **Configuration**.
3. In the **Phone Number Configuration** dialog box, on the **Regional Dial Plan** tab, click **Dial Plan**.
4. On the **Regional Dial Plan** dialog box, do one of the following:
   - To add a dial plan pattern, click **Add**.
   - To edit a dial plan pattern, select it and then click **Edit**.
   - To copy a dial plan pattern, select it and then click **Copy**.
5. In the **Regional Dial Plan - Edit Pattern** dialog box, in the **Input Pattern** field, enter a series of literal numbers, variables, or both. CIC tries to match the dialed input with this pattern. If it does not find a match with any of the defined input patterns, it passes the number through to the Dial Plan table unchanged.

The combination of the input pattern, list name, and location filter define a unique dial plan entry.

The input assistance prompt displays a list of the special input characters that are allowed in the **Input Pattern** field. It also contains commonly used input patterns, which you can select and modify if necessary. You should also be familiar with wildcard pattern syntax.

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**Note: Quoted and escaped string literals**

The Regional Dial Plan enables CIC administrators to embed literal characters or strings in a dial plan input pattern, even if it contains wildcard characters. These literal characters in an input pattern can be used by handler customizations to do special processing, or provide visible indicators to CIC administrators. For example, "Oldphone:+1NxxNxxxxxZ", or sip:”?"@inin.com." Previously, this would not be possible because certain characters (such as "?" and "n") were only treated as wildcard characters.
Phone number templates can consist of all digits, all wildcard characters, some non-dialing characters such as '+', '^', and '/', or any combination of these characters. The '/' character is generally used as a prefix to introduce an extension for direct extension dialing. The '^' character is used as a prefix before an extension, but that extension is not automatically dialed (that is, it is stored as informational data with the number). The '+' is used as a prefix to introduce a country code. These three characters are not actually dialed, but they are preserved as part of the stored phone number. The spaces these characters hold within the number are counted when determining ordinal positions in the formatted number (that is, which number is in the first position, second position, and so on).

| / | @ | Z |
| + | X | Y |
| N |

In the **Location Filter** list, optionally select a filter to apply for a specific location. This is a feature of regionalization. Locations are used to restrict or filter access to dial plan entries. You can use a **location filter** for the dial group entries. The combination of the location filter, list name, and input pattern define a unique dial plan entry.

The **Location Filter** options are:

- **<All>** - Select this option to make this dial plan entry specific to all stations, regardless of location.
- **<Skip>** - Select this option to ignore the location filter completely.
- **<Many Locations...>** - Select this option to choose multiple locations for this dial plan entry. This option is available only if you have defined one or more locations.
- **<Default Location>** - Select this option to choose the <Default Location> for this dial plan entry.
- Specific locations - Select a specific location from the list for this dial plan entry. This option is available only if you have defined one or more locations.

**Notes:** For stations that do not belong to a location, (those that have an empty location string), the **All** option is the only option that will match these stations.

If a dial plan entry does not have **<All>** access, then those specific options (patterns or dial groups) are
7. In the **List Name** list, select the list name. For information on how to add or edit the list names, see *Managed named lists of phone numbers*. The combination of the list name, pattern, and location filter define a unique dial plan entry.

8. In the **Classification** list, select the classification of phone numbers. For information on how to add or edit the classifications, see *Manage phone number classifications*.

Phone numbers that can be identified by a pattern in the numbers, or an explicit group of phone numbers with a common purpose are called phone number "classifications." For example, internal calls could be identified by the "Internal" classification, toll free (for example, 800 numbers) could be identified by the "Toll Free" classification, and calls to emergency services (such as 911, fire department, police, and hospital) could be identified by the "Emergency" classification.

These named groups of phone numbers are used to control individual users, workgroups, and station dialing privileges in CIC. For example, stand-alone phones may have only Emergency and Internal dialing privileges, while members of the Sales workgroup may have full dialing privileges provided in all classifications.

9. In the **Standardized Number** field, select the standardized number entry and modify it if necessary. The standardized number is a standard format for all phone numbers. Its primary use is to store called numbers in a +1 calling format.

   **Note:** This standardized number is used to make a call, so input patterns should be defined to match the standardized numbers. For example, the 7-digit pattern 715xxxx maps to +1317715xxxx, so there should be a +1317715xxxx, or an equivalent input pattern, in the table to match the standardized number.

10. In the **Default Dial String** field, enter the default dial string. You can select the dial string entries from the list and modify the numbers and characters, if necessary. The dial string is the actual string of characters sent to the CO to place a call. You can specify the dial string based on the dialing requirements the CO may have on your lines. For example, some areas may require you to dial the local area code, even for non-toll local calls. Using the **Dial String** field, you can add the local area code as a prefix to all local calls so CIC users do not need to dial the local area code. As another example, some trunks may require you to dial a '1' or a '9' prefix before certain numbers, or perhaps you need to add a long distance prefix to specify a long distance carrier (for example, 1010550). You can add any prefix (or suffix) to any type of phone number using the Dial String field. CIC client users do not need to dial the numbers you include as a prefix in the Dial String field.

11. In the **Display String** field, enter the formatted phone number that is displayed in the CIC clients when the user is not allowed to edit the phone number before the call is placed. You can control the numbers displayed to end users by the template you use in
the **Display String** field. For example, if the standardized form of the number includes a special long distance carrier prefix (for example, 1010550), you can drop that part from the phone number you display to CIC client users.

The display string variable uses the standardized format syntax. You can use either the wildcard character syntax or the ordinal number. However, if you use the wildcard characters, pay attention to the two conditions where you might have to use the ordinal number syntax in this field, and the potential efficiency of ordinal numbers over wildcard characters. For more information about syntax, see *Ordinal or Wildcard Syntax* or *Dial Plan Phone Numbers* in the CIC Documentation Library on the IC server.

12. In the **Edit Base** field, select an entry from the list and then modify the numbers and characters as necessary. The edit base is an existing phone number from the system that the user can modify before the call is placed. For example, in the CIC clients, the edit base number could be any of the following:

- A Directory or Speed Dial Contact phone number that the user has permission to modify
- A Follow-Me configuration number
- A forward status forward number
- A remote number station

13. To use account codes, select the **Account Code Verification** option. After you apply account code verification to a dial plan object, you can track that call type with a verified account code that the user provides for the outbound call. You can use this feature to track call types for billing purposes.

   **Note:** Do not apply Account Code Verification to the 911 and Intercom Dial Plan Objects.

14. In the **Components** box, specify the different parts of a phone number in each dial plan entry that need to be tracked in the report logs (such as area code, long distance prefix, country code, and so on). These components are used for tracking different parts of the phone number in the reporting databases.

   **Note:** If you create new dial plan objects for the Local and Long Distance categories, you must copy the content of the default Components field (such as the ReportingCode1 and ReportingCode2 components) and paste them in to your components field. Failure to do this may result in incomplete call data in your reports.

The default dial plan objects in the Local and Long Distance classifications created during installation contain two components: ReportingCode1 and ReportingCode2. These components represent the digits in the ordinal positions indicated by the ordinal number syntax in the field. For example, the syntax for the first entry is:

```
ReportingCode1:{3}{4}{5};
```

The part before the colon is the name or label for this component ("ReportingCode1"). The ordinal numbers after the component refer to the 3rd, 4th, and 5th digits in the current dial plan object. In the case of a Local or Long Distance classified number in the NANP, these digits always refer to the area code. The semicolon at the end is simply a separator between components.
In another example, the syntax for the second component in the Components field is:

ReportingCode2:(6)(7)(8)

Again, the part before the colon is the component name ("ReportingCode2"). The ordinal numbers after the component refer to the 6th, 7th, and 8th digits in the current dial plan object. In the case of a Local or Long Distance classified number in the NANP, these digits always refer to the local exchange.

If these same digits refer to a different part of the phone number in another location (such as city code, prefecture code, etc.), you can keep these components as they are and they will work for your location. If you need to track other parts of the phone number, you must:

- Create new components in the **Components** box.
- Customize the CallDisconnectMonitor handler to add the new components to one of the extra columns in the Call Detail report log.
- Modify or add a new column in a Crystal Report template that is based on the Call Detail report log.

15. In the **Description** box, document the purpose, along with any details, of each dial plan entry. This information will be valuable to other CIC administrators, especially if you have more than one administrator managing IC or more than one person editing the dial plan configuration.

16. To use account codes, select the **Account Code Verification** option. When you select this option, you can track that call type by using a verified account code that the user provides for the outbound call. For example, you would use this feature to track call types for billing purposes.

**Note:** You should **not** apply Account Code Verification to the 911 and **Intercom** Dial Plan Objects.

17. Configure dial groups for the object. Dial groups enable you to specify which outbound lines or channels to use for each type (classification) of phone number. For example, international calls may be directed to one dial group that uses lines with the best rate for international calls. Local calls may be directed to another dial group called "Local" over low-cost analog lines from the local CO. If you do not specify a dial group for a dial plan entry, calls placed via that dial plan object use the first available line with a direction of Outbound or Both.

**Note:** All of the lines or channels in a dial group must have identical dialing requirements. For example, in a dial group, you cannot have some lines that require a 9 prefix and other lines that do not.

Do the following, as necessary:

- To add a dial group, click **Add Group**. Select the dial group and then click **OK**. If there are no dial groups, create them in the **Line Groups** container.
• To edit a dial group, select it and then click **Edit**.
• To remove a dial group, select it and then click **Remove**.
• To add a secondary dial group to an existing dial group entry, select the dial group and then click **Add Group**.

**Related topics**

- **Configure a regional dial plan in Interaction Administrator**
- **Manage named lists of phone numbers**
- **Manage phone number classifications**

**Import a dial plan**

You can import an entire CIC phone number plan that was saved (with the **Export** button) by any IC server. Exported CIC phone number files have a `.i3dplan` extension and include all of the input conversion objects, dial plan objects, and classification names.

**To import a dial plan**

1. In the **System Configuration** container, click the **Phone Numbers** subcontainer.
2. In the list view, double-click **Configuration**.
3. In the **Phone Number Configuration** dialog box, on the **Regional Dial Plan** tab, click **Dial Plan**.
4. Click **Import**.
5. Click **Browse** button to select a `.i3dplan` file, and then click **Next**.
6. Click **Next** to navigate through the dialog boxes that display the contents of the dial plan file.
7. When you are presented with import options (replace or skip the merge), select the appropriate check boxes and then click **Next**.
8. Review the changes and then click **Finish**.
9. When the message appears that indicates that you have not yet saved your changes, click **OK**. You save your changes when you click **OK** on the **Regional Dial Plan** dialog box.

**Related topics**

- **Configure a regional dial plan in Interaction Administrator**
To export a dial plan

1. In the **System Configuration** container, click the **Phone Numbers** subcontainer.
2. In the list view, double-click **Configuration**.
3. In the **Phone Number Configuration** dialog box, on the **Regional Dial Plan** tab, click **Dial Plan**.
4. Click **Export**.
5. Navigate to your preferred file location and specify a name. Then click **Save**.

**Related topics**

Configure a regional dial plan in Interaction Administrator

**Configure a dial group entry**

When you configure a regional dial plan in Interaction Administrator, you can configure a dial group entry.

To configure a dial group entry

1. In the **Regional Dial Plan - Edit Pattern** dialog box, do one of the following:
   - To add a dial group, click **Add Group**. Continue with step 2.
   - To edit a dial group, select it and then click **Edit**. Continue with step 2.
   - To remove a dial group, select it and then click **Remove**.
   - To change the order of dial groups, click the **Up** and **Down** buttons.

2. In the **Location Filter** list, select the location filter for this dial group. The location filter determines which dial group entries are applicable based on the location for a station. This filter is used in conjunction with pattern selection based on the classification.

**Notes:** If a dial plan entry does not have <All> access then those specific options (patterns or dial groups) are removed from the dial plan and are not presented as dialing choices on dialing lookup in the describe number tool.

Any input pattern that has the <All> filter may require special care when defining the dial groups for the dial plan entry. For example a 911 pattern, the default line groups specified should be local to the location region as possible.

3. In the **Classification** list, select a value to differentiate between different identically dialed numbers based on the dial group and classifications that are used.
4. In the **Dial String** field, if necessary, change the dial string if the dialing requirements for one dial group are different from the another dial group. For example, if the number dialed failed to go out on the first dial group, it may be dialed on the second dial group, which might require a prefix or other dialing requirement.

   **Note:** All of the lines or channels in a dial group must have identical dialing requirements. In other words, you cannot have some lines that require a 9 prefix and other lines that don’t within the same dial group.

5. Click **OK**.

**Related topics**

Overview of dial group entries

Configure a regional dial plan in Interaction Administrator

Line selection order

Locations

**Manage named lists of phone numbers**

You can manage multiple lists of phone numbers for a dial plan. For example, you can create lists of local exchanges for an area code or toll free numbers.

**To manage named lists of numbers**

1. In the **System Configuration** container, click the **Phone Numbers** subcontainer.
2. In the list view, double-click **Configuration**.
3. In the **Phone Number Configuration** dialog box, on the **Regional Dial Plan** tab, click **Manage Lists**.
4. To view details of a number list, click it in the **Number Lists** list.
5. To add a new phone number list, under the **Number Lists** list click **Add**.
6. To remove a phone number list, first select it. Under the **Number Lists** list, click **Remove**.
7. To rename a phone number list, first select it. Under the **Number Lists** list, click **Rename**.
8. To add phone numbers to a list, first select the list. Then click **Add** in the right side of the dialog box. Separate numbers with spaces or commas.
9. To import a text file or CSV file of phone numbers for a list, first select the list. Then click **Import** in the right side of the dialog box.
10. To remove a phone number from a list, first select the list. Then select the number in the right side of the dialog box and click **Remove**.
**Overview of phone number classifications**

Phone numbers that can be identified by a pattern in the numbers, or an explicit group of phone numbers with a common purpose are called phone number classifications. For example, internal calls could be identified by the "Internal" classification, toll free (for example, 800 numbers) could be identified by the "Toll Free" classification, and calls to emergency services (such as 911, fire department, police, and hospital) could be identified by the "Emergency" classification.

These named groups of phone numbers are used to control individual users, workgroups, and station dialing privileges in CIC. For example, stand-alone phones may have only Emergency and Internal dialing privileges, while members of the Sales workgroup may have full dialing privileges provided in all classifications.

When CIC users dial a phone number, CIC matches the number dialed with the appropriate classification pattern. It then checks the user's dialing privileges to determine if the user or station is authorized to place the call. In this way, CIC uses phone number classifications to control individual users, workgroups, roles, and station dialing privileges.

You also use classifications to configure forced authorization codes. Administrators set forced authorization codes to require users to enter an extension and a password to make a call.

You create a list of classifications on the **Classifications** dialog box in the **Phone Number Configuration** dialog box. To create the number pattern for the classification, use the **Dial Plan** dialog box.

*For more information about phone numbers see the IC Dial Plan in the CIC Documentation Library.*

**Related topics**

- Manage phone number classifications
- Simulate a call
- Perform advanced operations

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**Related topics**

- Configure an old dial plan
- Manage phone number classifications
Manage phone number classifications

To manage phone number classifications

1. In the System Configuration container, click the Phone Numbers subcontainer.
2. In the list view, double-click Configuration.
3. In the Phone Number Configuration dialog box, on the Old Dial Plan tab or on the Regional Dial Plan tab, click Manage Classifications.
4. In the Dial Plan Classifications dialog box, do one of the following:
   - To add a classification, click Add. Type the name of the classification (for example, "900 Service" or "International"), and then click OK. Then continue with the next step.
   - To edit a classification, select it and then click Edit. Then continue with the next step.
   - To delete a classification, select it and then click Remove.
5. In the Classification dialog box, the name of the classification appears in the Display Text field. You can change this if necessary.
6. In the Category list, select the appropriate category.
7. In the Alerting section, select the Send email and client alerts for calls of this classification check box, and enter the users to receive the alerts in the To... field. You can also click the To... button and select the available users from the list that is displayed. Alerting sends an email notification and displays a popup notification in the CIC clients, to the specified users and/or workgroups when a call is made with this classification.
8. As necessary, complete the Multi-Language Support tab. For more information, see Multi-Language Support.
9. Click OK.

Related topics

Configure an old dial plan

Overview of phone number classifications

Set up an emergency classification

Set up an emergency classification

Calls to emergency services (such as 911, fire department, police, and hospital) should be identified by the "Emergency" classification.
To set up an Emergency classification

1. In the System Configuration container, click the Phone Numbers subcontainer.
2. In the list view, double-click Configuration.
3. In the Phone Number Configuration dialog box, on the Old Dial Plan tab or on the Regional Dial Plan tab, click Manage Classifications.
4. In the Dial Plan Classifications dialog box, click Add.
5. In the Entry Name dialog box, type the name of the classification (for example, "911 Emergency Service").
6. Click OK.
7. In the Classification dialog box, the name of the classification appears in the Display Text field. You can change this if necessary.
8. In the Category list, select Emergency.
9. In the Alerting section, select the users or workgroups to alert when a call is made with this classification. For more information, see Overview of classification alerts.
10. Complete the Multi-Language Support tab. For more information, see Multi-Language Support.
11. Click OK.

Related topics

Station emergency information settings

Multi-Language Support

Simulate a call

You can test your dial plan configuration by entering real phone numbers in any format you can imagine. Since users may enter phone numbers in a variety of ways (with or without a leading 1, with or without a local area code, etc.), you can test different kinds of input without actually placing a live call to different numbers. This page just simulates calls as if they were dialed from a CIC station; it does not actually place calls to the dialed numbers.

To simulate a call

1. In the System Configuration container, click the Phone Numbers subcontainer.
2. In the list view, double-click Configuration.
3. In the Phone Number Configuration dialog box, click Simulate Call. This button appears in the following places:
   • On the Regional Dial Plan tab
   • On the Regional Dial Plan dialog box
4. In the Number field, enter a phone number. You can type letters or digits, and you can use the keypad.
5. In the Location Filter list, select a filter to apply to the simulated call.
6. Click **Simulate Call**.
CIC passes your number input through the input conversion objects and dial plan objects you created on their respective property pages. The program displays the resulting output in the **Call Results** fields on the right side of this page.

The most important results you might look at first are in the three-column list box at the bottom of the **Call Results** section. This list box shows which dial group (if any) the call would go out on, the phone number classification for which users would need access rights to dial, and the actual dial string, which is the number CIC sends to the CO when dialing.

If you applied the account code verification feature to a dial plan entry, **Account Code Verification** is listed as **Yes**. You can track that call type by using a verified account code that the user provides for the outbound call. Use this feature to track call types for billing purposes. You should **not** apply account code verification to the **911** and **Intercom** Dial Plan Objects.

If you enter a number that does not match any of the standard input conversion objects or dial plan objects, **Unknown** will appear as the classification in the list box, the description in the call results section will indicate **No pattern match**, and other call results fields display the raw number you entered. This indicates that CIC cannot match the input with an input pattern in the dial plan.

**Related topics**

- Configure a dial plan in Interaction Administrator
- Manage named lists of phone numbers
- Manage classifications of phone numbers
- **Select which dial plan to view**

If you have both an old dial plan and a regional dial plan, you can select which one to view in the **Phone Numbers** container.

**Note:** If you choose to view both dial plans, the **Phone Number Configuration** dialog box displays a separate tab for each one.

Only one of the plans can be active at a time.

To select which dial plan to view

1. In the **System Configuration** container, click the **Phone Numbers** subcontainer.
2. In the list view, double-click **Configuration**.
3. In the Phone Number Configuration dialog box, on the Old Dial Plan tab or the Regional Dial Plan tab, click Advanced.
4. Under Dial Plan View, select the dial plan that you want to view.
5. Click OK.
6. Close the Phone Number Configuration dialog box.
7. Reopen the Phone Number Configuration dialog box.

Related topics

Activate a dial plan

Overview of old dial plans

Configure a regional dial plan in Interaction Administrator

Note: Only one dial plan format (Old Dial Plan or Regional Dial Plan) can be active. CIC uses the active dial plan to perform dial plan lookups and make calls. If necessary, you can modify an inactive dial plan and test it by simulating calls.

To activate a dial plan

1. In the System Configuration container, click the Phone Numbers subcontainer.
2. In the list view, double-click Configuration.
3. In the Phone Number Configuration dialog box, on the Old Dial Plan tab or the Regional Dial Plan tab, click Advanced.
4. Under Active Dial Plan, select the dial plan that you want to activate.
5. Click OK.

Related topics

Overview of old dial plans

Configure a regional dial plan in Interaction Administrator

DID/DNIS

Configure DID/DNIS
To configure DID/DNIS

1. In the **System Configuration** container, click the **Phone Numbers** subcontainer.
2. In the list view, double-click **Configuration**.
3. In the **Phone Number Configuration** dialog box, click the **DID/DNIS** tab.
   For information on the information you see in the table, see **Columns in the DID/DNIS table**.
4. To add a DNIS call route to the table, click **Add**. In the **DID/DNIS Identifier** box, enter the DID/DNIS extension. You can use either simple mapping, substitute a prefix, or replace digits. Select a user name, workgroup name, or station name destination to route calls that dialed the number. Click **OK**. For more information, see **Add a new DID/DNIS routing entry**.
5. To edit a DID/DNIS call route entry, select the entry to edit and then click **Edit**. Make the necessary changes and then click **OK**.
6. To edit the digits in a DID/DNIS number, select the entry and then click **Edit Digits**. Make the necessary changes and then press the Enter key.
7. To remove a DID/DNIS call route entry, select the entry and then click **Remove**.

**Related topics**

Overview of automatic call routing

**Columns in the DID/DNIS table**

**Add a new DID/DNIS routing entry**

**Routing entry configuration**

Each dialed number can be routed to a CIC user, station, station group (including fax group), or workgroup extension. Depending on the quantity and format of DNIS numbers you receive, you can use one of these three methods to set up a map table for routing calls: Simple Mapping, Substitute Prefix, and Replace N Digits. For more information about these methods, see **Overview of automatic call routing**.

**Simple Mapping**

Select this method if you have only a few call routes to create, or the DNIS numbers have different prefixes. This method allows you to add one call route to the map table at a time. To do this:

1. Select the **Simple Mapping** option.
2. Type the complete DNIS number and then single-click on a Destination field in the list at the right, or
Type the prefix of the DNIS number in the adjacent field, select a Destination queue in the list at the right, and click **Grab Extension** to add the destination extension to the field.

3. Type a brief description of the purpose of this call route. This serves as useful documentation for the CIC administrators looking at the DID/DNIS configuration.

4. Verify the route in the explanation field at the bottom and click **OK** if the map is correct.

**Notes:** The next two methods allow you to select multiple entries from the **Destination** list:

To select a contiguous range of entries from the list, click on the first entry in the list, scroll down (or up) to view the last entry in the list, hold the Shift key down and then click on the last entry in the list.

To select entries from the list randomly, click on an entry, hold the Ctrl key down, and then click on one or more other entries in the list. To sort the list before selecting entries, click on one of the column names to sort the list by that name.

### Substitute Prefix

Select this method if you have a range of DNIS numbers, all with the same prefix and a group of extensions with the same number of digits. This method allows you to build a map table for a large range of extensions with the same DNIS prefix at one time. The DNIS prefix can be three or four digits, depending on the DNIS numbers you have reserved, and whether the extensions are all three-digit numbers or all four-digit numbers.

1. Select the **Substitute Prefix** option.

2. Type the three or four digit DNIS prefix in the adjacent field.

3. Select a range of destination queues in the **Destinations** list to the right. If it would help to select the names in a particular order, click on one of the column headings in the list to sort the list by that column. For example, in the **Destination** list, click the **Extension** column heading to sort the list by extensions.

4. Type a brief description of the purpose of this call route. This serves as useful documentation for the CIC administrators looking at the DID/DNIS configuration.

5. Verify the routes in the explanation field at the bottom and click **OK** if the map is correct.

### Replace N Digits

Select this method if you have a range of DNIS numbers with the same prefix, but the DNIS numbers map to extensions with one, two, three, or four digits. You provide a phone number template and this method builds a map table by substituting the number of digits in each extension (N) for that same number of digits at the end of the template phone number. The template DNIS number is usually a seven-digit phone number using the first three digits of the prefix in the DNIS numbers.

1. Select the **Replace N Digits** option.

2. Type a DNIS phone number template in the adjacent field. This is a 7-digit number in the North American Numbering Plan, but it could be more or less than seven digits in other locations.
3. Select a range of destination queues in the **Destinations** list to the right. If it would help to select the names in a particular order, click on one of the column headings in the list to sort the list by that column. For example, in the **Destination** list, click the **Extension** column heading to sort the list by extensions.

4. Type a brief description of the purpose of this call route. This serves as useful documentation for the CIC administrators looking at the DID/DNIS configuration.

5. Verify the routes in the explanation field at the bottom and click **OK** if the map is correct.

**Defer substitution until DID/DNIS received**

This option provides flexibility allowing you to defer the lookup of the destination for the call. Instead of selecting the destination from one of the straight table maps created with the Prefix or Replace methods, this option tells CIC to get the DNIS number and then sequentially compare it with each number in the list until it finds a match. It then assigns the call to the matching queue, regardless of the user, workgroup, or station name currently assigned to that queue.

**Description**

This field contains a brief description of the purpose of the DID/DNIS entry. The text entered in this box appears on the DID/DNIS configuration page under the **Description** column. It can provide useful documentation for the CIC administrator who has to manage the call routing later.

**Note:** There is a tool to process the DID/DNIS routing table from Interaction Administrator. The tool takes the DNIS string of a telephone call and returns a scoped queue name based on the DID/DNIS configuration in Interaction Administrator. For more information, see the Interaction Designer help.

**Related topics**

- **Configure DID/DNIS**

  Overview of automatic call routing

  **Private Lines**

  ![Configure private lines]

  This procedure describes how to configure private lines in the **Private Line Assignment Table**. After you complete this procedure, you can assign the private lines to users.

  **To configure private lines**

  1. In the **System Configuration** container, click the **Phone Numbers** subcontainer.
  2. In the list view, double-click **Configuration**.
  3. In the **Phone Number Configuration** dialog box, click the **Private Lines** tab.
4. To add a private line, click **Add**. For more information on how to complete the fields, see *Add a private line*.

5. To Edit a private line, click **Edit**.

**Note:** You cannot edit the **Assigned To** field. If you need to assign a private line to another user or classification, first delete the existing entry from the **Private Line Assignment Table**. Then add another entry with the new assigned user or classification.

6. To delete a private line, select the entry and then click **Delete**.

7. Click **OK**.

**Related topics**

*Add a private line*

*Overview of private lines*

*Create a private line assignment*

---

**Add a private line**

*To add a private line to the Private Line Assignment Table*

1. In the **Private Line Dial Group** list, select a dial group from the list.

**Note:** For a line group to be available for a private line assignment, the **Use as Dial Group** and **Use for Private Line Assignment** boxes must be selected on the **Line Group Configuration** page.

2. Under **Assigned to**, do one of the following:

   - To assign the private line group to a user, select the **User** option. Then select user from the list.
   - To assign the private line group to phone classification, select the **Classification** option. Then select the classification from the list.

3. Click **OK**.

**Related topics**

*Configure private lines*
Create a private line assignment

To create a private line assignment

1. In the Line Groups container, add a line group to be used for a private line. On the Configuration tab, select the Use as Dial Group and Use for Private Line Assignment options.

2. In the Phone Number Configuration dialog box, on the Private Lines tab, use the Private Line Assignment field to associate a private line with a user or classification.

3. In the Phone Number Configuration dialog box, on the Regional Dial Plan tab, associate a dial plan object name with a dial group.

Related topics

Overview of private line assignment

Overview of line groups

Configure private lines

Remove a private line assignment

To remove a private line assignment

Note: If a Private Line Assignment line group is in the Private Line Association field, you cannot delete it. Also, if a dial group or a Private Line Assignment line group is used in a dial plan, you cannot delete the line group.

1. In the Phone Number Configuration dialog box, on the Regional Dial Plan tab, delete the dial group that is associated with the dial plan.

2. In the Phone Number Configuration dialog box, on the Private Lines tab, delete the private line dial group from the Private Line Assignment field.

3. In the Line Groups container, delete the line group.

Note: If a line belongs to a PLA line group, you cannot be delete it from the Lines container. If a PLA line group is in the Private Line Association field, you cannot delete it. If a dial group or PLA line group is used in a dial plan, you cannot delete the line group.

Related topics

Overview of private line assignment

Overview of line groups
CIC provides basic report logs that store all line, call, and user-related CIC interaction data. In Interaction Administrator, all report logs are identified with numbers (for example, 1, 2, 3, … 50, 51, and so on).

For more information about the basic report logs, see the CIC Data Dictionary Technical Reference in the CIC Documentation Library. For more information on how to run and export reports, and how to use the reporting tools, see the IC Reporting Guide in the CIC Documentation Library.

**Descriptions**

Note: A more detailed description of each report log appears on the Basic page of the Report Log Configuration dialog box. To see it, double-click the name of the report log in the Report Logs subcontainer.

<table>
<thead>
<tr>
<th>Log number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Interaction Administrator Change Notification Log</td>
</tr>
<tr>
<td>8</td>
<td>IC Change Notification Log</td>
</tr>
<tr>
<td>9</td>
<td>IC Application Login Logout Change Log</td>
</tr>
<tr>
<td>20</td>
<td>Interaction Custom Attributes Log</td>
</tr>
<tr>
<td>30</td>
<td>Interaction Summary and Detail Log</td>
</tr>
<tr>
<td>40</td>
<td>Interaction Wrap-up Log</td>
</tr>
<tr>
<td>50</td>
<td>ETL Data Log</td>
</tr>
<tr>
<td>70</td>
<td>User To Workgroup Relationships</td>
</tr>
<tr>
<td>71</td>
<td>Line Configuration Mirror</td>
</tr>
<tr>
<td>72</td>
<td>Line Group Configuration</td>
</tr>
<tr>
<td>73</td>
<td>Line Group to Lines Relationship Mirror</td>
</tr>
<tr>
<td>74</td>
<td>Account Code Mirror</td>
</tr>
<tr>
<td>80</td>
<td>Agent Activity Log</td>
</tr>
<tr>
<td>81</td>
<td>Interval Line Group Statistics</td>
</tr>
<tr>
<td>82</td>
<td>Interval Line Statistics</td>
</tr>
<tr>
<td>83</td>
<td>Fax Envelope History</td>
</tr>
<tr>
<td>84</td>
<td>IVR History</td>
</tr>
<tr>
<td>85</td>
<td>IVR Interval</td>
</tr>
<tr>
<td>86</td>
<td>Agent Queue Activation History</td>
</tr>
</tbody>
</table>
To configure basic report log information

1. In the Report Logs subcontainer, double-click the report log you want to configure. Use the Basic page to view and update the following fields.
2. The Log Name box displays the name of this report log.
3. The Display Name box displays the name of the report log appears here as it appears in the Reports tool in Interaction Designer.
4. The Description box displays a brief description of the purpose of this report log appears here.
5. The Data Destination box contains the server parameter ServerReportLogDataDestination by default. This parameter contains the default label for the queue used to deliver data to IC report logs in the report log database. You can specify a different queue label by typing it in this field. If you do, you must first create this queue and then specify the new queue in the EicLoggingService command line argument on the report log database server.
6. The Client DB Source field contains the system parameter ClientReportLogEICDataSourceName. This parameter contains the IC Data Source Name (DSN) that represents the ODBC data source called IC Report Logs. Reports use IC Report Logs to access the report logs. You may specify a different DSN by typing it in
this field. If you do, you must define the new DSN in the ODBC configuration and use Crystal Reports to modify the default DSN expected in CIC reports.

7. The **Active** check box controls whether the data is written to the reporting database. By default, it is selected, which means that CIC sends data to the report log automatically (**auto logging**). Regardless of whether this check box is selected or not, the StatServer generates the raw statistics. If you clear the check box the statistics are still generated, but they are not logged to the database. CIC recognizes changes to this check box immediately.

Note: By default, the IC Application Login Change Log is inactive. You must set this report log to active in order for it to work.

8. **Auto logging** refers to the ability of StatServer to receive its own statistics sent out in a notification and then log the statistics to the database. Turn off auto logging if you want handlers to catch this information and log it to the database. **This parameter is for advanced administrator use only.**

**Related topics**

Overview of report logs

Report log descriptions

Configure retention time

Configure report mappings

Configure custom attributes

View and update history

Configure report log retention time

The retention time determines how long the data in the report log is saved. Records older than the expiration age can be purged automatically or manually.

**To configure report log retention time**

1. In the **Report Logs** subcontainer, double-click the report you want to configure.
2. Click the **Retention** page.
3. In the **Purge records older than [x] days** box, type the expiration age for records for this report log.
4. To configure automatic purging, select the **Enable automatic purging for this report log** check box. You must also configure the purging schedule on the **Report Log**
Purging page of the Server Configuration dialog box, which is located in the Server Configuration container. For more information on how to configure the purge schedule, see Configure report log purging for your IC server.

5. To immediately purge the expired records from this report log, click Purge Now. In the message box, click Yes.

**Note:** You cannot undo a purge.

6. Click OK.

Related topics

Overview of report logs

Report log descriptions

Configure basic information

Configure report mappings

Configure custom attributes

View and update history

Configure report log purging for your IC server

Configure report log mappings

Report log mappings specify what data is logged in which column in the database.

**Notes:** If you are using this advanced feature, please see the CIC Reporting Technical Reference in the Technical Reference section in the CIC Documentation Library located on the IC server.

You may also search the knowledge base for articles regarding custom report mappings.

To configure report log mappings

1. In the Report Logs subcontainer, double-click the report you want to configure.
2. Click the Mappings page. Do one of the following:
To use the default mappings and ignore any custom output mappings that you have defined, select the **Use default mappings** check box. By default, this check box is selected.

To have CIC dynamically process a custom mapping, deselect the **Use default mappings** check box. Then, in the **Map string** box, type the value that CIC should use to bind the columns.

3. Click **OK**.

**Related topics**

Overview of report logs

- Report log descriptions
- Configure basic information
- Configure retention time
- Configure custom attributes
- View and update history

**Custom attributes**

The Custom Attributes page allows you to add customized attributes so that you can reference your own variables and settings through the IceLib interface.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes to the Custom attributes page in the User Configuration dialog box and the Workgroup Configuration dialog box dialog box are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

The page contains a list for the attributes and displays a **Name** and a **Value** column, and has the following buttons:

**Add**

Click **Add** and select an existing custom attribute from the pull-down list, enter a new custom attribute. If creating a new attribute, use a unique name, otherwise the existing attribute will be overwritten.

**Edit**
Click **Edit** to change the value of an existing custom attribute.

**Delete**

Click **Delete** to delete an existing custom attribute.

**Manage Attributes**

Click **Manage Attributes** to open a dialog box that displays a list of custom attributes. Click **Add** or **Delete** to manage the appearance of the custom attributes in the pull-down list.

The custom attributes are saved in the path of the root container. This **Path** is displayed at the bottom of the dialog box.

**History**

This page provides a way to manually document configuration changes and when they occurred. Changes made in Interaction Administrator are also automatically logged in the Interaction Administrator Change Notification Log (Log ID 7). Later, authorized users can run reports against this log to summarize all configuration changes.

**Note:** For more information on the Interaction Center Extension Library (IceLib), see The **System APIs** section in the CIC Documentation Library on the IC server.

This date is automatically updated each time you click the **OK** button, presumably after you make changes to the configuration. To avoid updating this date, exit the page by clicking the **Cancel** button.

**Note:** If you click **Cancel**, none of the changes made to this page will be preserved.

In addition, the history is updated when changes are made to the record elsewhere in Interaction Administrator. For example, when a user change his or her password, the **Last Modified** date is updated.

**Note:** Changes to the licenses for a user or a station do not update the Last Modified date.

This date is automatically set when the user creates the initial configuration for this page. If the page was initially created during setup, the date could be blank.
Notes

Type notes about configuration settings and changes. If you change the configuration page and click OK, the Last Modified date is updated.

You must manually enter the date beside each entry in the Notes field to identify the date of each note.

To create a new line in the Notes field, press Enter.

Enhanced Interaction Administrator Change Log

Enable the Enhanced Interaction Administrator Change Log

In order to take advantage of the Enhanced Interaction Administrator Change Log, you must enable it.

Notes:

By default, the Enhanced Interaction Administrator Change Log is not enabled. If you enable this feature and then upgrade CIC, the feature will remain enabled.

When you enable the Enhanced Interaction Administrator Change Log, the Snapshot Tool creates a baseline of your data. This process takes time and can affect system performance. Therefore, it is best to enable the Enhanced Interaction Administrator Change Log during off-peak hours. For more information, see About the Snapshot Tool.

To enable the Enhanced Interaction Administrator Change Log

1. In the Report Logs subcontainer, double-click the Enhanced Interaction Administrator Change Notification Log (6).
2. On the Basic page, select the Active check box.
3. Click OK.

Related topics

About the Enhanced Interaction Administrator Change Log

Database tables for the Enhanced Interaction Administrator Change Log

Troubleshooting the Enhanced Interaction Administrator Change Log

Database tables for the Enhanced Interaction Administrator Change Log
For complete information about the database tables that are used with the Enhanced Interaction Administrator Change Log, see the *CIC Data Dictionary Technical Reference* in the CIC Documentation Library.

Click a database table for more details about its purpose and its columns.

EnhancedIAChangeLog Table

The **EnhancedIAChangeLog** table is the primary table that is used for the Enhanced Interaction Administrator Change Log. If you enable the log, changes in supported Interaction Administrator containers are logged in this table.

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
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<tr>
<td>EnhancedIAChangeLogId</td>
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<td>Field</td>
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<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>EnhancedIAChangeLogId</td>
<td>Unique ID for the change</td>
</tr>
<tr>
<td>ChangeDateTime</td>
<td>Local server date and time when the change was made</td>
</tr>
<tr>
<td>ChangeTime</td>
<td>Local time of the change</td>
</tr>
<tr>
<td>ChangeDateTimeGMT</td>
<td>Greenwich Mean Time for when the change was made</td>
</tr>
<tr>
<td>UserId</td>
<td>User ID that made the change</td>
</tr>
<tr>
<td>StationId</td>
<td>ID of the computer from which the change was made</td>
</tr>
<tr>
<td>ChangeType</td>
<td>Type of change that was made. The values are Addition, Modification, Deletion, and Initial. Initial is the data taken when the system takes a snapshot point of the DS data</td>
</tr>
<tr>
<td>EntryKey</td>
<td>Item affected by the change</td>
</tr>
<tr>
<td>EntryClass</td>
<td>The Interaction Administrator container for which the change was made.</td>
</tr>
</tbody>
</table>

**Note:** Log records for licenses and skills are handled in this manner:

- “License” denotes a license change made in the **License Allocation** container.
- “UserLicense” denotes a license change made in the **Users** container.
- “StationLicense” denotes a license change was made from the **Stations** container.

**Note:** Log records for skills are handled in this manner:

- "Skills" denotes a change from **Skills** container.
- "SkillsUser" denotes a change to the user from the **Skills** container.
- "SkillsWorkgroup" denotes a change to the workgroup from the **Skills** container.

**Note:** Log records for roles are handled in this manner:

- "Roles" denotes a change from **Roles** container.
- "RolesUser" denotes a change to the user from the **Roles** container.
- "RolesWorkgroup" denotes a change to the workgroup from the **Roles** container.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I3TimeStampGMT</td>
<td>GMT Timestamp</td>
</tr>
<tr>
<td>SiteId</td>
<td>Site ID</td>
</tr>
<tr>
<td>SubsiteId</td>
<td>Subsite ID</td>
</tr>
</tbody>
</table>
ApplicationId - ID of the application from where the change was made. The ID number corresponds to the ID found in the ICApplications table.

IAAttributeLog Table

The IAAttributeLog table is a child table of the IAChangeLog table. This table contains the specific attribute that was changed, the previous value, and the new value. There may be multiple records in the IAAttributeLog table that are for a single record in the IAChangeLog table.

Note: Changes involving licenses are not recorded in this table.

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IAAtributeLogId</td>
<td>Unique ID for the attribute that was changed</td>
</tr>
<tr>
<td>EnhancedIAChangeLogId</td>
<td>The foreign key to the IAChangeLog table</td>
</tr>
<tr>
<td>AttributeName</td>
<td>The name of the attribute that was changed</td>
</tr>
<tr>
<td>PreviousValue</td>
<td>The value before the change was made. This field can contain an empty string if the value was never been set before change logging was enabled, or if the field was cleared of its value.</td>
</tr>
<tr>
<td>NewValue</td>
<td>The new value for the attribute. This field can contain an empty string if the field was cleared of its value.</td>
</tr>
</tbody>
</table>

IALicenseAttributeLog Table

The IALicenseAttributeLog table is a child table of EnhancedIAChangeLog. This table captures the changes made for a user or a workstation license attribute.

Note: There are several attributes for each user or workstation license. When a change is made to a user or a workstation license attribute, this table does not record which attribute was changed. Instead, all of the licenses for the user or station are written to the table.

To determine which specific attribute was changed, do a diff to compare the current set of license attributes with the previous set of license attributes. A set of records for a single change will have the same EnhancedIAChangeLogId.

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>IALicenseAttributeLogId</td>
<td>Unique ID for the license change</td>
</tr>
<tr>
<td>EnhancedIAChangeLogId</td>
<td>Foreign key to the IAChangeLog table</td>
</tr>
<tr>
<td>License</td>
<td>License ID. This ID corresponds to the ID found in the IALicenseLookup table.</td>
</tr>
<tr>
<td>IsAssignable</td>
<td>Indicates whether the license allocation method for the given IAChangeLog entry key is assignable or concurrent:</td>
</tr>
<tr>
<td></td>
<td>• A value of 1 means assignable</td>
</tr>
<tr>
<td></td>
<td>• A value of 0 means concurrent.</td>
</tr>
<tr>
<td>IsActive</td>
<td>Indicates whether licenses are enabled for the given IAChangeLog entry key:</td>
</tr>
<tr>
<td></td>
<td>• 1 means enabled.</td>
</tr>
<tr>
<td></td>
<td>• 0 means disabled.</td>
</tr>
<tr>
<td>CallCallback</td>
<td>Denotes whether call/callback is selected as the ACD media type. This field is valid only for ACD Media 2 and ACD Media 3 licenses.</td>
</tr>
<tr>
<td>Chat</td>
<td>Denotes whether chat is selected as the ACD media type. This field is valid only for ACD Media 2 and ACD Media 3 licenses.</td>
</tr>
<tr>
<td>Email</td>
<td>Denotes whether email is selected as the ACD media type. This field is valid only for ACD Media 2 and ACD Media 3 licenses.</td>
</tr>
<tr>
<td>Generic</td>
<td>Denotes whether generic is selected as the ACD media type. This field is valid only for ACD Media 2 and ACD Media 3 licenses.</td>
</tr>
</tbody>
</table>

**Related topics**

About the Enhanced Interaction Administrator Change Log

Examples of changes to database tables

Database views for the Enhanced Interaction Administrator Change Log

**Examples of changes to database tables**

This help topic shows how the following types of database changes are tracked when the Enhanced Interaction Administration Change Log is enabled:

Snapshot of initial data
Change to a user attribute

Addition of a user

Setting or changing a user license

Deletion of a user

Assignment of a skill to a workgroup or user

Removal of a skill from a workgroup or user

Modification to a Role

Change to a Default User attribute

Snapshot of initial data

This example shows a snapshot of data that was taken when the Enhanced Interaction Administrator Change Log was enabled. Notice that value in the ChangeType column is “Initial.” You can also see that both the IAAttributeLog table and the IALicenseAttributeLog table have multiple records tied to a single record in the EnhancedIAChangeLog table.

<table>
<thead>
<tr>
<th>EnhancedIAChangeLogD</th>
<th>ChangeDateTime</th>
<th>ChangeTime</th>
<th>ChangeDateTimeGMT</th>
<th>UserId</th>
<th>StationId</th>
<th>ChangeType</th>
<th>EntryKey</th>
<th>EntryClass</th>
<th>ApplicationId</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>IAAttributeLog Table</th>
<th>IAAttributeLogId</th>
<th>EnhancedIAChangeLogId</th>
<th>AttributeName</th>
<th>PreviousValue</th>
<th>NewValue</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2147483633</td>
<td>-2147483623</td>
<td>displayName</td>
<td>john.doe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-2147483632</td>
<td>-2147483623</td>
<td>givenName</td>
<td>John</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-2147483561</td>
<td>-2147483623</td>
<td>surname</td>
<td>Doe</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IALicenseAttributeLog Table</th>
<th>IALicenseAttributeLogId</th>
<th>EnhancedIAChangeLogId</th>
<th>License</th>
<th>IsAssignable</th>
<th>IsActive</th>
<th>CallCallback</th>
<th>Chat</th>
<th>Email</th>
<th>Generic</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2345697062</td>
<td>-2147483622</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>-2345697061</td>
<td>-2147483622</td>
<td>7</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>-2345697060</td>
<td>-2147483622</td>
<td>9</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Change to a user attribute

This example shows the change log records that are created when you change an attribute on any property page in the Users container.
Addition of a user

This example shows the change log records that are updated when you add a user:

- The UserLicense modification is tied to a record in the `IALicenseAttributeLog` table.
- The Password attribute generates its own change log record.
- The other properties are tied to the other `EnhancedIAChangeLog` modification record.
- A record in the `EnhancedIAChangeLog` with a ChangeType of Addition denotes that a user was added to the system; there are no attribute records tied to that entry.

Setting or changing a user license

This example shows the change log records that are inserted when the client access license and the ACD Media 2 licenses (with call and email qualifiers) are assigned for a user.
Deletion of a user

This example shows the change log record with the Change Type of Deletion. This indicates that the user record was deleted. The `IAAttributeLog` table is also updated to show what attributes were set on that user when the user was removed.

Assignment of a skill to a workgroup or user

This example illustrates how the database tables are updated when a skill is added to a workgroup and a user.
**Note:** If the EntryClass shows "SkillsUser" or "SkillsWorkgroup," then the skill was added from the **Skills** container.

<table>
<thead>
<tr>
<th>EnhancedAChangeLogID</th>
<th>ChangeDate/Time</th>
<th>ChangeTime</th>
<th>ChangeDateTimeGMT</th>
<th>Userid</th>
<th>StationId</th>
<th>ChangeType</th>
<th>EntryKey</th>
<th>EntryClass</th>
<th>ApplicationID</th>
</tr>
</thead>
</table>

**Note:** If the EntryClass shows "RolesUser" or "RolesWorkgroup," then the role was added/deleted from the **Roles** container.

<table>
<thead>
<tr>
<th>IAAttributeLogId</th>
<th>EnhancedAChangeLogId</th>
<th>AttributeName</th>
<th>PreviousValue</th>
<th>NewValue</th>
</tr>
</thead>
<tbody>
<tr>
<td>-21474683564</td>
<td>-2147468323</td>
<td>Skills</td>
<td>English(J2)</td>
<td>English(J2/Spanish(J2))</td>
</tr>
<tr>
<td>-21474683563</td>
<td>-2147468322</td>
<td>Skills</td>
<td>Spanish(J2)</td>
<td>Spanish(J2)</td>
</tr>
</tbody>
</table>

**Removal of a skill from a workgroup or user**

This example shows the change log records that are updated when a skill is unassigned from a workgroup or a user. Change log records are logged for the users and workgroups that were assigned that skill, along with the deletion record.

**Modification to a Role**

This example shows the change log records that are created when you change an attribute on any property page in the **Roles** container.

**Note:** If the EntryClass shows "RolesUser" or "RolesWorkgroup," then the role was added/deleted from the **Roles** container.
Change to a Default User attribute

This example shows the change log records that are created when you change an attribute on any property page in the Default User container.

<table>
<thead>
<tr>
<th>IAAttributeLogId</th>
<th>EnhancedIAChangeLogId</th>
<th>AttributeName</th>
<th>PreviousValue</th>
<th>NewValue</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2147481294</td>
<td>-2147483306</td>
<td>Role</td>
<td>Supervisor</td>
<td></td>
</tr>
<tr>
<td>-2147481296</td>
<td>-2147483307</td>
<td>Role</td>
<td>Supervisors</td>
<td></td>
</tr>
<tr>
<td>-2147481297</td>
<td>-2147483308</td>
<td>ViewHistoricalReports</td>
<td>[[All]]</td>
<td>[[All]]</td>
</tr>
<tr>
<td>-2147481298</td>
<td>-2147483308</td>
<td>Notes</td>
<td>History Notes</td>
<td></td>
</tr>
</tbody>
</table>

Back to top

Related topics

About the Enhanced Interaction Administrator Change Log

Database tables for the Enhanced Interaction Administrator Change Log

Database views for the Enhanced Interaction Administrator Change Log
The following views are available for use with the Enhanced Interaction Administrator Change Log:

- **EIACL_CurrentLicenses**
- **EIACL_HistoricalLicenses**
- **EIACL_HistoricalLicensesDP**
- **EIACL_CurrentSkills**
- **EIACL_HistoricalSkills**
- **EIACL_HistoricalSkillsDP**

For more information on how to use these views, see the *CIC Data Dictionary Technical Reference* in the CIC Documentation Library.

**Note:** Some of the values recorded for attributes may have multiple entries. The delimiter is the unit separator character (0x1F).

**EIACL_CurrentLicenses**

This view shows the current license allocation.

- This view will always be ordered by EntryKey. It displays only the most recent entry for each entry key. The entry key is always going to be a user or a station.
- The EntryKeyLicenseCount column provides a quick way to see how many licenses are currently allocated to a specific entry key.
- The License column displays license names the same way that they are displayed in the License Management dialog box.
EIACL_HistoricalLicenses

This view shows all the changes for licenses.

- This view will always be in descending order by EntryKey and ChangeDateTime. It displays all of the changes for each entry key. The entry key will always be a user or a station.
- The DESCLicenseChangeSequence column displays the ranking of changes for a specific entry key in descending order. A value of 1 always indicates the most recent license change for a specific entry key.
- The EntryKeyLicenseCount column provides a quick way to see how many licenses are currently allocated to a specific entry key and change sequence.
- The License column will display license names in the same way that they appear in the License Management dialog box.
When a user or station is deleted, the most recent entry for that entry key shows a '-' in the license column and a 1 in the DESCLicenseChangeSequence column. This provides an easy way to tell which licenses were allocated to the user or station when the user or station was deleted, in case you need to recreate the user or station later with the same licenses.

EIACL_HistoricalLicensesDP

This view shows all the changes for licenses. It also includes some date part columns for use in sorting and grouping the data.

- This view will always be in descending order by EntryKey and ChangeDateTime. It displays all of the changes for each entry key. The entry key will always be a user or a station.
- The DESCLicenseChangeSequence column displays the ranking of changes for a specific entry key in descending order. A value of 1 always indicates the most recent license change for a specific entry key.
- The EntryKeyLicenseCount column provides a quick way to see how many licenses are currently allocated to a specific entry key and change sequence.
- The License column will display license names in the same way that they appear in the License Management dialog box.
- Additional columns have been added to show date parts of the local and gmt date time columns.

EIACL_CurrentSkills

This view shows the current skills allocation for skills that have users or workgroups allocated to them.

- This view will always be ordered by EntryKey and ChangeDateTime descending and display all of the changes for each entry key. The entry key is always going to be a user or a workgroup.
- The SkillNewValue column displays the skill name.

EIACL_HistoricalSkills

This view shows all the changes for skills that have users or workgroups allocated to them.
- The entry key is always going to be a user or a workgroup.
- The SkillNewValue column displays the skill name.
- The SkillPreviousValue column displays the skill name for the previous value.
- This view is different from EIACL_CurrentSkills in that it also displays the previous values for the skill on the same row as the new value.
- In order to make this data easier to consume, it is recommended that you order the view by EntryKey and ChangeDateTime DESC.
- The DESCSkillChangeSequence column will show the ranking of the EntryKeys ordered by ChangeDateTimeGMT DESC.

When a user or workgroup is deleted, the SkillNewValue, ProficiencyNewValue and DesireToUseNewValue columns display a -. This provides an easy way to tell what skills were allocated to a user or workgroup when it was deleted in case you need to recreate the user or workgroup later with the same skill allocations.

EIACL_HistoricalSkillsDP

This view shows all the changes for skills.

- The entry key is always going to be a user or a workgroup.
- The SkillNewValue column displays the skill name.
- The SkillPreviousValue column displays the skill name for the previous value.
- This view is different from EIACL_CurrentSkills in that it also displays the previous values for the skill on the same row as the new value.
- In order to make this data easier to consume, it is recommended that you order the view by EntryKey and ChangeDateTime DESC.
• The DESC SkillChangeSequence column will show the ranking of the EntryKeys ordered by ChangeDateTimeGMT DESC
• This view includes some date part columns for use in sorting and grouping the data.

```
SELECT * FROM EIAL_HistoricalSkills ORDER BY EntryKey, ChangeDateTime DESC;
```

Related topics

About the Enhanced Interaction Administrator Change Log

Database tables for the Enhanced Interaction Administrator Change Log

Examples of changes to database tables

Troubleshoot the Enhanced Interaction Administrator Change Log

This help topic contains the following sections:

Logging administrative changes from other applications

If you upgrade and then downgrade

Duplicate records for workgroup media types

Side effect changes in Directory Services

Logging administrative changes from other applications

If you are using an version of Interaction Administrator that is earlier than CIC 2016 R1, with a server that supported enhanced logging, the changes will not be logged and may introduce inconsistencies with the data. The detailed changes in the Users, Workgroups, Skills, License Allocation, Stations, Roles and Default User containers will not be logged.

If you notice data inconsistencies, disable and re-enable logging. This takes a new snapshot and creates a new baseline for your data.
**Note:** If you take a new snapshot, the views display data back to the last snapshot. However, your complete change log information remains in the database.

**Duplicate records for workgroup media types**

You may see duplicate records for workgroup media types. This is because the earlier Interaction Administrator logging feature still exists and it logs data for these items. This feature was preserved for backward compatibility purposes.

**If you upgrade and then downgrade**

If you upgrade to 2016 R1 and then downgrade to an earlier version, you will see the Enhanced Interaction Administrator Change Log in Interaction Administration. However, the log will not function. When you re-upgrade to 2016 R1, and if the enhanced logging was previously enabled, a new snapshot will be taken during the upgrade process and enhanced logging will begin. If you had not enabled the enhanced logging before downgrading, the logging will not begin until you enable it.

**Side effect changes in Directory Services**

During the implementation of the Enhanced Interaction Administrator Change Log, certain Interaction Administrator behaviors were affected. This section describes those side effect changes.

The following are the categories of side effect changes that have been noticed in Directory Services:

- Side effects with delayed manifestation in Directory Services
- Side effects with immediate manifestation in Directory Services

**Side effects with delayed manifestation in Directory Services**

<table>
<thead>
<tr>
<th>Field</th>
<th>DS Key</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default Language</td>
<td>Users[USER]Preferred Language</td>
<td>If the preferred language for a user or workgroup’s is deleted, the default language is automatically assigned to the user or workgroup. However, the Enhanced Interaction Administrator Change Log does not log this change until another action or event updates or saves the user’s or workgroup’s configuration.</td>
</tr>
</tbody>
</table>
If the recording beep tone for a workgroup is deleted, the default recording beep tone is automatically assigned to the workgroup. However, the Enhanced Interaction Administrator Change Log does not log this change until another action or event updates or saves the workgroup’s configuration.

If a user’s default workstation is deleted, the Enhanced Interaction Administrator Change Log does not log this change until another action or event updates or saves the user’s configuration.

When a user record is imported by a .CSV file, an administrator can view the user’s properties in Interaction Administrator. When the administrator clicks OK to close the user’s Configuration dialog box, additional configuration settings are automatically set by Interaction Administrator. The Enhanced Interaction Administrator Change Log logs those additional settings changes.

See Location.

---

### Side effects with immediate manifestation in Directory Services

<table>
<thead>
<tr>
<th>Field</th>
<th>DS Key</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unified Messaging</td>
<td>Users[USER]\UM Destination</td>
<td></td>
</tr>
</tbody>
</table>

If a Unified Messaging station is deleted and a user was configured to use that station, the Enhanced Interaction Administrator Change Log logs that the station was deleted. It does not, however, log that the user record was also changed.
If a location is deleted, the Enhanced Interaction Administrator Change Log logs that the location was deleted. It does not, however, log that the user records that used that location were also changed.

When a location is deleted, the user records that were configured to use that location are changed to use the time zone of the default location. However, the Enhanced Interaction Administrator Change Log does not log this change to the user records.

If the time zone for the default location is changed, the Enhanced Interaction Administrator Change Log does not log this change to the users that use the default location.

If a user is configured to use a password policy, and that password policy is deleted, the Enhanced Interaction Administrator Change Log does not log that the password policy has been removed from the user.

If a role is configured to use a password policy, and that password policy is deleted, the Enhanced Interaction Administrator Change Log does not log that the password policy
Roles

If a user is configured to use a role, and that role is deleted, the Enhanced Interaction Change Log logs that the role was deleted. It does not, however, log the change to the user’s configuration.

If a workgroup is configured to use a role, and that role is deleted, the Enhanced Interaction Change Log logs that the role was deleted. It does not, however, log the change to the workgroup’s configuration.

Secure Input Forms

If a workgroup is configured to use a secure input form, and that form is deleted, the Enhanced Interaction Change Log does not log that the form was deleted. It also does not log the change to the workgroup’s configuration.

Actions

If an action is deleted, the Enhanced Interaction Change Log does not log the deletion of that action.

In addition, if that action is configured as either an alerting or disconnected action for a user, the Enhanced Interaction Change Log does not log the change to the user’s configuration.

If a workgroup is configured to use a wrap-up code, and that wrap-up code is deleted, the Enhanced Interaction Change Log does not log the deletion of the wrap-up code or the change to the workgroup’s configuration.

Wrap-up Codes
workgroup's configuration.

If a client configuration template is deleted, the Enhanced Interaction Change Log logs the deletion. However, if a user is configured to use that template, the Enhanced Interaction Log does not log the change to the user's configuration.

If an audio source is deleted, the Enhanced Interaction Change Log logs the deletion. However, if the audio source is configured as the on hold music for a workgroup, the Enhanced Interaction Change Log does not log the change to the workgroup's configuration.

Related topics

About the Enhanced Interaction Administrator Change Log

Accumulators

Accumulators are similar to system registers. They count events as they occur in the IC Interaction Processor. Instances of these events are stored in variables and are accessible in report logs or other handlers using the Accumulator tools in Interaction Designer.

Use this configuration page to define characteristics for each accumulator on the IC server. When you create a new accumulator, be sure to assign it to the server on the Server Configuration - Accumulators dialog box. Handlers built with the Accumulator tools in Interaction Designer must use the accumulator names defined on this page.

Data Type

The data type specifies the type of data that held in this accumulator. Select one of the available types based on the kind of data to accumulate. Data types include:
### Data Type

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boolean</td>
<td>True or false</td>
</tr>
<tr>
<td>DateTime</td>
<td>The year, month, day, hour, minute, and second.</td>
</tr>
<tr>
<td>Integer</td>
<td>Any positive or negative non-decimal number including zero. Includes all whole numbers.</td>
</tr>
<tr>
<td>Numeric</td>
<td>Any positive whole or decimal number including zero. Includes all real numbers.</td>
</tr>
<tr>
<td>String</td>
<td>Any sequence of alpha-numeric characters.</td>
</tr>
</tbody>
</table>

### Instance Type

Accumulator handlers create and modify instances of the data stored in the accumulator (see the Set Acc. tools in Interaction Designer). The accumulator specifies what kind of instances it can store. Select one of the following instance types.

<table>
<thead>
<tr>
<th>Instance Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any Instance</td>
<td>Allows the Accumulator handler to insert any instance (of the correct data type) into the accumulator. No Instance List is necessary. This is the least restrictive option; use it when accumulating values for an indeterminate list (for example, all CIC users referenced by UserID as a Value in the Set Acc. accumulator tool). This is similar to a predefined dynamic array.</td>
</tr>
<tr>
<td>Fixed List</td>
<td>The only instances captured by the accumulator are specified in the Instance List (for example, NewIncomingCall, NewOutgoingCall). Use this to capture a fixed set of values of a specific data type.</td>
</tr>
<tr>
<td>Single Instance</td>
<td>The accumulator captures only one specific instance of a value, which is specified in the Instance List (for example, CallOnHold).</td>
</tr>
</tbody>
</table>

### Instance List

Use the **Instance List** to define one or more instance names if the instance type is either fixed list or single instance. The developer who creates accumulator steps in a handler uses these instance names in the Interaction Designer. For example, to accumulate a call attribute for a specific list of three CIC user accounts, specify the three user names in the instance list, one entry for each name.

To create an instance name, click **Add** and type a name in the **Entry Name** dialog box.

To delete an instance name, select the name and click **Delete**.

**Note:** When a new accumulator instance is created, it must be deactivated and reactivated in Interaction Administrator --> Server Configuration --> **Accumulators** in order to use it. If this is not done, a warning message is displayed.

### Active

Select the **Active** check box to activate this accumulator in CIC, assuming you added it to the list of Currently Selected Accumulators in the **Server Configuration - Accumulators** dialog box. Once you
select the check box and click OK, the accumulator is immediately available to collect data. Clear the check box and the accumulator stops accepting data.

**Note:** A newly-defined accumulator immediately appears in the list of Available Accumulators in Server Configuration. You must move this newly defined accumulator to the list of Currently Selected Accumulators before you can activate it with the Active check box.

Related topics

**Accumulators**

**System Parameters**

**Packaged System Parameters**

CIC includes a few pre-configured system parameters that are used in the default handlers and by a few modules on the IC server.

The pre-configured system parameters include:

<table>
<thead>
<tr>
<th>System Parameter</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>ClientReportLogEICDataSourceName</td>
<td>Specifies the CIC data source name Interaction Reporting uses when running reports on IC report logs. The CIC data source references an ODBC Data Source Name (DSN) that points to the SQL Server database containing the report log data. This scheme allows you to change the report log database type in the future without having to change the Interaction Reporting interface. Report logs are stored in SQL Server tables on the IC server or on a separate server on the network.</td>
</tr>
<tr>
<td>Use Old TUI</td>
<td>Users that are assigned the Interaction Mobile Office role are speech-enabled TUI users, and users that are not assigned the Interaction Mobile Office role are DTMF-only TUI users. If you want DTMF-only users to use the old (original) DTMF TUI instead of the new DTMF TUI, you can change the value of the new Use Old TUI system parameter. The first time any DTMF-only user (a user not assigned the Interaction Mobile Office role) logs into the TUI, CIC creates the Use Old TUI parameter, and sets the value to False, meaning all DTMF-only users will use the new DTMF TUI. If you set the system parameter value to True, all DTMF-only users will use the old DTMF TUI with customizations available only with handler modifications.</td>
</tr>
</tbody>
</table>
**Status Messages**

To add a status message to the My Status list in Interaction Client

1. In the **System Configuration** container, double-click the **Status Messages** subcontainer.

2. Click **New**.

3. Type the name of the new status message entry, and then click **OK**. The **Status Message Configuration** dialog box appears.

4. In the **Status Message** box, type the message text you want to appear in the CIC clients on the **My Status** list.

5. In the **Status Icon** box, type the full path and file name with an .ICO extension. This is the icon that will appear next to the status message.

6. In the **Status Group** list, select a name that most closely describes or categorizes the status message.

7. Depending on your configuration, additional fields may appear that allow you to map the CIC status messages to the status messages in other systems. Select the appropriate options from these fields.

8. Select all of the status attribute boxes that apply to the new status message. The status attribute boxes define the behavior of CIC clients when the status is activated. For more information about the status attributes, see **Configuration**.

   **Note:** While you can select any combination of attributes, choose them carefully. Some combinations do not make sense.

9. Click **OK**. The new status message immediately appears in the **Status Messages** container in Interaction Administrator and in **My Status** in the CIC clients.

To have CIC play the status message as a DND (not available) prompt when a CIC client has that status set, record a prompt with this message and then modify the **CustomIVRSetUserStatus** handler in Interaction Designer by adding the new prompt. See **Queue Announcements** for more information.
Related topics

Overview of status messages

Multi-Language Support

Queue Announcements

Status message name

Type the name of a status message to appear in the My Status list in the CIC clients.

Status Message Configuration

Status Message

Type the message text to appear on the CIC clients' My Status list. For example, "On Vacation".

Localized Message

If the appropriately localized language is supported, the value of the localized status message is displayed.

Status Icon

Select a path, parameter, or type a full path and file name with an .ICO extension that contains an icon representing the status message. The directory that contains the default CIC status icon files is \[IC_server]\Resources where Server is the name of your IC server computer. Status message icons should be 32 x 32 and 16 colors.

Status Group

Select a status group that most closely describes or categorizes the status message. The status data is grouped, by default, in one of the five initial status groups. If necessary, you can create a new status group by typing a name in the list box field. The Agent Activity Log (report log ID 80) logs all user status changes and provides data for user and supervisor reports based on these status changes.

To use a newly created status group in a report, you must:

- Type a new Status Group name in the list box field for a status message. CIC starts logging data for this status with the new group name as soon as the change is saved.
- Add references to the custom column in Agent Activity Log to any appropriate reports.
Status is Do Not Disturb

Select this check box if the status should indicate the user is unavailable or should not be interrupted. When a CIC client user selects a status with the Do Not Disturb attribute set, no calls are sent to that user's station until the status changes to a non-DND status. When the IC detects a DND (Do Not Disturb) status, callers are typically directed to the user's voicemail or given other options, according to the SystemIVR handler.

Clear the Status is Do Not Disturb check box if the status indicates the user is available to receive calls.

Note: If the user has selected a status in a CIC client with a Do Not Disturb attribute and has selected the Activate Out of Office Message check box, the caller will hear the user's Out of Office message. See Queue Announcements for more information.

Status has Date

Select this check box if the status message should indicate an ending date, typically used when the Status is Do Not Disturb attribute is set. When a CIC client user selects a status with a date attribute set (for example, Out of town), an "Ending date for current status" field appears beside the status message. If the user types an ending date, callers are told the person is unavailable until the specified date.

Clear the Status has Date check box if the status indicates the user is available to take calls.

Status has Time

Select this check box if the status message should indicate an ending time and the Status is Do Not Disturb attribute is selected. When an Interaction Client user selects a status with a time attribute set (for example, Out to lunch), an "Ending time for current status" field appears beside the status message. If the user types an ending time, callers are told the person is unavailable until the specified time.

Clear the Status has Time check box if the status indicates the user is available to take calls.

Status is Forward

Select this check box if the status message indicates the user is available at a different phone number. If a CIC client user sets a status with this attribute selected, CIC checks for a forwarding number and dials it to complete the incoming call. Users must provide a forwarding phone number for CIC to forward calls based on this status. Users can set forwarding numbers on the Incoming Calls tab of the Configuration page in Interaction Client, or remotely using Interaction Mail.

Status is Allow Follow Up

Select this check box if the status message indicates that an agent's status can change to "Follow Up" after an ACD call terminates. For example, in an ACD environment, the "Available" status message may have the Status allows ACD Calls attribute set. If the Status is Allow Follow Up
attribute is also set, then the agent's status will automatically change to a "Follow Up" status after every ACD call terminates.

**Note:** If this check box is clear, terminating ACD calls does not automatically change the agent's status to Follow Up.

**Status is User Selectable**

Select this check box if the user can select the status message from the CIC client interface or the system tray icon.

If this check box is clear, the status is grayed out or not available for selection by users. It implies the status is set only by CIC using handlers.

**Status allows ACD Calls**

Select this check box if the status message indicates an agent is available to receive calls from both ACD queues and non-ACD queues. For information on how calls are placed to ACD queues, see *Workgroup Configuration*.

**Status is Persistent**

Select this check box if the status message can persist when the agent logs out of CIC (for example, exits a CIC client). For example, status messages like "On Vacation" should have this attribute.

Clear this check box if the status should not persist after a user logs out of CIC while the status is selected. If a user logs out of CIC with such a status, the user's status is automatically set to the last persistent status message used.

**Note:** In Interaction Administrator, you can change an agent's current status to another status only if the current status is persistent.

**Status is ACW (After Call Work)**

Select this check box if the status message indicates an agent is in a "Follow Up" mode after an ACD call. An agent's time is counted as logged in for ACD calls while the status with this attribute is selected. An ACW status is generally also a DND status, but that can be configured on this page.

Clear this check box if the status is not a follow-up status for ACD calls. You cannot configure a message as both ACW and Persistent. They are mutually exclusive. A warning dialog appears if you try.

**Status and Personal prompts**

The following table shows you when a caller would hear the user's personal prompts.
### Personal Prompt

<table>
<thead>
<tr>
<th>Prompt</th>
<th>Is played when:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>A caller dials a user's extension, or dials by name, the caller hears the user's Name prompt.</td>
</tr>
<tr>
<td>No Answer</td>
<td>The caller hears the user's No Answer prompt when the user is Available but doesn't answer the phone.</td>
</tr>
</tbody>
</table>
| Out of the Office | When the user has selected a status with a Do Not Disturb attribute and checked the Activate Out of Office Message box, the caller hears the Out of the Office message.  
**Note**: If the Activate Out of the Office Message box is not selected, the CIC client directs the call to the user's voicemail or to other options. |
| Agent Greeting  | A caller in an ACD queue assigned to the user hears the user's Agent Greeting prompt for up to 10 seconds before the user answers the call. |

### Related topics

- **Overview of status messages**
- **Add a status message**
- **Workgroup Configuration**
- **Multi-Language Support**

### Multi-Language Support

Multi-language support refers to the translation of data that are displayed in the CIC clients, and in reports, in a language appropriate to the login locale you specified created during setup.

If the appropriately localized language is not supported, the values are displayed in the default language.

**Note**: Languages available depend on the language installed by the add-on language install. An error message is displayed if the selected language is not installed.

### Parameters

The **Multi-Language Support** tab contains three parameters: **Attribute**, **Language**, and **Value**.
<table>
<thead>
<tr>
<th>Attribute</th>
<th>The name of the value to be translated. Translation is elected for only a few values that are displayed in reports or status messages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language</td>
<td>The language used for the translation. The default language is that currently set by the administrator. A list of 100 + additional languages appears in the Languages dialog when you click Add Language. This value is Default if no language is specified for your login country in the Languages list.</td>
</tr>
<tr>
<td>Value</td>
<td>The value to display, the translated value.</td>
</tr>
</tbody>
</table>

**Buttons**

The Multi-Language Support tab also contains the buttons: Edit Value, Add Language, and Remove Language. This is the function they perform:

- **Edit Value**
- **Add Language**
- **Remove Language**

For more information on the function of the scroll buttons and the Confirm auto-save check box, see Interaction Administrator Interface.

**Related topics**

Overview of status messages

Add a status message

**Configuration**

**Actions**

- **Action Names**

Use this page to enter the action name and select the type of action.

**Name:**

Enter a descriptive name for an action (for example, Start Call DB, Stop Call DB, and so on). If you use a Force and a non-Force version of the commands, it may be helpful to name the commands accordingly. This name appears as an Alerting Action, Disconnected Action, or a Transfer Action.

**Type:**
Select the type of action from the drop-down list. The options are 'DDE', 'Custom Screen Pop', and 'Web Browser Screen Pop'.

**Action Configuration**

Each action must specify the required action protocol components in the following fields. Click here for an example procedure.

**Executable**

Type the name of the server application's executable file (for example, C:\Windows\MSOffice\Word.exe).

**Application**

Type the name of the server application, which is generally the name of the executable without the .EXE extension (for example, Word).

**Topic**

Type the name of the server application topic (also called the action item name) that specifies the exact group or category of data to use (for example, a bookmark, TOC, System, and so on).

**Command List**

Add one or more action commands that direct the server application to the desired point for the user or ACD agent. This action will not work unless you enter at least one command for this action. The order in which the commands appear in this list is significant. Commands are executed in order from the top to the bottom of the list.

To add a command, click the **Add** button and type the name of the command in the list. After you enter all of the commands for this action, use the **Up** and **Down** buttons to arrange the order of execution, starting at the top of the list.

**Add**

Click **Add** to enter each new command in the Command List box. Each command must be on its own line. Click **OK** to complete the entry.

**Edit**

Select a command in the list and click **Edit** to change the command. Click **OK** to save the edits.

**Delete**
Select one or more commands in the list and click **Delete** to remove one or more commands from the list.

**Up**

Select a command in the list and click **Up** to move the command higher in the order of execution.

**Down**

Select a command in the list and click **Down** to move the command lower in the order of execution.

**Note:** You must restart the CIC client for any changes to Actions to take effect.

---

**Custom Screen Pop Configuration**

Screen Pop configuration allows you to pop open a third party application screen to perform an action. This screen design provides information about the screen to the .NET plug-in.

**Screen Pop Type**

Enter a unique name for the screen pop type.

**Input Values**

This section displays the name and associated default value of the inputs. Click **Add...** to add a new input value for this screen pop action. Click **Edit...** to change an existing input, or click **Remove** to delete an input.

---

**Web Browser Screen Pop**

Web Browser Screen Pop configuration allows you to open your browser to a specific location or URL on a specific event. For example, on an incoming call, your browser can open to web page.

**URL**
Enter a URL to open in the browser. Use the http:// format. For example, use http://my.yahoo.com/. To pass a specific parameter to the URL, click Insert a URL parameter into the URL string.

**Popup Type**

Select **Pop to a new browser (only supported in Internet Explorer and Firefox)** to open the URL in a new browser instance. Select **Pop to a new tab on an existing browser session** to open the URL in a new page or tab in a currently opened browser.

**URL Parameters**

This is a list of parameters that are being passed to the URL. Click **Edit...** to change an existing parameter.

>Note: CIC encodes the URL parameters. Therefore, put special characters, such as “,” in the URL field and not in the values of the URL parameters.

**Command Entries**

Type an actual command associated with this action. An action can consist of one or more commands. Each command must be on its own line in the Command Entry field. Use the Add button to add each command on its own line. Since the top to bottom order of the commands in this list determines the order in which the commands are executed, use the Up and Down buttons to arrange the order in the list.

Request commands (that is, commands initiated from a client application to the IC server) can be:

- Called by a specific function in the client application
- Called by a generic execute function in the client application

If a specific function is used in a command, type the function name followed by the requested CIC attributes. For example:

```
MyFunction(${CallID},${LineName},${StationName})
```

If a client application requests CIC attributes (that is, not using a unique function), you can type just the CIC attributes to return. For example:

```
${CallID},${LineName},${StationName}
```
Use this page to configure your organization information.

**Organization**

This is the name of your company you entered in the Company Name field. This name identifies your organization in the master database and in email messages sent by LRA at your site.

**LRA Monitored Mailbox**

This field shows the display name of the email account on the customer site that LRA monitors to pick up requests. Log requests are mailed to this account for processing by LRA.

**SMTP Address for LRA’s Monitored Mailbox**

This is the SMTP address for the monitored mailbox. For example, you would enter "i3recorder@dev2000.com".

**Work Directory**

This required field stores the fully qualified path to a working directory where log files are compressed (zipped) prior to FTP transfer. If for some reason the FTP process fails, log files will persist in this location until a subsequent FTP attempt is successful, or until files are manually deleted. The logs directory [drive]\[server name]\IC\Logs (or \IC\Logs) is used by default.

**Off-Peak Begin and Off-Peak End**

These fields indicate a block of time when the customers IC server is not at peak utilization. Deferred log retrieval requests are executed during this period to minimize impact on the server.

**Standard Slowdown and Off-Peak Slowdown**

You can set "slowdown factors" that limit the amount of CPU and network bandwidth that LRA can consume. Throttling forces CPU-intensive processes such as snipping, zipping, FTP, etc. to sleep intermittently so that LRA does not degrade the overall performance of the CIC system.

LRA runs at normal speed when the slowdown factor is 1. It runs at half speed (and consumes half the resources) when the slowdown factor is 2. A factor of 4 means LRA is operating at one-quarter speed with a corresponding decrease in system resources used. This factor applies to requests processed during normal hours and must be between 1 and 100.
Different slowdown factors can be set for peak-time and non-peak times. For example, you might set the slowdown factor to 2 during business hours, and allow LRA to run at normal speed during non-peak hours.

**Defer By Default**

Check this option to defer all LRA requests until off-peak hours. In an emergency, support personnel can override this setting on a per-request basis, meaning that they can flag a request to be processed immediately.

**LRA Email Configuration**

Use this page to configure email settings for LRA.

**Send Status Email To**

Status messages are sent to recipients listed in this field. LRA sends status emails when jobs start and finish. Leave this field blank if you do not want to receive status emails.

**Send Error Email To**

In the event that an error occurs, LRA will send an error notification message to the recipients listed in this field. Leave this field blank if you do not want to receive error notification emails.

**LRA Firewall Configuration**

Use this page to configure firewall settings for LRA.

**IP Address**

If your IC server is behind a firewall, you must specify additional information that allows outbound payloads and data to pass through the firewall. Contact your local network administrator to find out if your IC server is behind a firewall. This person can help you complete Firewall type, FTP Passive Mode, Firewall address, FTP Port, Id, and Password fields. Firewall Address is the host name (or IP address) of the firewall.

**Port**

This number identifies the port used by FTP to pass data through firewalls. Contact your local network administrator to find out which port on the firewall is opened to FTP traffic.

**Username**
This field stores the User Id needed to pass data through the firewall. It is likely that you will need to contact your local network administrator to obtain this information.

**Password**

This field stores the password for the Username specified above.

**Type**

This field identifies the type of firewall used. The choices are None, Socks4 or Socks5. Socks4 is a protocol that relays TCP sessions at a firewall host to allow application users transparent access across the firewall.

Socks5 does the same thing, except that it also resolves issues that Socks4 does not fully address or omitted. Socks5 provides strong authentication, authentication method negotiation, address resolution proxy, and other features.

Sensitive information about your firewall, such as ID and password information, is never transmitted to a remote server or passed to a remote database. LRA uses firewall configuration information to transmit outbound data through the firewall. The firewall Id and password is stored locally in a configuration (.cfg) file in the server\LRA directory so that LRA can retrieve it. If this poses an unacceptable security risk, you should deny user access to the \server\LRA folder.

---

**LRA FTP Configuration**

Use this page to enable or disable FTP configuration settings for LRA.

**Use Passive Mode**

This check box determines whether FTP operations will be performed in passive or active FTP mode. Passive mode allows FTP operations to pass data through certain types of firewalls that would not otherwise allow the flow of data. Check with your local network administrator to find out if your firewall requires passive FTP. Passive FTP mode is the default.

**Auto Send**

This check box determines whether requested data is automatically FTP'd from the customer site to the requester's FTP site. When checked, the I3LRAU server process FTP's zip files as soon as it finishes staging them in the working directory. When this option is unchecked, zip files remain in the working directory until they are manually FTP'd to the requester by the customer. As a rule of thumb, you should leave this option checked unless you wish to inhibit all LRA-related file transfers for some reason.
When Autosend is unchecked, LRA extracts logs and zips them, but does not do anything else. Customers must use an Internet FTP utility (e.g. WSFTP or equivalent) to manually transfer zip files to the Product Information site.

Mail

Configure a mail storage source

To configure a mail storage source

1. In the System Configuration container, click the Mail subcontainer.
2. In the view pane, double-click Configuration.
3. In the Mail Configuration dialog box, complete the tabs. See the links under Related topics for complete information.
4. Click OK.

Related topics

Providers

Directories

Transports

Prefixes and Voicemail

Options

Monitored Mailboxes

Attendant Mailboxes

Providers

Exchange

Configure an Exchange provider

To configure an Exchange provider

1. In the Mail Configuration dialog box, click the Providers tab. For information on how to access the Mail Configuration dialog box, see Configure a Mail storage source.
2. In the list of providers, select Exchange.
3. Click Enable Provider.
4. In the Exchange Configuration dialog box, in the Host box, type the URL of the Exchange server that runs the calendar service, in the “http://ServerName” format. If you plan to use SSL/TLS, use “https://ServerName” format.
5. In the **User** box, type an administrative user account name (CIC administrator account) that has "Receive As" rights on the Exchange server. The field should contain the domain and username (domain\username).

6. In the **Password** box, type the password for the user ID.

7. In the **Confirm** box, re-type the password for the user ID.

8. To use Exchange MAPI as the CIC-to-Exchange integration, select the **Enable MAPI** check box. Then select either **Full mailbox access** or **Administer information store** depending on the Exchange permissions you set. For more information, see the *IC Installation and Configuration Guide*, which is available in the Documentation Library on the IC server.

   **Note:** In CIC 4.0 and later, both Exchange Web Services and MAPI can co-exist, for example during a migration or business as usual.

9. To not use Exchange MAPI as the CIC-to-Exchange integration, clear **Enable MAPI**.

10. To use Microsoft Exchange Web Services (EWS)-based integration, select **Enable Exchange Web Services**.

11. To specify an Exchange server in addition to the default Exchange server, click **Add** and continue with **Configure domain properties**.

   **Note:** If you do not specify the domain to use to access mailboxes, CIC connects to the default Exchange server. That is, Exchange Web Services will try to use the CIC service account's mailbox for autodiscovery and impersonation over other mailboxes for message retrieval and queuing. If you want to use another Exchange server in addition to the default Exchange server to access mailboxes, you must specify the domain to use for the default Exchange server and the domain to use for the additional Exchange server.

12. Click **OK**.

Related topics

Configure a Mail storage source

Configure domain properties for an Exchange provider

To configure domain properties for an Exchange provider

1. In the **Service account email address** box, type the email address that is used to access mailboxes.

2. To use the CIC Administrator account credentials to access mailboxes, select the **Use IC Administrator account credentials** option. Otherwise, skip to step 7.
3. To use another account's credentials to access mailboxes, select the **Use the following credentials** option. Then complete steps 4, 5, and 6.

4. In the **User name** box, type an administrative user account name (CIC administrator account) that has impersonation rights on the Exchange server. For network credentials, type the domain and user name (domain\username). For Web credentials, type the account name @ domain (username@domain).

5. In the **Password** box, type the password for the account.

6. In the **Confirm password** box, re-type the password for the account.

7. To use the Exchange Autodiscover feature to identify the Exchange Web Services URL, select the **Autodiscover to get the Exchange Web Services URL** option.

**Note:** The Autodiscover process can be time-consuming. As an alternative, manually specify the Exchange Web Services URL, as described in step 8.

8. To manually specify the Exchange Web Services URL, select the **Use this Service URL** option. Then type the Service URL in the corresponding box.

9. If Exchange information is not stored in Active Directory, using SCP lookup during the autodiscover process to find service endpoints will result in unnecessary delays. To disable this the SCP lookup, deselect the **Enable SCP Lookup** check box.

10. In the **Seconds before timeout** box, type the number of seconds that CIC should attempt to contact the Exchange server.

11. Click **OK**.

**Related topics**

Configure an Exchange provider

**Notes**

Configure a Notes provider

To configure a Notes provider

1. In the **Mail Configuration** dialog box, click the **Providers** tab. For information on how to access the Mail Configuration dialog box, see Configure a Mail storage source.
2. In the list of providers, select Notes.
3. Click **Enable Provider**.
4. In the **Notes Configuration** dialog box, in the **Password** box, type the CIC administrator's IBM Domino password. It should be the same password used to log into the Domino server when IBM Notes is started. (It is not the Windows domain or CIC password.)
5. In the **Confirm** box, re-type the password.
Note: If you used IC Setup Assistant to configure your Notes provider, the IC Setup Assistant verified that you typed the same password in both fields. However, it did not authenticate the password with the IBM Domino server. For more information, see the *Installation and Configuration Guide* in the CIC Documentation Library on the IC server.

6. To filter voice mails and faxes with a database filter, select the **Use Database Search** option. This option provides a significant performance improvement when a user accesses a mailbox via the TUI. However, it is recommended that you also select the **Use Folder References** option. Together, these options limit the voice mails and faxes to the user’s inbox (or other selected folder). If you select only the Use Database Search option, then all of voice mails and faxes for the entire mail database appear.

7. To apply a filter that includes a reference to the currently selected folder to the mail database, select the **Use Folder References** option.

**Note:** In order for this feature to work, the IBM Domino administrator must enable folder references on the IBM Domino server(s) for the mail database of each CIC user.

If you select both the **Use Database Search** option and the **Use Folder References** option, but do not enable folder references, then no voice mails or faxes may be returned. After you select the **Use Folder References** option, the only voice mails and faxes returned are those remaining after folder references have been enabled. For more information, see the *Installation and Configuration Guide* in the CIC Documentation Library on the IC server.

Related topics

Configure a Mail storage source

Notes requirements

Interaction Message Store

Configure Interaction Message Store

To configure Interaction Message Store

1. In the **Mail Configuration** dialog box, click the **Providers** tab. For information on how to access the **Mail Configuration** dialog box, see Configure a Mail storage source.
2. In the list of providers, select Interaction Message Store.
3. Click **Enable Provider**.

   The **Interaction Message Store** dialog box appears. CIC confirms the **Root Directory** location for message storage. The default root directory is `\[server name]\IC\FBMC`. When the Interaction Message Store is not located on the IC server, use one of the following to specify the Message Store Path:
- UNC Path Using a DNS resolved host
  Example: `\fileserver\FBMC`
- UNC Path Using an IP address for the host - **Note:** This method is preferred as it removes a potential point of failure (DNS resolution).
  Example: `\192.168.2.27\FBMC`

**Note:** Do not set the root directory to the root of the drive (for example C:\IMS). For more information, see the Interaction Message Store in the Technical Reference Documents section of the CIC Documentation Library on the IC server.

4. To configure individual mailboxes, click **Mailboxes configuration**. For more information, see Configure Interaction Message Store mailboxes.

5. In the **Maximum Storage Space (bytes)** field, select the maximum amount of storage space, in bytes, to allocate to voice mail messages. Select No Limit if you do not want to limit the storage space for voice mail messages.

6. In the **Maximum Message Count** field, select the maximum number of messages to allocate for voice mail messages. Select **No Limit** if you do not want to limit the storage space or message count for voice mail messages.

7. Click **OK**.

Related topics

- Configure a Mail storage source
- Configure Interaction Message Store mailboxes

**Configure Interaction Message Store mailboxes**

To configure Interaction Message Store mailboxes

1. To view only unused IMS mailboxes, select the **Show Only Unused Mailboxes** checkbox.
2. To refresh the list of IMS mailboxes, click **Refresh List**.
3. To select all mailboxes, click **Select All**.
4. To delete selected mailboxes, click **Delete Mailbox**.

**Note:** If a mailbox is still being used by another user, the mailbox will not be deleted.

Valid mailbox names and address use only alpha-numerical characters. Other characters are not recognized by CIC.
Configure a GroupWise provider

To configure a GroupWise provider

1. In the **Mail Configuration** dialog box, click the **Providers** tab. For information on how to access the **Mail Configuration** dialog box, see *Configure a Mail storage source*.
2. In the list of providers, select GroupWise.
3. Click **Enable Provider**.
4. In the **GroupWise Configuration** dialog box, in the **Server** box, type the name or IP address of the GroupWise server hosting the POA containing the most CIC users. While the new GroupWise Connector can connect to any POA with SOAP enabled, it is most efficient to connect to the POA that will be used the most. If the GroupWise Connector attempts to access a mailbox on a different post office than the one handled by the POA selected here, it will be redirected to the correct POA.
5. In the **Port** field, select the port value. The port value should be the same as the SOAP port for this POA, which by default is 7191. If the POA uses a different port value, select it here.
6. In the **Username** box, type the account that will be used to access the system address book and to send voice mails left by external callers. Typically, it is an account created just for use by CIC.
7. Click **Browse** to select the **GWTApp.xml** file from the appropriate IC server directory.

The Groupwise Connector requires that you install CIC as a Trusted Application in GroupWise. This enables CIC to automatically provide GroupWise users access to their mailboxes through e-mail or TUI.

If you have not yet generated the Trusted Application Key file in ConsoleOne and copied the resulting GWTApp.xml file to a directory on the CIC Server, do so now. For instructions, see the *Novell GroupWise Support for IC Technical Reference* in the IC Documentation Library.

8. To authenticate the server and encrypt subsequent communications, select **Use Secure Connections (SSL/TLS)**.

If you are using TLS/TLS for SOAP and have obtained the certificate, assigned it to the POA, and enabled SSL for SOAP in the POA, select this option to enable SSL for SOAP in CIC.
**Prerequisites:** The server certificate must be available and trusted, before **Use Secure Connections (TLS)** takes effect. For more information see *Interaction Center Security Concepts* in the CIC Documentation Library.

**Note:** GroupWise uses certificates stored in the Windows certificate store. The GroupWise server has to be using a certificate that has been issued by a CA (Certification Authority, like Verisign) and trusted in the Windows certificate store. If the certificate is self-signed (not issued by a CA), manually add the server’s certificate to your Windows certificate store. To view certificates, run the certificate manager (certmgr.msc) from the Start menu.

Examples:

- The GroupWise administrator has a certificate issued from Verisign. Since Verisign shows up in certmgr.msc under Trusted Root Certification Authorities, just select **Use Secure Connections (TLS)**, and TLS is enabled.

- The GroupWise administrator has a certificate issued from a certificate shop that does not have a Windows certificate store listing. Manually add the certificate to your Trusted Root Certification Authorities, then select **Use Secure Connections (TLS)**.

- The GroupWise administrator created a self-signed certificate (not issued by a CA). Manually add the certificate to your Trusted Root Certification Authorities, then select **Use Secure Connections (TLS)**.

9. To enable GroupWise server tracing for troubleshooting purposes, select the **Enable GroupWise Server-side Tracing** checkbox.

**Note:** For more information, see *Novell GroupWise Support for IC* in the Technical Reference Documents section of the CIC Documentation Library.

10. Click **OK**.

Related topics

*Configure a Mail storage source*

*GroupWise requirements*

*LDAP*

*Configure an LDAP directory*
To configure an LDAP directory

1. In the **Directory Name** box, type the LDAP directory name. The name entered here is arbitrary and used solely within CIC to identify this configured directory.
2. In the **Server** box, type the FQDN or IP address of the LDAP server.
3. In the **Port** box, modify the default port number if necessary. The default port number used on most LDAP servers is 389 (non-SSL) or 636 (SSL). The port number on your LDAP server may vary.
4. In the **Search Base** box, type the distinguished name of the base entry (starting point) for searches in the directory, if required. This entry can be for a country, an organization, or other type of grouping. Whether a search base is required depends on the directory server in use.
5. If the LDAP server requires authentication so that the IC server can connect to it, select the **Requires Authentication** check box. Then enter the user name and password information.
6. Click **OK**.

Related topics

**Configure an LDAP provider**

To configure an LDAP provider

1. In the **Mail Configuration** dialog box, click the **Providers** tab. For information on how to access the **Mail Configuration** dialog box, see Configure a Mail storage source.
2. In the list of providers, select LDAP.
3. Click **Enable Provider**.
4. In the **LDAP Configuration** dialog box, click **Add** to add LDAP directories. You can select an existing directory in the worksheet to edit or delete it. For more information, see Configure an LDAP directory.
5. In the **Timeout (seconds)** field, enter how long the IC server should allow a search to proceed through the directory before it times out. The default timeout is 10 seconds.
6. In the **Search Limit** field, select the maximum number of matching entries the LDAP server should return when the directory is searched. The default is 1000 entries.
7. To authenticate the server and encrypt subsequent communications, select the **Use secure connections (SSL/TLS)** option.
   If you are using SSL/TLS for LDAP, select this option to enable SSL/TLS for CIC.

**Prerequisites**: The server certificate must be available and trusted, before **Use Secure Connections (TLS)** takes effect. For more information see Interaction Center Security Concepts in the Technical Reference Documents section in the CIC Documentation Library on the IC server.
Note: LDAP uses certificates stored in the Windows certificate store. The LDAP server has to be using a certificate that has been issued by a CA (Certification Authority, like Verisign) and trusted in the Windows certificate store. If the certificate is self-signed (not issued by a CA), manually add the server’s certificate to your Windows certificate store. To view certificates or manually import certificates in the Windows certificate store, run the certificate manager (certmgr.msc) from the Start menu.

Examples:

• The LDAP administrator has a certificate issued from Verisign. Since Verisign shows up in certmgr.msc under Trusted Root Certification Authorities, just select **Use Secure Connections (TLS)**, and TLS is enabled.

• The LDAP administrator has a certificate issued from a certificate shop that does not have a Windows certificate store listing. Manually add the certificate to your Trusted Root Certification Authorities, then select **Use Secure Connections (TLS)**.

• The LDAP administrator created a self-signed certificate (not issued by a CA). Manually add the certificate to your Trusted Root Certification Authorities, then select **Use Secure Connections (TLS)**.

8. Click **OK**.

Related topics

Configure a Mail storage source

Overview to LDAP SMTP and IMAP

Configure an LDAP directory

SMTP

Configure an SMTP provider

To configure an SMTP provider

1. In the **Mail Configuration** dialog box, click the **Providers** tab. For information on how to access the **Mail Configuration** dialog box, see *Configure a Mail storage source*.

2. In the list of providers, select SMTP.

3. Click **Enable Provider**.

4. In the **SMTP Configuration** dialog box, click **Add** to add SMTP transports. You can select an existing transport in the worksheet to edit or delete it. For more information, see *Configure an SMTP transport*.

5. In the **Default Sender** box, type the email address of the default sender. The default sender is used for messages in which a sender has not been explicitly specified.

6. In the **Timeout (seconds)** list, specify how long the IC server should wait for a response from the SMTP server before abandoning an attempt to send an email message. The default timeout is 10 seconds.
7. To authenticate the server and encrypt subsequent communications, select the **Use secure connections (SSL/TLS)** option. If you are using SSL/TLS for SMTP, check this setting to enable SSL/TLS.

**Prerequisites:** For TLS to be fully enabled, additional configuration is required. For more information see *Interaction Center Security Concepts* in the **Technical Reference Documents** section in the CIC Documentation Library on the IC server.

8. Click **OK**.

**Related topics**

- Configure a Mail storage source
- Add an SMTP transport

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Configure an SMTP transport

To add an SMTP transport

1. In the **Transport Name** box, type the SMTP transport name. The name you type is used solely within CIC to identify this configured transport.
2. In the **Server** box, type the FQDN or IP address of the SMTP server.
3. In the **Port** box, modify the default port number if necessary. The default TCP/IP port number used on most SMTP servers is 25 (non-SSL) or 465 (SSL). The port number on your SMTP server may vary.
4. In the **Domain Serviced** box, if you want to limit the domain serviced by this transport, type the recipients’ domain name. For example, if you type **example.com**, then this transport will attempt to deliver emails intended for john@example.com, but not for john@inin.com. In most cases, you leave this field blank.

**Note:** This field is not related to the **Server** field. It simply acts as a filter for the recipient (To:) addresses that this SMTP transport serves.

5. If the SMTP server requires authentication so that the IC server can connect to it, select the **Requires Authentication** check box. Then specify the user name and password information.
6. Click **OK**.

**Related topics**

- Configure an SMTP provider
To configure an IMAP provider

1. In the **Mail Configuration** dialog box, click the **Providers** tab. For information on how to access the **Mail Configuration** dialog box, see **Configure a Mail storage source**.
2. In the list of providers, select IMAP.
3. Click **Enable Provider**.
4. In the **IMAP Configuration** dialog box, click **Add** to add IMAP servers. You can select an existing server in the worksheet to edit or delete it. For more information, see **Configure an IMAP server**.
5. In the **Timeout (seconds)** field, enter how long the IC server should wait for a response from the IMAP server before abandoning the attempt to receive an email message. The default timeout is 10 seconds.
6. To authenticate the server and encrypt subsequent communications, select the **Use secure connections (SSL/TLS)** option.
   
   If you are using SSL/TLS for IMAP, select this option to enable SSL/TLS for CIC.

**Prerequisites:** For TLS to be fully enabled, additional configuration is required. For more information see **Interaction Center Security Concepts** in the **Technical Reference Documents** section in the CIC Documentation Library on the IC server.

Related topics

**Configure a Mail storage source**

**Configure an IMAP server**

To configure an IMAP server

1. In the **Name** box, type the IMAP server name. The name entered here is arbitrary and used solely within CIC to identify this configured server.
2. In the **Server** box, type the FQDN or IP address of the IMAP server.
3. In the **Port** box, modify the default port number if necessary. The default TCP/IP port number used on most IMAP servers is 143 (non-SSL) or 993 (SSL) The port number on your IMAP server may vary.
4. Select the **Supports PROXYAUTH** check box if the IMAP server supports a non-standard extension to the IMAP4rev1 protocol called PROXYAUTH. The PROXYAUTH extension enables CIC to access users’ mailboxes without having to know their IMAP passwords. To use this extension, CIC must still be able to determine the users’ IMAP logon names (either via an IMAP user account file or via the LDAP server), and CIC must also be granted the necessary privileges on the IMAP server. Then enter the user name and password. The values will depend on the configuration of the IMAP server.

5. Click **OK**.

**Related topics**

- Configure an IMAP provider
- Gmail

**Configure a Gmail provider**

To configure a Gmail provider

1. In the **Mail Configuration** dialog box, click the **Providers** tab. For information on how to access the **Mail Configuration** dialog box, see Configure a Mail storage source.
2. In the list of providers, select Gmail.
3. Click **Enable Provider**.
4. To view, add, edit, or delete domains for the provider, click **Properties**. For more information, see Configure a Gmail domain.

**Related topics**

- Configure a Mail storage source
- Overview of Gmail

**Configure a Gmail domain**
In the **Gmail Configuration** dialog box, you can add, edit, and delete a domain. You can also designate a default domain to deliver messages when neither the domain of the sender nor the domain of any of the recipients is one of the configured domains. For example, if a user requests that an email alert be delivered to a personal email address for a voice mail or fax.

To configure a Gmail domain, you need to obtain several items from the Google Developer Console in your Gmail account. For a list of these items, see *Overview of the Gmail integration configuration*. For more information about how to obtain these items, see *Gmail Integration Technical Reference* in the CIC Documentation Library.

To configure a Gmail domain

1. To add a domain, click **Add**. Then complete the procedure, *Configure the properties of a Gmail domain*.
2. To edit a domain, select it in the list and then click **Edit**. Then complete the procedure, *Configure the properties of a Gmail domain*.
3. To delete a domain, select it in the list and then click **Delete**.
4. To select a default domain, select it in the list and then click **Set default**.
5. To specify the timeout for IMAP and SMTP requests, in the **Timeout** box, specify the duration in seconds after which the system will stop trying to send a message to the domain.

**Note:** the timeout value is the same for all domains.

Related topics

**Configure the properties of a Gmail domain**

**Directories**

Use this page to select the default directory which is used for email name searches, and set the order of priority for searches. Use the **Up** and **Down** buttons to change the order of the directories.

**Directory Search Order**

The directory contains the lookup information for contacts (first name, last name, and so on).

This list shows the default order of email provider directories that CIC will use to search for a user's mailbox.

- Interaction Message Store will not be listed because it does not maintain any contact information.
- If you defined more than one LDAP directory, each will be listed.
Transports

Use this page to select the transport which is used for delivering email, and set the order of priority for delivery. Use the **Up** and **Down** buttons to change the order of the transports.

**The SMTP transport handles the delivery of mail.**

This list shows the default order of email provider transport vehicles that CIC will use to search for a user's mailbox. (If you defined more than one SMTP transport, each will be listed.)

*Note:* If you have multiple transports and one of them is of the type SMTP for an SMTP mail provider (e.g., Sun ONE), you must move the SMTP provider to the top of the Transports list. Configure each transport to handle messages only in its domain, so messages to each domain are passed to the appropriate transport.

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Prefixes and Voice Mail

Use this page to configure email subject prefixes and voice mail options.

**Email Subject Prefixes**

Use this section to set the email subject prefixes for faxes and voice mails.

**Fax**

Enter the prefix that you want to appear for faxes in the subject line. By default, the system uses **IC Fax**.

**Voice**

Enter the prefix that you want to appear for voice mails in the subject line. By default, the system uses **IC Voicemail**.

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Related topics

- Configure a Mail storage source
- Transports
- Prefixes and Voice Mail

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Enter the prefix that you want to appear for replies to interactions in the subject line. By default, the system uses RE:

**Note:** This option is used only with emails that are created by handler email tools. Emails that users create in the CIC clients do not use this option. For more information on using handlers, see the Interaction Designer Help in the CIC Documentation Library.

**Forward**

Enter the prefix that you want to appear for forwarded interactions in the subject line. By default, the system uses FW:

**Note:** This option is used only with emails that are created by handler email tools. Emails that users create in the CIC clients do not use this option. For more information on using handlers, see the Interaction Designer Help in the CIC Documentation Library.

**Voicemail Options**

Use this section to set voice mail message options.

**Normalize Voice Mails**

This setting determines whether or not the audio is normalized. **Normal Voice Mails** attempts to correct any problems in which the person leaving the voicemail could not be heard). Select the check box to turn on this option.

**Long Message Compression**

This setting is the compression format which is used to compress the audio for "long" messages. Select the format from the pull-down list. The available settings are:

- DSP Group TrueSpeech
- GSM 6.10
- G711 Mu-Law PCM

**Related topics**

[Configure a Mail storage source](#)

[ACD Options](#)

Use this page to configure message delivery behavior.
Message Count Limit

Use the up and down arrow keys to set the count that is used as the maximum number of messages that will be loaded when a user accesses a folder in the telephone user interface (TUI). The default value for this setting is 100.

Polling Intervals

Directory Synchronization (Minutes)

Use this field to set the interval for importing user information from the directory service (what is displayed in the Mailbox Info page in Interaction Administrator and in the Company Directory view in the CIC clients. The default value is 15 minutes.

New Messages (Seconds)

This setting specifies the time in seconds that each message store provider polls for new messages. The default is 120 seconds.

Failed Message Delivery

Use this section to configure failed message delivery behavior.

Delivery Retry Limit

This setting specifies how many times the system will retry the delivery of a message. By default the CIC email server will attempt to transmit a message a maximum of ten times before deciding that there is something wrong with the message itself and moving it to the MAIL\NORETRY directory. The email server will never attempt the second transmission on a message whose first transmission failed until after some other message has been successfully transmitted. Therefore, it is somewhat unlikely, but not impossible, that a transient condition such as network problems would cause an otherwise perfectly valid message transmission to fail twice.

Use the up and down arrow keys to change the limit.

Retry Interval (minutes)

This setting specifies (in minutes) the time to wait between message delivery retries. Use the up and down arrow keys to change the number of minutes. The default value for this setting is 5 minutes.

Failed Message Expiration (days)
This setting specifies the time (in days) to save a message that could not be delivered. If this time expires, the undeliverable message is deleted. Use the up and down arrow keys to change the number of days. The default value for this setting is 7 days.

**Threaded Email**

CIC can track email messages based on text contained in the messages. This text is the conversation identifier, which CIC uses to associate these email conversations or "Threaded Email". Select the **Add conversation Identifier on Emails** check box to enable the text identifier for this feature.

**Related topics**

[Configure a Mail storage source](#)

[Monitored Mailboxes](#)

A monitored mailbox is a mailbox that is configured so that the Incoming Mail initiator is started whenever a new message arrives in the "Inbox" folder for that mailbox.

**Mailbox Number**

This is the number that corresponds to the Object ID that will be passed to the Incoming Mail initiator (the Notification Event will always be New Mail). Valid mailbox numbers are 1 through 32767.

**Mailbox Address**

Click **Select** to set the **Mailbox Address**. The Mailbox Selection dialog box is used to associate a User, Workgroup, Email Queue, Monitored Mailbox, etcetera, with a mailbox. The four options available are:

- **No mailbox** - (this doesn't apply to an Email Queue or a Monitored Mailbox). Assign a **Display Name**. No mailbox will be associated with this entry.
- **Interaction Message Store** - (formerly Voicemail Only or FBMC). Assign a **Display Name** and click **Assign Address**. The generated address will be i.e., "FBMC: JohnDoe".
- **IMAP** - No directory entry is associated with the object, but a mailbox exists on an IMAP server, so you must provide the IMAP server, port, username, and password to access the mailbox.
- **Search for a mailbox in the following directories** - Because the directory entry has associated attributes, the directories can be searched to find the associated entry. Once found, the attributes are populated using the corresponding attributes from that entry.
Related topics

Configure a Mail storage source

Attendant Mailboxes

Use this page to configure the mailboxes that Interaction Attendant can use.

Mailbox Address

Click Select to set the Mailbox Address. The Mailbox Selection dialog box is used to associate a User, Workgroup, Email Queue, Monitored Mailbox, etcetera, with a mailbox. The four options available are:

- **No mailbox** - (this doesn't apply to an Email Queue or a Monitored Mailbox). Assign a Display Name. No mailbox will be associated with this entry.
- **Interaction Message Store** - (formerly Voicemail Only or FBMC). Assign a Display Name and click Assign Address. The generated address will be i.e., "FBMC: JohnDoe".
- **IMAP** - No directory entry is associated with the object, but a mailbox exists on an IMAP server, so you must provide the IMAP server, port, username, and password to access the mailbox.
- **Search for a mailbox in the following directories** - Because the directory entry has associated attributes, the directories can be searched to find the associated entry. Once found, the attributes are populated using the corresponding attributes from that entry.

Allow to Receive Encrypted Email

Select this option to support the use of the S/MIME type in email. Selecting this check box enables support of email encryption, but other configuration, such as installing certificates, is necessary. For more information see Interaction Center Security Concepts in the Technical Reference Documents section in the CIC Documentation Library on the IC server.
Single Sign-On
Secure Token Server
Configure the secure token server

The **Configuration** page of the **Secure Token Server Configuration** dialog box displays the default configuration values for the secure token server. In most cases, you do not need to change the default values that appear here. However, if the secure token server is known by a different hostname on a remote machine that needs to access it, configure that hostname in the **Machine Name** box.

**Note:** You must configure the secure token server before you configure the identity providers.

**To configure the secure token server**

1. In the **Single Sign-on** container, click **Configuration**. The **Secure Token Server Configuration** dialog box appears. The **Configuration** tab is automatically displayed.
2. In the **Private Key Path** box, type the file path to the location of the private key.
3. In the **Certification Path** box, type file path to the location of the certificate.
4. In the **Port** box, select the port. The default port is 8043.
   **Note:** If you specify a different port, select one that is allowed by your firewall and that does not conflict with any other applications. For information on other ports used by Interactive Intelligence, see the IC Port Maps and Data Flow Diagrams Technical Reference, which is available in the Documentation Library.
5. In the **Machine Name** box, type a logical name for this server. The machine name allows other machines to locate this specific server by its IP address or FQDN.
   **Note:** Only one alternative name is allowed per server. The alternate name for the server may be either its IP address or its FQDN, but not both.
6. By default, all tokens issued by this secure token server expire in 14 days. To change this, in the **Token Expiration** group, do one of the following:
• If the token never expires, select the **Never** option button.
• If the token expires, select the **After** option button and then specify the expiration time in the corresponding boxes.

1. Click **OK**.

**Related topics**

- Configure a connection for a secure token server
- Configure an identity provider
- **Configure a connection for a secure token server**

Use the **Connections** page of the **Secure Token Server Configuration** to configure connections to the secure token server.

To prevent a "denial-of-service" attack on the IC server, Interactive Intelligence allows a server to make up to 5 simultaneous connections to the secure token server. If you know of a server that needs more than this number of simultaneous connections, then create a connection for it.

**To configure a connection**

1. On the **Connections** page, do any of the following:
   - To add a connection, click **Add**.
     The **New Connection** dialog box appears.
   - To edit a connection, select it in the list and then click **Edit**.
     The **Edit Connection** dialog box appears.
   - To delete a connection, select it in the list and then click **Delete**.
     A confirmation message appears. Click **OK**.

2. Do one of the following:
   - Click **OK** to close the dialog box.
   - Click **Apply** to save your changes and continue with the configuration process.

**Related topics**

- **New Connection** dialog box
- **Edit Connection** dialog box
Configure a secure token server

Identity Providers

Configure an identity provider

Use the Configuration tab of the Identity Provider Configuration dialog box to configure identity providers. For more information about identity providers, see the Identity Providers Technical Reference in the CIC Documentation Library.

To configure an identity provider

1. In the Single Sign-on container, click the Identity Providers sub-container.
2. In the container, right-click to display the pop-up menu and then click New.
   The Identity Provider Configuration dialog box appears. The Configuration tab automatically appears.
3. In the Name box, type a meaningful name for the identity provider.
4. In the Connection group, do one of the following:
   - If you configured the identity provider to use Single Sign-on for a release prior to CIC 2016 R1, select the Connect to Secure Token Server option.
   - If you are configuring a new identity provider, select the Connect to Session Manager option. This option allows IceLib clients to connect to the local session manager (CIC or OSSM, if it exists). This is the preferred option for new identity providers.
5. In the UI display group, do one of the following:
   - To prompt the user for his or her user name and password, select Allow user to specify username and password.
   - To prompt the user for his or her Windows credentials, select Logged in Windows username must be used.
   - To have CIC automatically use a browser-based authentication site to validate user credentials, select Use webbrowser for authentication.
6. In the Authentication Types list, select the appropriate authentication type for your identity provider:
   - Select SAML 2 Enhanced Client or Proxy for any application that can complete the authentication request, but that is not a web-based application. For example, the CIC clients.
   - Select SAML 2 Web Browser Post for the web page of an application that can complete the authentication request.
   - Select SAML 2 Web Browser Redirect for a web page that redirects the authentication request to a web page where the authentication can be completed.
7. To import an XML file containing your authentication details, click Import and then click Browse to select the file. After you import the file, continue with the next step.
8. Do one of the following:
   - If this is a new configuration, click **Enable**.
   - If this is an existing configuration that you are updating, click **Configure**.

9. Continue with *Configure an endpoint*.

**Related topics**

- [Configure a secure token server](#)
- [Configure an endpoint](#)
- [Configure SAML attributes](#)
- [Configure validation certificates](#)
- [Configure claims](#)

**Configure an endpoint**

Use the **Endpoint** box to specify the URI of your identity provider. The endpoint is the place where the process of obtaining your credentials begins.

**Notes:**

- The **Endpoint** box appears only after you configure and enable one of the available authentication types on the **Configuration** tab. For information on how to do this, see *Configure an identity provider*.
- The endpoint must support SAML 2.0.

To configure an endpoint

1. In the **Endpoint** box, type the URL of the identity provider that is used to authenticate the user's credentials.
2. Do one of the following:
   - To save the configuration and close the dialog box, click **OK**.

   **Note:** You cannot close the dialog box unless you fully configure the identity provider details. These include at least one claim and one validation certificate (unless identity provider does not sign its responses). CIC displays messages if you need to complete your identity provider configuration before closing the dialog box.
To save the configuration and continue with the configuration process, click Apply.

3. Continue with Configure SAML attributes.

Related topics

Configure an identity provider
Configure SAML attributes
Configure validation certificates
Configure claims

Configure SAML attributes

Use the SAML Attributes page to configure optional data values to return in the secure token certificate.

Note: The predefined secure token certificate contains all of the data values that are necessary to ensure security. Configuring additional SAML attributes is optional.

For complete information on configuring SAML attributes, contact Interactive Intelligence Customer Support.

To configure a SAML attribute

1. On the SAML Attributes page, do any of the following:
   
   • To add a SAML attribute, click Add. The New Attribute dialog box appears.
   • To edit a SAML attribute, select it in the list and then click Edit. The Edit Attribute dialog box appears.
   • To delete a SAML attribute, select it in the list and then click Delete. A confirmation message appears. Click OK.

2. Do one of the following:
   
   • Click OK to close the dialog box.
   • Click Apply to save your changes and continue with the configuration process.

3. Continue with Configure validation certificates.

Related topics
Use the Validation Certificates page to configure the files that your secure token server uses to verify the SAML responses from the identity provider.

To configure a validation certificate

1. On the Validation Certificates page, do any of the following:
   - To add a validation certificate, click Add. The New Validation Certificate dialog box appears.
   - To edit a validation certificate, select it in the list and then click Edit. The Edit Validation Certificate dialog box appears.
   - To delete a validation certificate, select it in the list and then click Delete. A confirmation message appears. Click OK.

2. Do one of the following:
   - Click OK to close the dialog box.
   - Click Apply to save your changes and continue with the configuration process.

3. Continue with Configure claims.

Related topics

New Validation Certificate dialog box

Edit Validation Certificate dialog box
Configure claims

Use the **Claims** page to configure the assertions that are included in the SAML responses. A claim maps each SAML assertion to a user's CIC attribute. If the value of the SAML assertion matches the value of a particular user's CIC attribute, then the authentication is considered to be made for that CIC user. For example, if the SAML assertion "NT Account" has a value of "John.Doe," and it is mapped in a claim to the CIC attribute "Windows Domain Account," then the authentication is applied for the CIC user, "John.Doe."

**Tip:** Look in the **Users** container for the attributes that are defined for CIC users.

Every identity provider must provide at least one claim (a SAML assertion) that is mapped to a CIC attribute.

To configure a claim

1. On the **Claims** page, do any of the following:
   - To add a claim, click **Add**.
     The **New Claim** dialog box appears.
   - To edit a claim, select it in the list and then click **Edit**.
     The **Edit Claim** dialog box appears.
   - To delete a claim, select it in the list and then click **Delete**.
     A confirmation message appears. Click **OK**.

2. Do one of the following:
   - Click **OK** to close the dialog box.
   - Click **Apply** to save your changes and continue with the configuration process.

**Related topics**

**New Claim** dialog box

**Edit Claim dialog box**

Configure an identify provider

Configure an endpoint

Configure SAML attributes

Configure validation certificates
System Configuration > PureCloud > Configuration

For complete instructions on how to configure the PureCloud for CIC Integration, see the PureCloud for CIC Administrator's Guide in the CIC Documentation Library.

Enable PureCloud Integration

Select this check box to configure the PureCloud for CIC Integration. In the confirmation message, click Yes to continue with the configuration.

Note:
Click No in the confirmation message if you wish to configure additional CIC user information in Interaction Administrator before configuring PureCloud for CIC, or if you do not wish to configure PureCloud for CIC at this time.

Administrator Email

Type the email address you wish to use for the PureCloud administrator. If you have an existing PureCloud organization, this is the existing administrator email address for the organization.

If you do not have an existing PureCloud organization, we recommend using a general administrator or IT-related distribution email address, for example, “ITServices,” instead of a person’s email address.

Password

Type the PureCloud administrator password. If you have an existing PureCloud organization, type the existing administrator password for the organization.

Notes:
• The password must follow standard PureCloud password requirements.

Confirm Password

Re-type the PureCloud administrator password.
Organization Name

Do one of the following:

- If you have an existing PureCloud organization, type its name. If you are unsure of the organization short name, log in to PureCloud and navigate to Admin>Account Settings>Organization Settings.
- If you do not have an existing PureCloud organization name, type the name you would like.

**Note:**
The name must follow PureCloud naming conventions.

Region

Select your closest region. The default is North America. User access to PureCloud will be routed to the location of the Amazon data center for the region you select, whether users are in the office, at home, or traveling.

Bridge Location

Click **Edit** and then select one of the following:

- To install the bridge on the IC server, select the **Automatic Local Install** check box. This is the recommended selection. The PureCloud Bridge will automatically be installed on the IC server.

  **Note:**
  When you select **Automatic Local Install**, any backup IC servers automatically install the bridge and connectors when running in backup mode.

- If you have decided you need an off-server bridge, select the **Manual Off-Host Install** check box. After you configure the fields in this tab, be sure to install the off-server bridge. **The integration is not complete** until you install the bridge server. For more information about how to install a bridge on a different server, see the *PureCloud for CIC Administrator's Guide* in the CIC Documentation Library.

  **Notes:**
  - If you select the **Manual Off-Host Install** check box, the integration creates a paired organization in PureCloud, but no data is synced. As soon as you complete the installation of the off-server bridge, the data will sync.
After you make your selection, click **Apply** in the **PureCloud Configuration** tab. A message box appears; you must confirm that you want to provision the organization.

- If you are creating a new PureCloud organization, click **Yes** to confirm that the new organization will be created.
- If you entered the credentials for an already existing PureCloud organization, click **Yes** to confirm that this organization already exists and will be populated with your CIC users.

A message box confirms that the PureCloud organization was successfully created. Click **OK**.

**Test PureCloud Connection**

After you provision to PureCloud, click the **Test PureCloud Connection** button to verify that single sign-on works and that the internet connection to your PureCloud organization is healthy.

If this test fails, try to log in to your PureCloud organization manually using [https://login.mypurecloud.com](https://login.mypurecloud.com). (The URL will be different if you used the Ireland or Australia/New Zealand regions.) If you can log in successfully, then the root cause of the problem may lie with CIC. If that is the case, you can reprovision the integration by disabling and then re-enabling the integration. For more information, see the *PureCloud for CIC Administrator's Guide* in the CIC Documentation Library.

**Enable CIC web-based phone**

The **Enable CIC web-based phone** check box is automatically enabled when you complete the CIC web-based phone configuration wizard. If, after that point, you want to disable CIC web-based phone for all users, disable the **Enable CIC web-based phone** check box.

**Configure CIC web-based phone**

Select the **Configure CIC web-based phone** button to start a wizard application that configure the necessary options and associations between PureCloud and CIC. If the **Enable CIC web-based phone** check box is disabled, successfully completing the wizard enables the check box. If you had previously configured CIC web-based phone, a subsequent running of the wizard reconfigures the feature with the options you select.

**Important!**

The CIC web-based phone configuration wizard is for use with PureCloud organizations that are associated with only one CIC server.
Remove Configuration

This button deletes any bridges on the primary IC server. Before you can complete this action, you must first use the ICBridgeSetupUtility to uninstall all bridges that are not on the primary IC server.

To remove a configuration, first deselect the **Enable PureCloud Integration** checkbox. Then click **Remove Configuration**.

**Notes:**

You must deselect the **Enable PureCloud Integration** check box in order to use the Remove Configuration button.

After you click this button, its name changes to **Check Remove Status**. Click the button to see whether the remove process is ongoing or completed.

While a configuration is being removed, you can change no values and perform no other functions on the PureCloud Configuration page.

**Related topics**

About PureCloud for CIC

PureCloud Web Page

Bridge Status

PureCloud Dial Groups

PureCloud Web Page

Click Launch Web Page to go directly to your PureCloud organization.

- You are automatically logged as the PureCloud Admin user that was created for you in CIC.
- If your CIC user accounts were configured with Display Name and Business Email before you configured PureCloud for CIC, CIC user account data was sync’d and those users appear in PureCloud Directory.

**Additional configuration in PureCloud Admin**

You may wish to:

- Further configure your organization by adding to the PureCloud Admin profile, setting up groups, etc. See Admin>Overview.
- Modify organization settings in Admin>Account Settings.
- Review PureCloud Bridge settings and check for updates in Admin>Integrations. For more information see the *PureCloud for CIC Administrator’s Guide*. 
For information about PureCloud administration, see the PureCloud Resource Center at help.mypurecloud.com.

**Related topics**

**About PureCloud for CIC**

- PureCloud Configuration
- Bridge Status
- PureCloud Dial Groups

**Bridge Status**

This page lets you quickly see whether the bridge and connectors for the PureCloud integration are online and syncing properly.

**Note:** In PureCloud, you can see these same connector details in Admin > Integrations > Bridge > Connectors.

To see the details of a connector, click its node. The following table describes the icons that you may see when you expand the connector details.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>🔄️</td>
<td>Status: This connector is online and data is syncing properly.</td>
</tr>
<tr>
<td>🔄️</td>
<td>Status: This connector is not online and not syncing. You may see this icon if the connector has been deleted in PureCloud. Click Refresh to see updated information from PureCloud.</td>
</tr>
<tr>
<td>📍</td>
<td>Location: The bridge is installed here.</td>
</tr>
<tr>
<td>📣</td>
<td>Information: This icon indicates some information; it does not indicate the status of the bridge.</td>
</tr>
<tr>
<td>🚨</td>
<td>Note: One type of information is Leader. The leader is set when there are 2 or more connector instances. Leader: True indicates that this server is the active server in the switchover pair. Leader: False indicates that this server is not the active server in the switchover pair.</td>
</tr>
<tr>
<td>⚠️</td>
<td>Caution: An event has occurred which requires your attention.</td>
</tr>
<tr>
<td>📄</td>
<td>Timestamp: An event at this time.</td>
</tr>
<tr>
<td>🌐</td>
<td>FQDN: This is the fully qualified domain name of the bridge.</td>
</tr>
</tbody>
</table>

**Refresh**
Click **Refresh** to verify that you are viewing the most up-to-date information. The information shown may change as connectors are added or deleted from the integration.

**Related topics**

PureCloud Configuration

PureCloud Web Page

PureCloud Dial Groups

PureCloud Dial Groups

**System Configuration > PureCloud > PureCloud Configuration > PureCloud Dial Groups**

The **PureCloud Dial Groups** tab enables you configure which dial groups CIC will use to connect to PureCloud.

**Available Dial Groups**

This list box displays the existing dial groups of this CIC server. You can select a dial group in this box.

**Add button**

With an item in the **Available Dial Groups** box selected, select this button to move that CIC dial group to the **Currently Selected Dial Groups** box.

**Currently Selected Dial Groups**

This list box displays the existing dial groups that CIC is currently configured to use to communicate with PureCloud.

For information about PureCloud administration, see the PureCloud Resource Center at help.mypurecloud.com.

**Related topics**

About PureCloud for CIC

PureCloud Configuration
CIC web-based phone configuration wizard

CIC Location to PureCloud Site Associations (1 of 6)

This panel of the CIC web-based phone wizard associates CIC Locations with PureCloud Sites. This mapping enables the users assigned to the CIC Location to use CIC web-based phone.

Note:
The PureCloud Site must include a PureCloud Edge device to facilitate WebRTC communications.

CIC Location

Select an existing CIC Location for which you want to use CIC web-based phone.

Important!
Users in CIC Locations that are not mapped to PureCloud Sites cannot use CIC web-based phone.

PureCloud Site

Select an existing PureCloud Site to associate with the selected CIC Location.

Create Mapping

Select this button to associate the selected CIC Location with the selected PureCloud Site.

Important!
The CIC web-based phone feature requires that you map at least one CIC Location to a PureCloud Site. If you do not map at least one CIC Location to one PureCloud Site, you cannot use CIC web-based phone.

Map list

This list box displays existing mappings between CIC Locations and PureCloud Sites.

Remove Mapping

Select this button to remove the currently-selected, existing mapping in the Map list.

When you have finished mapping CIC Locations to PureCloud Sites, select the Next button to continue to the next panel of the CIC web-based phone wizard.

Tip:
To remove all existing mappings between CIC Locations and PureCloud Sites, ensure that no entries are specified in the CIC Location and PureCloud Site list boxes. Then, select the Next button.
The wizard, then, displays the PureCloud Edge Tie Lines dialog box, bypassing the Select PureCloud Edge Devices and Select Local NIC dialog boxes. The PureCloud Edge Tie Lines dialog box displays the lines that the wizard will remove from the configuration. Select the Next button to continue with the removal of those items.

Related topics

Select PureCloud Edge Devices
Select Local NIC
PureCloud Edge Tie Lines
PureCloud Edge Line Groups
Commit Changes

Select PureCloud Edge Devices (2 of 6)

This panel of the CIC web-based phone wizard enables you to select which PureCloud Edge devices in the mapped PureCloud Sites will facilitate CIC web-based phone communications. You must select at least one PureCloud Edge devices in a PureCloud Site that is mapped to a CIC Location to be able to use CIC web-based phone.

Important!
When this dialog box is displayed for the first time, Windows displays a security message box stating that the wizard is requesting access to the network. Select the appropriate network location displayed in the message box and grant the wizard access to the network so that it can make the appropriate PureCloud configuration.

Note:
To successfully complete this step of the CIC web-based phone wizard, PureCloud Edge devices must be configured and assigned to your PureCloud Sites. The PureCloud Edge devices do not have to be operational or online at the time when this wizard is run.

Available Detected Edges

This list box displays the detected PureCloud Edge devices in all PureCloud Sites that are associated with CIC Locations. PureCloud Edge devices in this list box cannot service CIC web-based phone communications.

Add button

Select this button to move the selected PureCloud Edge device in the Available Detected Edges list box to the Currently Selected Edges list box.

Remove button

Select this button to remove the selected PureCloud Edge device in the Currently Selected Edges list box.
Currently Selected Edges

This list box displays the PureCloud Edge devices in PureCloud Sites that can service CIC web-based phone communications.

The **Connectivity** column provides a visual indicator if the associated PureCloud Edge device is currently active and responsive.

Manual Edge/Proxy

This group of controls enables you to define a PureCloud Edge device that is not displayed in one of the list boxes. In some environments, a PureCloud Edge device may be located behind a **SIP proxy** or **SBC**. This wizard cannot detect SIP proxy or SBC devices through which you want to connect to a PureCloud Edge device.

Additionally, you could use this set of controls to enter a PureCloud Edge device that has not yet been installed and configured.

Address

Enter the IP address of SIP proxy, SBC, or unavailable PureCloud Edge device.

**Note:**
The IP address must be consistent. Do not attempt to manually enter an address if the device receives its IP address through **DHCP** and a range of IP addresses is available for assignment.

Name

Enter a name to use for the tie line of the IP address that you entered.

Site

Enter the PureCloud Site that includes this PureCloud Edge device.

Add button

Select this button to add the manually-defined PureCloud Edge device to the **Currently Selected Edges** list box.

When you have finished selecting which PureCloud Edge devices will service CIC web-based phone communications, select the **Next** button.

**Note:**
If you do not select a PureCloud Edge device in this dialog box, the wizard will bypass the **Select Local NIC** dialog box and display the **PureCloud Edge Tie Lines** dialog box.
Select Local NIC

This panel of the CIC web-based phone wizard enables you to select the NIC on the CIC server that will communicate with any PureCloud Edge device that is configured to service CIC web-based phone communications.

In the **Local NIC for New Edges** list box, select a listed network interface of the CIC server through which it will send SIP messages to PureCloud Edge devices.

After selecting the appropriate NIC of the CIC server, select **Next**.

**PureCloud Edge Tie Lines (4 of 6)**

This panel of the CIC web-based phone wizard provides a summary of the *tie lines* that will be created by the CIC web-based phone configuration wizard.

Tie lines are logical circuits that link PureCloud Edge devices to CIC servers without requiring the dialing of a telephone number in E.164 format.

**Tie Lines To Be Generated**

This box lists the tie lines that the wizard will create on the specified PureCloud Edge devices.
Existing Tie Lines

This box lists any existing tie lines that will not be updated or removed by the wizard.

Tie Lines To Be Removed

This box lists the existing tie lines that the wizard will remove.

If, after reviewing the tie lines changes, you are satisfied with the tie line configuration, select the **Next** button.

Related topics

CIC Location to PureCloud Site Associations

Select PureCloud Edge Devices

Select Local NIC

PureCloud Edge Line Groups

Commit Changes

**PureCloud Edge Line Groups (5 of 6)**

This panel of the CIC web-based phone configuration wizard displays the changes that the wizard will make for PureCloud line groups.

There will be only one line group for each PureCloud site.

Tie Line Groups To Be Generated

This box lists the PureCloud line groups and the dial plan entry pattern for telephone extensions that this configuration wizard will create in PureCloud.

Existing Tie Line Groups

This box lists the existing PureCloud line groups that will not be modified by this wizard.

Tie Line Groups To Be Removed

This box lists the existing PureCloud line groups that the wizard will remove.

**Note:**
Removing a PureCloud line group also removes any corresponding extension pools.
After you review and approve the line group changes that this wizard will make, select the **Next** button.

**Related topics**

CIC Location to PureCloud Site Associations

Select PureCloud Edge Devices

Select Local NIC

PureCloud Edge Tie Lines

Commit Changes

**Commit Changes (6 of 6)**

The final panel of the CIC web-based phone wizard enables you to confirm the configuration changes and cause the wizard to implement them. You can use the **Back** button to return to the previous panels and make changes.

If you are satisfied with the configuration for the CIC web-based phone feature, select the **Commit Changes** button to initiate the changes. Upon successful completion, the wizard changes the **Status** message to **Changes Complete!**.

Select the **Finish button** to close the CIC web-based phone configuration wizard.

**Related topics**

CIC Location to PureCloud Site Associations

Select PureCloud Edge Devices

Select Local NIC

PureCloud Edge Tie Lines

PureCloud Edge Line Groups

**Interaction Process Automation**

**Security Specifications**

Interaction Process Automation provides data-level security that allows each customer the flexibility to specify which users, workgroups, and/or roles can access each data variable.
If your company needs to track sensitive information as part of a process, you can use a security specification to grant access to only those users or workgroups who need to view that data.

You assign users or workgroups to a security specification to give them access to any data that is bound to that specification. If no security specification is assigned to a data variable, everyone has access to that data.

You can add and modify security specifications in Interaction Administrator, and then bind them to data variables in the Property tab in Interaction Process Automation Designer. You can also delete security specifications. This topic includes instructions for:

- Adding a Security Specification
- Modifying a Security Specification
- Deleting a Security Specification

Adding a Security Specification

To add a security specification:

2. Within the Interaction Process Automation container, click the Security Specifications sub-container.
3. Right-click in the area on the right side of the Interaction Administrator window, and then click New from the shortcut menu that appears.
4. In the Entry Name dialog, type a name for the new security specification, and then click OK. The Security Specifications Configuration dialog appears.
5. On the Configuration tab, click Members.
6. In the Select Users dialog, select each user, workgroup, or role for which you want to grant access, and then click Add.
7. Once you have selected all the users, click OK.
8. This option is reserved for a future release. Under For members that don’t have full-access, choose either of the following or leave both options unselected:

<table>
<thead>
<tr>
<th>Choose this option...</th>
<th>If...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not show data</td>
<td>You don't want the data to appear at all for users, workgroups, and roles not in the Members list.</td>
</tr>
<tr>
<td>Show only right 4 characters</td>
<td>You only want to display the right four characters for users, workgroups, and roles not in the Members list. (useful for data such as credit card numbers).</td>
</tr>
</tbody>
</table>

9. Click OK.

The security specifications you added should now be available to apply to data variables in Interaction Process Automation Designer.
Modifying a Security Specification

You can modify a security specification to add or remove members.

To modify a security specification:

1. In the Security Specifications sub-container, double-click the security specification to modify. The Security Specifications Configuration dialog appears.
2. On the Configuration tab, click Members.
3. Do one of the following:
   - To add a member, select the member from the list and then click Add.
   - To remove a member, select the name in the list at the bottom of the dialog and then press Delete.
4. Once you have added or removed the appropriate members, click OK.
5. Click OK to close the Security Specifications Configuration dialog.

Deleting a Security Specification

Caution: If you delete a security specification that has been assigned to a data variable in Interaction Process Automation Designer, you could cause the data to be unreadable.

To delete a security specification:

1. In the Security Specifications container, right-click the security specification to delete. Interaction Administrator displays a message to warn you that deleting a security specification that has been assigned to a data variable will make that data unreadable.
2. Click Yes to confirm the deletion or click No to cancel the deletion.

Interaction Feedback Settings

Use this page to configure Interaction Feedback settings.

Prompts Path

Type the path from which the survey prompts are loaded. The default value for the prompts is \\[server name]\IC\Resources\SurveyPrompts.

Recordings Path
Type the path where the recorded surveys are stored. This is where free-form survey answers are stored. The default value for the recordings is `\[server name]\Compressed Recordings`.

**Audio Compression**

Select the Audio Compression protocol to use when compressing survey recordings. The values are: `audio/PCMU`, `audio/PCMA`, `audio/GSM`, `audio/x-truespeech`, and `audio/G726-32`. The default value is `audio/x-truespeech`.

**Enable Audio Encryption**

Select this check box to enable audio encryption. *This feature will be available in a future release.*

**Fax Configuration**

**Appearance**

Use this page to configure the appearance options for server faxes. This information is sent as part of the outgoing fax notification.

**Header Text**

Type the text to appear in the top margin on each page, the area called the page header. The length of the text is limited to 256 characters. If this field is left blank, no text will appear at the top of each page.

**Cover Page**

Select the cover page (.IC file) to use as the default cover page sent as the first page of each fax. If values are not specified by the sender in Interaction Fax Viewer, the values specified in the fields below (that is, Name, Company Name, Fax Number, Display Number, and Voice Number) are used in the corresponding fields on the cover page.

Cover pages are stored in the same directory as the Interaction Fax Cover Page Editor (that is, the `bin` directory under your IC root directory). Use the Interaction Fax Cover Page Editor (IFaxCovrA.exe) to create or modify cover pages.

**Name**

Type the default name of the person sending the fax.

**Company Name**

Type the default name of the company sending the fax.
Fax Number

Type the default phone number for the sending fax device.

Display Number

Type the sending fax phone number. This number is displayed on the receiving fax station’s display window and in the fax log. Typically, it is the same number as the Fax Number field.

Voice Number

Type the default voice phone number where the fax recipient should call to reach the person sending the fax.

Related topics

Send and Receive Options

Fax Server

Advanced

SIP Line Configuration

Send/Receive Options

Use this page to configure send and receive options for faxes.

Fax Group

Select a fax group from the pull-down menu. A fax group is a group of fax resources on the media server dedicated for that particular purpose.

Fax Speed

Select the fax transmission speed from the pull-down menu according to the fax modem capacity of the recipients. This speed is the maximum receive baud rate in bps. The default value is 4800 bps. Use "Best" for the maximum support speed by device.

Number of Retries
Use the up and down arrow keys to select the number of times the system will retry to send a fax if it fails to send it on the first attempt (for example, the line is busy or down). The default number of retries allowed for a fax send is 3.

**Retry Delay (sec)**

Use the up and down arrow keys to select the delay in seconds that the system should wait between the end of a fax failure and the next time it tries to send. The default value is 30 seconds.

**No Answer Timeout (sec)**

Use the up and down arrow keys to select the time in seconds the system should wait before determining there is no answer when a called fax number rings but does not connect. If the number does not answer within this amount of time, the system terminates the attempted call. The default value is 30 seconds, which represents approximately five rings (in North America).

**Do Not Send Faxes During Peak Hours**

Select this check box to not send faxes during peak hours as defined in the **Begin** and **End** times in **Peak Hours** below. If selected, the system will not send a fax during the time range entered. For example, if this option is enabled, **Begin** is set to "08:00", and **End** is set to "20:00", then no faxes will be sent from 8:00am through 8:00pm.

The default peak hours are 07:00 for beginning time, and 22:00 for ending time.

**Note:** The time is based on the time zone of the fax server.

**Max Fax Call Rate (cps)**

Use the up and down arrow keys to select the maximum calls per second or rate that the media server process faxes. The default value is 5 calls per second. The valid range is 1 to 10 million calls per second.

**Related topics**

- Media Server Fax Configuration - Appearance
- Media Server Fax Configuration - Fax Server
- Media Server Fax Configuration - Advanced
- SIP Line Configuration
Use this page to configure fax server options.

**Servers**

You can optionally use a render server and external fax converter for media server faxing.

**Use IC Render Server**

Select this option to use the IC render server as the fax server. When selected, enter the name of the server in the **Server** field. By default this setting is not enabled. When it is enabled, the default value is the local host.

The render server is used instead of the fax server to off-load PDF conversions to a remote server. This relieves some of the processing burden of the IC server. For information see *IC Render Server Technical Reference* in the **Technical Reference Documents** section in the CIC Documentation Library on the IC server.

**Use External Fax Converter**

Select this option to use an external fax converter such as Adobe for converting faxes instead of pdf2image. By default this setting is not enabled. When enabled, CIC uses third-party software installed on the IC render server to convert fax files, so using this setting is not recommended. For information see *IC Render Server Technical Reference* in the **Technical Reference Documents** section in the CIC Documentation Library on the IC server.

**Options**

Use this section to set fax server options.

**Discard Partial Pages on Failure**

Select this option to discard partial fax pages on a fax error. By default, this setting is not enabled. Default unchecked. If enabled, the user receives an email message listing only the pages that succeeded when inbound faxes fail during transmission. If a page is partially received, that page is not sent in an email message to the user.

**Notify Event Viewer on Failure**

Select this option to send fax failures to the event viewer.

**Use Error Correction Mode**
Select this option to use Error Correction Mode (ECM) when sending a fax. By default this setting is not enabled. ECM breaks image data into HDLC (High-level Data Link Control) frames and multiple fields, which each hold 256 or 64 octets of image data. There is 16 bit Frame Checking Sequence (FCS) used to check for transmission errors.

**Use Call Analysis**

Select this option to detect answering machines, SIT tones, or live response to calls when sending a fax. By default this setting is checked (enabled), which means faxes are terminated immediately for cases such as live responses, and a description of the termination is provided.

**Override Default Paths**

You can optionally override default paths.

**Cover Pages**

This is the fax cover page directory used by the fax server. The default path for cover pages is `\[server name]\IC\Resources\CoverPages`. If Interaction Administrator is installed on the IC server, then you may click **Browse...** to change the location.

**Fax Files**

This is the work directory used by the fax server. The default path for fax files is `\[server name]\IC\Work\FaxWork`. If Interaction Administrator is installed on the IC server, then you may click **Browse...** to change the location.

**Related topics**

- Appearance
- Send and Receive Options
- Advanced
- SIP Line Configuration
- Advanced
- Use this page to configure advanced options for faxing.
- Web Server Options
Address to Use

Select the interface name from the drop-down list. This is used to determine the local server IP address. The default value is <All>, and "Local Area Connection" is an option. CIC supports IPv4 and IPv6 addressing schemes.

HTTP Port

Select the local port from the drop-down list to use for servicing HTTP requests. The default port is "8112". Acceptable values are between "2000" and "65535".

Use HTTPS

Select this check box to specify whether resources are only served through a TLS connection. HTTP requests will be re-directed to the HTTPS port. Enter the HTTPS Port when selecting this check box.

HTTPS Port

Select the secure local port from the drop-down list to use for servicing HTTPS requests. The default port is "8113". Acceptable values are between "2000" and "65535".

Host Format

Select which format from the drop-down list to use for resolved URI authorities. The default value is “FQDN” (Fully Qualified Domain Name), and the other options are “IP” (Internet Protocol), “Host Name”, or “Custom”. If you choose "Custom", then a text box appears that you may enter any desired text.

Cache Options

Remove Unversioned Files After (sec)

Use the up and down arrows to set the time in seconds before unversioned files are removed from the cache. The default value is "600".

Remove Unused Files After (sec)

Use the up and down arrows to set the time in seconds before unversioned files are removed from the cache. The default value is "600".

Only Cleanup Idle Files Every (sec)
Use the up and down arrows to set the time in seconds between cache cleanups. The default value is "300".

**Only Update File Attributes Every (sec)**

Use the up and down arrows to set the amount of time in seconds that has to elapse before a cached prompt will be queried for freshness. This is an optimization to prevent unnecessary file refreshes. The default is "10".

**Related topics**

[Appearance](#)

[Send and Receive Options](#)

[Fax Server](#)

[SIP Line Configuration](#)

**Fax Groups**

**Fax Group Names**

Type a descriptive name for a fax group, which is a group of fax resources dedicated for a particular purpose.

**Fax Group Configuration**

A media server fax group is a named group of media server fax resources. The system automatically creates a fax group named <DefaultFaxGroup>.

**Description**

Type a sentence that describes the purpose of this group of media server fax resources.

**Maximum Number of Faxes**

In the **Inbound** field enter the maximum number of inbound faxes allowable, or select **No Limit** to be limited by only the number of fax licenses available.
In the **Outbound** field, enter the maximum number of outgoing faxes allowable, or select **No Limit** to be limited by only the number of fax licenses available.

**Related topics**

Media Server Fax Configuration

**IC Data Sources**

Type the name of an IC data source that generally describes the kind of data another part of IC might need to access. IC data sources generically define a gateway to a particular kind of data repository, including:

- An ODBC database
- A JDBC interface to an ODBC database
- The old JDBC-ODBC database interface
- Lightweight directory access protocol (LDAP)
- A source that requires Microsoft's Mail Application Programming Interface (MAPI) to access data
- White Pages directory data

IC data source names appear in the **Type** field in the **Contact List Sources Configuration** page. The Contact List Sources actually define the directory pages that can appear as a directory view in the CIC clients (such as Company Directory).

**IC Data Source Configuration**

Select the appropriate values or enter the appropriate configuration data to create a CIC data source for an ODBC-compliant data repository.

If you use an ODBC data source for speed dial entries, it must have identical data layout as the SQL Server SpeedDial table (found in I3EIC.mdb on the SQL Server computer), and it must provide read/write access. Alternatively, if the layout is not identical, you must create a view to match the data layout.

**Subtype**
This is an ODBC data type. Therefore, Subtype is one of the listed ODBC compliant relational databases, or another database that includes an ODBC driver. The default setting is "DB2 Family", and other options are "Informix", "Ingres", "Oracle", "MS Access", "MS SQL Server", "Sybase", and "Other".

**Read Only**

Select this check box if CIC client users cannot update this data source. Clear the check box if CIC client users will be able to add, modify, or delete entries in this data source.

**File DSN**

Select this check box if the ODBC driver requires a file Data Source Name.

**ODBC DSN**

Type the name of the System Data Source Name field in the ODBC Administrator used to create the data source. The DSN must be a System DSN, not a User DSN.

**Qualifier**

If one is required, type the table qualifier used to access the tables in this data source. The qualifier may be the owner or creator of the table, or it may be the path to the table, depending on the database.

**User ID**

Type a user ID if one is required to connect to the data source.

The user ID is determined by the administrator and the database tool used to create the data source.

**Password**

Type a password if one is required to connect to the data source.

The password is determined by the administrator and the database tool used to create the data.

**Manually enter connection string**

Select this check box if you wish to manually enter an ODBC connection string in the **Connection String** field below.
Connection String

This field remains blank unless you first select the **Manually enter connection string** check box above. Type the customized ODBC connection string to connect to the target database. This uses the Qualifier entered above, if any.

Additional Information

Some CIC data sources may need to specify additional information or need a way to temporarily override the default behavior. Values in this field could include the `Catalog=` and `Schema=` statements, as illustrated in the IC Report Logs CIC data source.

For example:

```
DATABASE=i3_eic;SERVER=(local)
```

Related topics

- Overview of IC Data Sources and Contact Lists
- Report connection configuration
- Configure reports for your IC server

JDBC Data Source Configuration

Select the appropriate values or enter the appropriate configuration data to create a CIC data source for a JDBC compliant data repository.

Subtype

This is a JDBC data source. Subtype is one of the listed ODBC compliant relational databases, or another database that can be accessed by a JDBC driver. The default setting is "DB2 Family", and other options are "Informix", "Ingres", "Oracle", "MS Access", "MS SQL Server", "Sybase", and "Other".

Read Only

Select this check box if CIC client users cannot update this data source. Clear the check box if CIC client users will be able to add, modify, or delete entries in this data source.

User ID
Type a user ID if one is required to connect to the data source.

The user ID is determined by the administrator and the database tool used to create the data source.

Password

Type a password if one is required to connect to the data source.

The password is determined by the administrator and the database tool used to create the data.

Qualifier

If one is required, type the table qualifier used to access the tables in this data source. The qualifier may be the owner or creator of the table, or it may be the path to the table, depending on the database.

Driver

Type the name of the JDBC driver (you may have to ask the vendor for your driver name).

URL

Type the URL used to connect to this JDBC data source. This uses the Qualifier entered above, if any.

Additional Information

Some CIC data sources may need to specify additional information or need a way to temporarily override the default behavior. Values in this field could include the Catalog= and Schema= statements, as illustrated in the IC Report Logs CIC data source.

For example:

DATABASE=i3_eic;SERVER=(local)

Related topics:

Overview of IC Data Sources and Contact Lists
JDBC-ODBC Data Source Configuration

Select the appropriate values or enter the appropriate configuration data to create a CIC data source for an ODBC compliant data repository.

**Note:** If you use an ODBC data source for speed dial entries, it must have identical data layout as the SQL Server SpeedDial table (found in I3EIC.mdb on the SQL Server computer), and it must provide read/write access. Alternatively, if the layout is not identical, you must create a view to match the data layout.

**Subtype**

This is a JDBC-ODBC data source. Subtype is one of the listed ODBC compliant relational databases, or another database that includes a Type 1 ODBC driver. The default setting is "DB2 Family", and other options are "Informix", "Ingres", "Oracle", "MS Access", "MS SQL Server", "Sybase", and "Other".

**Read Only**

Select this check box if CIC client users cannot update this data source. Clear the check box if CIC client users will be able to add, modify, or delete entries in this data source (that is, it is Read/Write accessible).

**ODBC DSN**

Type the name of the System Data Source Name field in the ODBC Administrator used to create the data source. The DSN must be a System DSN, not a User DSN.

**Qualifier**

If one is required, type the table qualifier used to access the tables in this data source. The qualifier may be the owner or creator of the table, or it may be the path to the table, depending on the database.

**User ID**

Type a user ID if one is required to connect to the data source.

The user ID is determined by the administrator and the database tool used to create the data source.

**Password**
Type a password if one is required to connect to the data source.

The password is determined by the administrator and the database tool used to create the data.

**Manually enter connection string**

Select this box to manually enter an ODBC connection string in the **Connection String** field below.

**Connection String**

This field appears dimmed and is unavailable, unless you first select the **Manually enter connection string** box above. Type the customized ODBC connection string to connect to the target database. This uses the Qualifier entered above, if any.

**Additional Information**

Some CIC data sources may need to specify additional information or need a way to temporarily override the default behavior. Attributes in the **Additional Information** field could include the `Catalog=` and `Schema=` statements, as illustrated in the IC Report Logs CIC data source. For example:

`DATABASE=i3_eic;SERVER=(local)`

Multiple attributes are separated by semicolons (;).

---

**LDAP Data Source Configuration**

**IC Data Sources > <Data source> > IC Data Source Configuration > LDAP Data Source Configuration**

Use the following to configure an LDAP-compatible data source.

**Tip:** For more information, see *Using LDAP for IC Contact Lists*, in the CIC Documentation Library.

**Subtype**

This is an LDAP data type. The options are Other, iPlanet, OpenLDAP, and Active Directory.
Read Only

Select this check box if CIC client users cannot update this data source. Clear the check box if CIC client users will be able to add, modify, or delete entries in this data source (that is, it is Read/Write accessible).

Host Name

Type the name of the Netscape Directory Server. For example: BocaSitePC

Port

Type the port number used by the Netscape Directory Server. If blank, then the default 389 is used.

Bind DN

The distinguished name (DN) used to authenticate the password. This should be in the format: domain\user name.

For example:

Uid:AiriusDomain\ic_admin, ou=People, o=Airius.com

Password

The password used to bind with.

Search DN

The distinguished name (DN) of the node where searching begins.

Note: Because a search DN is usually specified in the contact list source, any information added here is overridden. Typically, this field is left empty.

Additional Information

Currently, this field is unavailable for LDAP data sources

Tip: For additional information about how CIC supports LDAP-enabled Netscape directory servers, see Using LDAP for IC Contact Lists in the CIC Documentation Library.
MAPI data sources are either Exchange contact lists or Outlook contact lists.

**Subtype**

Select **Outlook** if the data source is a private contact list based on an individual's contact list stored on the Exchange server. Select **Exchange** if the data source is a public Contacts list (such as the global address list) on the Exchange server.

**Read Only**

Select this check box if CIC client users cannot update this data source. Clear the check box if CIC client users will be able to add, modify, or delete entries in this data source (that is, it is Read/Write accessible).

**Folder**

If no folder is specified, the default is the **Contacts** folder on the Exchange server. To override the default folder, specify the path and directory of the folder on the Exchange server that contains the contact list file.

**Additional Information**

You can suppress a particular display type for Exchange contact lists. To do this, add a `DISPLAY_TYPE` attribute to the **Additional Information** box, and then include one of the following values:

<table>
<thead>
<tr>
<th>Value</th>
<th>Suppresses</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAILUSER</td>
<td>A normal mail user, and a remote mail user.</td>
</tr>
<tr>
<td>REMOTE_MAILUSER</td>
<td>A remote mail user.</td>
</tr>
<tr>
<td>DISTLIST</td>
<td>A distribution list.</td>
</tr>
<tr>
<td>ORGANIZATION</td>
<td>An organization.</td>
</tr>
<tr>
<td>FORUM</td>
<td>A forum or discussion group.</td>
</tr>
</tbody>
</table>

For example:

To suppress a normal mail user, add the following to the **Additional Information** box:

```plaintext
DISPLAY_TYPE=MAILUSER
```
**White Pages Data Source Configuration**

Use this dialog box to configure your White Pages data sources. CIC includes two White Pages data sources, I3 Text File and Redi-Connect. You may add other data sources to the list if you wish.

**Subtype**

In the Subtype list, select the data source to configure. Among the choices of compliant databases could be:

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I3 Text File</td>
<td>Select this to add the WhitePages.txt database. CIC knows which driver to add.</td>
</tr>
<tr>
<td>Think Direct Marketing</td>
<td><strong>Note:</strong> Think Direct Marketing has been replaced by Redi-Connect. Do not select this option.</td>
</tr>
<tr>
<td>Redi-Connect</td>
<td>Select this to add the Redi-connect database. CIC knows which driver to add. <strong>Note:</strong> Redi-connect is a realtime lead verification service that you must be registered to use.</td>
</tr>
<tr>
<td>Other</td>
<td>Select this to add a third-party driver for another White Pages data source.</td>
</tr>
</tbody>
</table>

**Read Only**

Select this check box if CIC client users cannot update this data source. Clear the check box if CIC client users will be able to add, modify, or delete entries in this data source (that is, it is Read/Write accessible).

**Connection Information**

If the driver requires a User ID, Password, or Program ID, type it in one of the following fields:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>User ID</td>
<td>Type your Redi-Connect ClientID, which Redi-Data provided to you. Leave the other fields blank; you do not need to specify any additional information to configure this driver.</td>
</tr>
<tr>
<td>Password</td>
<td>Type a password to access the data source. I3Text File and TDM do not require a password.</td>
</tr>
<tr>
<td>---------------</td>
<td>------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Program ID</td>
<td>If the driver Subtype is <strong>Other</strong>, you must type a Program ID (PROGID). An example PROGID could be I3PDBwp.Rwp.1</td>
</tr>
</tbody>
</table>

Type any additional information your driver may require, (in ATTRIBUTE=VALUE; syntax). This is optional information, not required for I3Text and Redi-Connect drivers.

### Reverse White Pages Lookup Sequence

You can configure any public Data Manager contact list source to participate in the reverse white page (RWP) lookup sequence. By default, Data Manager searches CIC *businessphone*, *businessphone2*, and *homephone* attributes. However, you can configure each contact list source to have its own list of phone attributes to search on. This is specified with the RWP_LOOKUP_PHONE_TYPES attribute.

Follow these steps.

1. From Interaction Administrator, select **Contact List Sources**, and then press the **Insert** key.
2. Type the name of a new white pages contact list source, and then click **OK**. The Contact List Source Configuration window appears.
3. From the **IC Data Source** list, select the name of the white pages data source that you previously created.
4. Select the **Public** option for public contact sources, if applicable.
5. From the **Driver** list, select **White Pages**.
6. Type the appropriate attributes in the **Additional Information** box, for example:

   ```
   RWP_LOOKUP_PHONE_TYPES=HomePage,BusinessPhone,BusinessPhone2,Mobile;
   ```

   You can use any combination upper- or lower-case letters for the **RWP_LOOKUP_PHONE_TYPE** attribute and phone number type values. Valid phone number types are:

   - BusinessPhone
   - BusinessPhone2
   - HomePhone
   - HomePhone2
   - AssistantPhone
   - Mobile
   - Fax
   - Pager

If an LDAP source is included in the RWP lookup sequence, then you must index each phone number that you want Data Manager to search for. For information about adding indexes, see *Using LDAP for IC Contact Lists* in the CIC Documentation Library.
Report Connection Configuration

IC Data Sources > <Data source> > IC Data Source Configuration > Report Connection Configuration

This page lets you configure the connection to an Oracle or SQL Server data source for the purposes of running reports. For more information about reports, see the CIC Reporting Technical Reference in the CIC Documentation Library.

About Internet enabled reports

Beginning in CIC 2016 R3, you can configure a data source to run Crystal Reports in IC Business Manager with a direct connection to the database server via the Internet. If you do this, you must also configure reports for your IC server.

If you are adding an Oracle data source for Internet enabled reporting, after you save the fields on this page, you must re-open this page to specify the Oracle service name and to view the client TNS entry.

Select method to connect to data source

- To connect through the IC server, select Direct client connection to the data source. This is the default configuration.
- To enable a direct connection to the database server via the Internet, select Proxy through HttpPluginHost.

Port number to proxy report connection on client workstations

Oracle data sources only (required)

Type the port number for your proxy report connection. The valid range of port connections is 1024-64000.

Oracle service name

Note: This field appears only when you edit an existing Oracle data source.

Type the Oracle service name to which the reports will connect.

View client TNS entry button

Note: This button appears only when you edit an existing Oracle data source.

Click this button to view the TNS entry in Notepad. Copy the TNS and paste it to each of the client workstations. This points the TNS entry to the reporting proxy instead of the database.
Data Manager configuration covers all data sources used to display contact information on the Directory and Speed Dial views in the CIC clients. Specific data source configuration is discussed in the IC Data Source Configuration page found under the Data Manager container.

**Thread Pool Size**

Type a number to specify how many threads are available for data operations between CIC client speed dial pages and the IC server. A higher number of threads requires more server system resources. A lower number increases the possibility of contention for the threads needed to access the speed dial data sources.

Each data operation request (for example, database read, database update, and so on) is performed in a separate thread on the server. When the operation is complete, the used thread is returned to a pool of available threads. The Thread Pool Size value determines the maximum number of simultaneous data operations (16 by default). If more than sixteen (16) data operations occur at the same time, the seventeenth (17)--and subsequent--operation will have to wait until an operation completes and a thread becomes available.

To see if users require more than the default 16 threads, check the Windows Server’s Event Viewer program found in the Administrative Tools folder. Look at the Event Details of the Data Manager application events to see if the number of requests exceeds the number of available threads.

**Speed Dial Source**

Select the data source containing the speed dial data for this site. The names in this list are based on the data sources defined in the Contact List Sources container. The default CIC Contacts database is contained in a SQL Server database. This database contains the Contacts and the SpeedDial tables.

If you use an ODBC data source for speed dial entries, it must have identical data layout as the SQL Server SpeedDial table, and it must provide read/write access.

**Refresh Connections**
Click this button to cause CIC to quickly drop and reestablish connections to the contact list data sources. This may be necessary if one or more of the contact list data sources hangs or crashes.

**Reverse White Pages Lookup Sequence**

The program allows you to arrange your contact lists in the order they should be searched.

Use the **Reverse White Pages Lookup Sequence** box to arrange the lists to:

- Add a contact list, click **Add**. In the Entry Name dialog box, select a list in the drop-down box and click **OK**
- Change the lookup sequence, select a list and use the **Up** and **Down** buttons
- Remove a list, select it and click **Remove**

**Note:** You cannot add private contact list sources if Interaction Tracker is not licensed.

**Contact Data Manager Icons**

Each speed dial button on the CIC client interface can have an icon to identify the kind of phone number displayed for each contact. For example, if the contact named Jeff Swinson has phone numbers for home, business, fax, and pager, Jeff's name appears only once in the list, but you can select one of the numbers to display by default. Each kind of phone number can have a different icon to help CIC client users quickly identify which number is displayed.

Select a path, parameter, or a full path and file name with an .ICO extension that contains an icon representing each phone number type. The directory that contains the default CIC icon files is `\Server\IC_Client\IC_Client\Resources` where Server is the name of your IC server computer.

**Business Phone**

Click **Browse** and select the name of an icon file to appear beside Business Phone numbers. For example:

`\Server\Resources\BusPhone.ico`

**Business Phone2**

Click **Browse** and select the name of an icon file to appear beside secondary Business Phone numbers. For example:

`\Server\Resources\BusPhone2.ico`
Click **Browse** and select the name of an icon file to appear beside your contact's Assistant Phone numbers. For example:

\Server\Resources\AsstPhone.ico

![Home Phone](\Server\Resources\HmPhone1.ico)

Click **Browse** and select the name of an icon file to appear beside Home Phone numbers. For example:

\Server\Resources\HmPhone1.ico

![Home Phone2](\Server\IC_Client\IC_Client\Resources\HmPhone2.ico)

Click **Browse** and select the name of an icon file to appear beside secondary Home Phone numbers. For example:

\Server\IC_Client\IC_Client\Resources\HmPhone2.ico

![Mobile Phone](\Server\Resources\MobPhone.ico)

Click **Browse** and select the name of an icon file to appear beside Mobile Phone numbers. For example:

\Server\Resources\MobPhone.ico

![Fax Phone](\Server\Resources\FaxPhone.ico)

Click **Browse** and select the name of an icon file to appear beside Fax Phone numbers. For example:

\Server\Resources\FaxPhone.ico

![Pager Phone](\Server\Resources\Pager1.ico)

Click **Browse** and select the name of an icon file to appear beside Page Phone numbers. For example:

\Server\Resources\Pager1.ico

---

**Contact List Sources**

**Contact List Sources - Options**

Add values for the following contact list source options.

**Timeout (sec)**
Type the number of seconds IC should wait for a response from the data source before returning an error. If you leave this field blank, CIC uses the default timeout value of 60 seconds.

**Query Row Limit**

Enter the maximum number of rows the CIC data source can return in one query of the data source. The default value is 1000 rows.

*Note:* If you are configuring Interaction Tracker contact list sources, consider your operating conditions when setting the values for Timeout and Query Row Limit:

**Timeout (sec)**

- Under normal operating conditions, set the value to 300.
- Under heavy load or high tracing conditions—for example when diagnosing a problem—set the value to 900.

**Query Row Limit**

Set the value for this box to no less than 500,000. You can increase this value if needed by the client site. It should be higher than the combined counts of Individuals, Addresses, Attributes and Connections.

**Contact List Source Name**

Type a descriptive name of the contact list you wish to make available as a directory tab in the CIC clients.

*Note:* The name you type appears as a selection in the CIC clients.

**CIC LDAP Contacts**

You can add configuration information to extend the settings of an LDAP contact. In the **Additional Information** box, use the following syntax:

```<Attribute>=<Value>;<Attribute>=Value...```

**Where:**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attribute</td>
<td>Uppercase or lowercase letters are allowed. Case is not preserved.</td>
</tr>
<tr>
<td>Value</td>
<td>Uppercase or lowercase letters are allowed. Case is preserved.</td>
</tr>
<tr>
<td>=</td>
<td>Blank spaces around equal sign (=) are allowed. When Value contains one or more equal signs (=), then Value must be enclosed by double quotation marks.</td>
</tr>
<tr>
<td>;</td>
<td>Blank spaces around semi-colon (;) are allowed.</td>
</tr>
</tbody>
</table>
When Value contains one or more semi-colons (;), then Value must be enclosed by double quotation marks.

Additional Information attributes:

**Search_DN=**

Use to override the search DN specified in the Interaction Administrator CIC Data Source configuration. In LDAP, a search involves three parameters:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEARCH_DN=</td>
<td>A place (node) in the directory tree to start searching from.</td>
</tr>
<tr>
<td>SEARCH_FILTER=</td>
<td>A filter/query to be applied to the contact entries.</td>
</tr>
<tr>
<td>SEARCH_SCOPE=</td>
<td>A specification for how/if the search is to proceed down the tree.</td>
</tr>
</tbody>
</table>

**Tip:** When specifying the search DN, enclose the string in double quotation marks (" "), since the standard DN format contains equal signs (=).

You can use one or more user substitution variables inside the DN; this is particularly useful when setting up private contacts (see **USERNAME_MAPPING_FILE=** below).

In addition, you can use one or more built-in substitution variables. They are:

<table>
<thead>
<tr>
<th>Variables</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ICUID</td>
<td>The CIC user ID. Generally only useful for private contact sources.</td>
</tr>
<tr>
<td>$CONTACTSOURCE</td>
<td>The name of the contact list source used by the Data Manager. For example: Our Public Contacts.</td>
</tr>
<tr>
<td>$BINDDDN</td>
<td>The DN used to bind with, as specified in the Interaction Administrator CIC Data Source configuration.</td>
</tr>
</tbody>
</table>

**Note:** The above variables must be all uppercase letters.

**SEARCH_FILTER=**

Contains, in LDAP search syntax, the search filter/query to be used.

For example: `((&(objectclass=i3person)(i3owner=$ICUID))`  

You can use one or more user substitution variables inside the DN; this is useful when setting up private contacts (see the section on **USERNAME_MAPPING_FILE=** below).

In addition, you can use one or more built-in substitution variables. They are:
### Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ICUID</td>
<td>The CIC user ID. Generally only useful for private contact sources.</td>
</tr>
<tr>
<td>$CONTACTSOURCE</td>
<td>The name of the contact list source used by Data Manager. For example: Our Public Contacts.</td>
</tr>
<tr>
<td>$BINDDN</td>
<td>The DN used to bind with, as specified in the Interaction Administrator CIC Data Source configuration.</td>
</tr>
<tr>
<td>$SEARCHCDN</td>
<td>The search DN as specified in the Interaction Administrator CIC Data Source configuration (SEARCH DN field), or as overridden in the contact list source.</td>
</tr>
<tr>
<td>$SEARCHDNPARENT</td>
<td>The parent DN of the configured search DN.</td>
</tr>
</tbody>
</table>

**Note:** These variables must be all uppercase letters.

### SEARCH_SCOPE=

Specifies how/if the search proceeds down the sub-tree rooted by the search DN. This attribute can have one of three values:

<table>
<thead>
<tr>
<th>Values</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ONE</td>
<td>Searches only entries directly below the search DN. This is the default.</td>
</tr>
<tr>
<td>SUB</td>
<td>Starts the search at the base DN and then searches everything below, including the base DN.</td>
</tr>
<tr>
<td>BASE</td>
<td>Searches only the base DN entry.</td>
</tr>
</tbody>
</table>

### ATTRIBUTE_MAPPING_FILE=

By default, CIC uses an object class called `i3person` (which inherits from `inetorgperson`) for storing contact information. However, you are free to choose whatever object class you like, including a custom object class. To do this, you must create a file that contains the mappings between the CIC attributes and the attributes of your object class. CIC provides two sample mapping files, `I3PERSON_MAP.TXT` and `INETORPERSON_MAP.TXT`, that contain syntax and usage documentation in the files themselves.

**Note:** `I3PERSON_MAP.TXT` is provided for informational purposes, and – unless you want to modify any of the defaults – you do not need to have an `ATTRIBUTE_MAPPING_FILE=` entry, since CIC knows about the mapping for the `i3person` object class.

### USES_FOLDERS=

The default is True. Set to False if the contact entries are not rooted by a folder/container entry that you want CIC to create. CIC has a default folder object class called `i3genfolder` that you can use.

### FOLDER_ATTRIBUTE_FILE=

You can use your own folder type (such as a folder other than i3genfolder) and still have CIC automatically create the folders to contain your contacts. To do this you must create a file that contains information about the attributes of the folder object class you wish to use. An example file I3GENFOLDER_MAP.TXT is provided whose syntax and usage is the same as the attribute mapping file and is documented in comments inside the file itself.

**Note:** CIC knows about the mappings for i3genfolder, so unless you need to modify the defaults, you don’t need to have a FOLDER_ATTRIBUTE_FILE= entry if you plan on using the default i3genfolder object class.

**RDN_ATTRIBUTE=**

Each newly created contact must have a globally unique distinguished name (DN). The left-most component of a distinguished name is called a *relative* distinguished name (RDN), and contains the attribute-value pair that uniquely defines the contact entry within the current directory. By default, Data Manager will use the *userid* attribute as the attribute for the RDN. However, you can choose whatever attribute you want by setting this attribute.

**Note:** Even though you can specify any attribute as an RDN attribute, Data Manager will always set it to a unique timestamp value (for example "200009231456450001000"). Therefore, when choosing an RDN attribute, make sure the semantics of the attribute are such that a unique timestamp value like this will not cause any problems.

**USERNAME_MAPPING_FILE=**

When accessing private contacts, the only information CIC has when distinguishing one user’s contact data from another user’s contact data is the CIC user ID value. These values might or might not be the same as the LDAP user ID attribute’s values.

If they are not the same, you can set up a file to specify the mapping from the CIC user ID to the LDAP user ID. In fact, you can do this even if they are the same in order to specify other substitution values for a user.

The ICUSER_MAP.TXT example mapping file provides syntax and usage documentation.

**Tip:** For additional information about how CIC supports LDAP-enabled Netscape directory servers, see *Using LDAP for IC Contact Lists* located in the CIC Documentation Library.

Related topics:

LDAP contact list attributes
Syntax for public contact source that uses the default folders:

```
SEARCH_DN="cn=$CONTACTSOURCE, ou=People, o=Airius.com";
```

Syntax for private contact source that uses the default folders:

```
SEARCH_DN="cn=$CONTACTSOURCE, uid=$ICUID, ou=People, o=Airius.com";
```

Syntax for private contact source that does not use the default folders:

```
USES_FOLDERS=FALSE; SEARCH_DN="uid=$ICUID, ou=People, o=Airius.com"; SEARCH_FILTER="(objectclass=i3person)";
```

Web Services

Web Services Configuration

Use this page to define the settings for the HTTP and HTTPS behavior for Web Services.

**Notes:** You must have CIC's web services installed and configured on your web server (see Interaction Web Tools Technical Reference in the CIC Documentation Library on the IC server).

In order for these settings to take effect, restart the WebProcessor and the WebProcessorBridge.

See also Web Services Parameters.

---

Web Services Parameters

After installing IC Web Services, the Web Services container appears in Interaction Administrator. In that container you can configure the following chat parameters:

**Required Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CollaborationLaunchURL</td>
<td>The URL on which the Web Collaboration will start when the agent pushes out the web page to the visitor.</td>
</tr>
<tr>
<td>HoldMsg</td>
<td>Message displayed when interaction is placed on hold. Preset to: &quot;%1 has put the conversation on hold.&quot; %1 delimiter is replaced by agent name.</td>
</tr>
<tr>
<td>InteractionsAllowedUnitTime</td>
<td>See the description in MaxInteractionsAllowedPerUnitTime the default is 1</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>MaxActiveInteractionsAllowed</td>
<td>This determines the maximum number of active interactions (web chats/callback) allowed through WebProcessorBridge at any point of time. For example, if its value is 5000, WPB can create 5000 active web chats/callbacks. If 10 chats/callbacks are disconnected, WPB can create another 10 web chats/callbacks. This limitation doesn’t apply on intercom chats/callbacks. The default is 5000.</td>
</tr>
<tr>
<td>MaxAnonymousInteractionsAllowed</td>
<td>This limits the total number of active web chats/callbacks, anonymous users can create at any point of time. the default is 5000.</td>
</tr>
<tr>
<td>MaxAnyInteractionsAllowedPerQueue</td>
<td>This limits the total number of active chats and callback requests that are allowed on an ACD queue at any point in time. The default is 5000. Note: The Web Processor adheres to this setting. This setting does not affect the number of active calls, e-mails, and faxes allowed on an ACD queue at any point in time.</td>
</tr>
<tr>
<td>MaxInteractionsAllowedPerIP</td>
<td>This limits the total number of active web chats/callbacks that can be created from one IP address at any point of time. The default is 15.</td>
</tr>
<tr>
<td>MaxInteractionsAllowedPerUnitTime</td>
<td>MaxInteractionsAllowedPerUnitTime and InteractionsAllowedUnitTime together define the web chat/callback burst time. For example, if MaxInteractionsAllowedPerUnitTime = 5 and InteractionAllowedUnitTime = 1, then no more than a burst of 5 chats per 1 second would be allowed. The default is 5.</td>
</tr>
<tr>
<td>MaxInteractionsAllowedPerUser</td>
<td>This limits the total number of active web interactions (chats or callbacks), an Interaction Tracker registered user can create at any point of time. The default is 5.</td>
</tr>
<tr>
<td>SystemName</td>
<td>Identifies the server name to display as a prefix for server messages. Preset to: IC. For example, if you changed IC to WebAdmin you would see “WebAdmin: DebbiH has joined the conversation.” To change the preset value, right-click the parameter name and select Properties. You see the Parameter Configuration dialog where you can enter a new parameter value.</td>
</tr>
<tr>
<td>WebCGIRequestTimeout</td>
<td>This is used with the CGI request/response parameter. This time out (in seconds) determines the maximum time a handler can take to reply to the CGI request. The default is 300.</td>
</tr>
</tbody>
</table>

**Optional Parameters**

The following Web Services parameters are optional and must be set manually in Interaction Administrator.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AgentConnectedMsg</td>
<td>Sets the message that appears in the Chat dialog when an Agent joins a chat. Preset to: &quot;&lt;Name&gt; has joined the conversation.&quot; A visitor to the Website who has not registered, would appear as WebUser. A visitor who has registered is identified by name. For example, if the agent’s ID was TomS, you would see “TomS has joined the conversation.” If the visitor was unregistered, you would see “WebUser has joined the conversation.” To change the preset value, right-click the parameter name and select Properties. You see the Parameter Configuration dialog where you can enter a new parameter value.</td>
</tr>
<tr>
<td>Parameter Name</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>AgentDisconnectedMsg</td>
<td>Sets the message that appears in the Chat dialog when an Agent leaves a chat. Preset to: &quot;&lt;Name&gt; has left the conversation.&quot; A visitor to the Website who has not registered, would appear as WebUser. A visitor who has registered is identified by name. For example, if a registered visitor's ID was <a href="mailto:DebbiH@framis.com">DebbiH@framis.com</a>, you would see <a href="mailto:DebbiH@framis.com">DebbiH@framis.com</a> has left the conversation. To change the preset value, right-click the parameter name and select Properties. You see the Parameter Configuration dialog where you can enter a new parameter value.</td>
</tr>
<tr>
<td>CallbackAccessControl</td>
<td>In IC 4.0 SU3 or later, this controls whether WPB allows visitors to create callback requests. In IC 4.0 SU4 or later, this also determines whether the radio buttons for both anonymous and authenticated access appear in the webpage where a visitor requests a callback.</td>
</tr>
<tr>
<td></td>
<td>• 0=block all</td>
</tr>
<tr>
<td></td>
<td>• 1=allow all</td>
</tr>
<tr>
<td></td>
<td>• 2=authenticated only</td>
</tr>
<tr>
<td></td>
<td>• 3=anonymous only</td>
</tr>
<tr>
<td></td>
<td>Example: If CallbackAccessControl=2 and your custom web interface ignores the presence or absence of supportAuthenticationAnonymous, WPB prevents website visitors from creating anonymous callback requests.</td>
</tr>
<tr>
<td></td>
<td>Example 2: If CallbackAccessControl=1 (allow all) and MaxAnonymousInteractions=0 (anonymous users cannot start a chat or create a callback request), supportAuthenticationAnonymous is sent from WebProcessor Bridge to the visitor’s browser.</td>
</tr>
<tr>
<td>ChatAccessControl</td>
<td>In IC 4.0 SU 3 or later, this controls whether WPB allows visitors to create chat requests. In IC 4.0 SU 4 or later, this also determines whether the radio buttons for both anonymous and authenticated access appear in the webpage where a visitor starts a chat interaction.</td>
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<td></td>
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<tr>
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<td>Example: If ChatAccessControl=2 and your custom web interface ignores the presence or absence of supportAuthenticationAnonymous, WPB prevents website visitors from creating anonymous callback requests.</td>
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</tr>
<tr>
<td>EnableIdleTimeout</td>
<td>0 = Disable timeout. (Default value)</td>
</tr>
<tr>
<td></td>
<td>1 = Enable timeout.</td>
</tr>
</tbody>
</table>
| IdleDisconnectMessage         | Specifies the message sent to all parties after the
chat is disconnected. You can customize this default message: “%1 has been disconnected from chat since being idle for %4.”

%1 = Visitor name
%2 = Idle Time
%3 = Grace time
%4 = Idle Time + Grace Time

Curly brackets, {}, are not used. All time display are localized so they appear in the manner in which the visitor is used to seeing them.

<table>
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</thead>
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<tr>
<td>IdleWarningMessage</td>
<td>Specifies the warning message sent to all parties after the time defined in PartyIdleTime. You can customize this default message: “%1 has been idle for %2. The party has to type something within next %3 to remain active in chat”.</td>
</tr>
<tr>
<td>MaxPollFrequency</td>
<td>Sets the interval after which the Javascript client polls during a chat. The default is 2000ms (2 seconds). Note: Setting this value lower can seem to speed up the pace of a chat conversation, but it increases the IC server’s workload. Setting it to a higher value eases the IC server’s workload but can make chats seem sluggish. Recommended values are between 1000 ms and 5000 ms.</td>
</tr>
<tr>
<td>PartyIdleGraceTime</td>
<td>Set the maximum number of seconds the web user can remain idle after the warning message is sent. The default is 120 seconds. See also SMS Configuration. <strong>Note:</strong> If you want to use this parameter, you must also add the EnableIdleTimeout parameter and set that parameter to 1.</td>
</tr>
<tr>
<td>PartyIdleTime</td>
<td>Set the time (in seconds) the visitor can be idle before the warning is displayed. The default is 300 seconds. See also SMS Configuration. <strong>Note:</strong> If you want to use this parameter, you must also add the EnableIdleTimeout parameter and set that parameter to 1.</td>
</tr>
<tr>
<td>QueryQueueAccessControl</td>
<td>Controls whether the radio buttons for both anonymous and authenticated access to the Chat and Callback links appear to website visitors when the appropriate queue is not busy.</td>
</tr>
<tr>
<td></td>
<td>• 0=block all</td>
</tr>
<tr>
<td></td>
<td>• 1=allow all</td>
</tr>
<tr>
<td></td>
<td>• 2=authenticated only</td>
</tr>
<tr>
<td></td>
<td>• 3=anonymous only</td>
</tr>
</tbody>
</table>

The query queue tool enables you to find out programmatically how many agents are available and what the wait time is. You can write your own code to do something with that information. Your code could implement certain rules that control the display of the Chat and Callback links.

For example:
- Display the Chat link if wait time is less than 3 minutes.
- Display the Chat link if agents are free or the wait time is less than 1 minute. Otherwise, show the Callback link.
- Display the link to everyone if agents are free. If not, and the wait time is less than 8 minutes, display the link to every third visitor. Otherwise don't display the link.

**VisitorConnectedMsg**

Sets the message that appears in the Chat dialog when a visitor joins a chat. Preset to: "<Name> has joined the conversation." A visitor to the Website who has not registered, would appear as WebUser. A visitor who has registered is identified by name. For example, if the agent's ID was TomS, you would see "TomS has joined the conversation." If the visitor was unregistered, you would see "WebUser has joined the conversation." To change the preset value, right-click the parameter name and select Properties. You see the Parameter Configuration dialog where you can enter a new parameter value.

**VisitorDisconnectedMsg**

Sets the message that appears in the Chat dialog when a visitor leaves a chat. Preset to: "<Name> has left the conversation." A visitor to the Website who has not registered, would appear as WebUser. A visitor who has registered is identified by name. For example, if a registered visitor's ID was pattyj@nville.com, you would see pattyj@nville.com has left the conversation. To change the preset value, right-click the parameter name and select Properties. You see the Parameter Configuration dialog where you can enter a new parameter value.

---

**Note:** Changes to the parameters will not take effect until you restart web services.

**Recognition**

**Recognition Configuration - General**

Use this page to configure the general behavior of speech recognition.

**Input Modes Mask**

These are the input modes that are supported by the system. For example, if this mask is “dtmf”, only DTMF input will be considered.

**Default Input Modes**

This is the default input mode used for all interactions where the input mode is not explicitly overridden in Reco Initialize tool.

See the Handler help in the CIC Documentation Library on the IC server for more information on this tool.

**Default Grammar Base URI**
This is the URI (or file path) that is used to resolve relative grammar URIs. It is commonly a file path to the grammars, for example d:/I3/IC/Resources. If this parameter is not specified, the “Resource Path” server parameter is used.

For example, assuming a base URI of “d:/I3/IC/Resources”, specifying a relative grammar URI of “main_menu.gram” will be resolved to “d:/I3/IC/Resources/main_menu.gram” by the RecoSubsystem.

**Recognition Configuration - Grammar Cache**

Use this page to configure the settings for the grammar cache.

**Note:** These settings should only be modified under the direction of Support. Any modifications to these values can have a significant impact on the behavior of the system.

**Grammar Cache Directory**

This is the directory where the RecoSubsystem maintains the grammar cache. If no directory is specified, the system uses the “Work Path” server parameter.

**Grammar Source Data Size Limit (bytes)**

This is the maximum number of bytes the source of a single parsed grammar may be comprise of. This setting is used to prevent denial of service attacks by specifying excessively large grammar source files. This limit does not apply to grammars that are not parsed (to allow large binary, engine specific grammars).

**Max Per Grammar Data Memory Size (bytes)**

This is the maximum size (in characters) the source of a grammar may have before it is cached in a file. Data of grammars that is smaller than this value are cached in memory.

**Max Total Grammar Data Memory Cache (bytes)**

This is the maximum number of bytes the in-memory cache of the grammar source may contain. If the size of all grammar data cached in memory exceeds this value, the data of subsequently cached grammars is cached in a file (regardless of size).

**Note:** This does not include the memory occupied by the parse-trees of parsed grammars.

**Grammar Cache Cleanup Interval (sec)**

This is the interval between garbage collections in the grammar cache (time in seconds).
**Min Grammar Idle Time (sec)**

This is the minimum amount of time that has to elapse since the last reference to a grammar before that grammar is eligible for garbage collection (in seconds).

**Grammar Cache Idle Baseline**

This setting specifies the minimum number of idle grammars always left in the cache. Even after idle grammars are eligible for removal because the amount of time passed since last use, the number of grammars specified by this setting is kept in the cache. If there are more idle grammars, the oldest ones are removed. This setting prevents excessive grammars if a system has very low traffic and uses only a few grammars. Without the baseline idle grammars, the grammars would be unloaded between a call and then re-loaded in the next call (for example if the system is not used for a long time during the night).

**Note:** Setting this value too high may lead to excessive virtual memory usage.

**Parsed Grammar Cache Size (bytes)**

This is the maximum combined size of all parsed grammars held in memory. If all the grammars in the parsed grammar cache occupy more than this, the oldest grammars are serialized to disk and then released. The next time the grammar is accessed, it's reloaded from disk. Grammars that have been accessed in the last “Min Parsed Grammar Idle Time” seconds or are smaller than “Parsed Grammar Compact Threshold” are not considered.

**Note:** The calculation of the size of the parsed grammars is only approximate. Setting this value very low can lead to churn when large grammars are registered frequently. The default of 16MB should be appropriate in most cases.

**Parsed Grammar Compact Threshold (bytes)**

Parsed grammars of size less than this setting will never be compacted (saved to disk and parsed object released). This reduces the likelihood that DTMF grammars are being compacted, as they tend to be rather small.

**Min Parsed Grammar Idle Time (sec)**

This is the minimum amount of time that must pass since the last access before a parsed grammar is considered for compacting (serializing to disk and then releasing the parsed grammar object).

**Properties**

Use this page to Add, Edit or Delete speech recognition properties. These properties constitute name and value pairs that are maintained by the recognition subsystem. They are retrieved and modified through the ‘Reco Get Property’ and ‘Reco Set Property’ tools.
The “namespace prefix” classifies properties. This is important to distinguish between VoiceXML, I3, and engine specific properties. Properties that have no namespace prefix correspond to their VoiceXML counterparts of the same name. See the table below for a list of property names and values.

Note: For more information on the tools, see the Handler help in the CIC Documentation Library.

To add a property click **Add** and enter the **Property Name**. Click **Add Value** and enter the property value. Click **Remove Value** to delete a property.

To edit a property select the property and click **Edit**. Make changes then click **OK** to save your changes.

To delete a property select the property and click **Delete**.

<table>
<thead>
<tr>
<th>Property Name</th>
<th>Description and Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>reco:ASREngine</td>
<td>This is the name of the ASR (Automatic Speech Recognition) engine used by the current session.</td>
</tr>
<tr>
<td>reco:ASRServer</td>
<td>Machine name of the ASR server on which the port of the session is located. Empty string if lazy port allocation and port has not yet been allocated.</td>
</tr>
<tr>
<td>reco:ASRSupportedFeatures</td>
<td>This Property is reserved for future release.</td>
</tr>
<tr>
<td></td>
<td>Space separated list of features supported by the ASR engine of a session. Handlers can enforce support for features in the ‘Reco Initialize’ and check for individual support through the ‘Reco Has Feature’ tool. The following features are currently defined:</td>
</tr>
<tr>
<td></td>
<td>asr_multiple_grammars - The ASR engine supports multiple simultaneously active grammars (multiple ASR grammars may be referenced by the ‘Reco Input’ tool at once).</td>
</tr>
<tr>
<td></td>
<td>asr_grammar_weights - The ASR engine supports weights for individual grammars. If not supported, 1.0 is assumed.</td>
</tr>
<tr>
<td></td>
<td>asr_grammar.fragments - The ASR engine supports fragments in the grammar URIs.</td>
</tr>
</tbody>
</table>
### asr_sisr_conditionals
- The engine supports conditional expressions in semantic interpretation tags.

### asr_sisr_func_reject
- The engine supports the ‘Reject’ function in semantic interpretation tags.

### asr_inline_grammars
- The ASR engine supports adding grammars defined as source at runtime, thus the tools ‘Reco Register Grammar String’ and ‘Reco Register Inline Grammar’ are supported.

### reco:ASRMinResultConf
- Minimum confidence an ASR recognition hypothesis must have in order to be included in the recognition result. Default: "0.1"

### reco:GrammarBaseURI
- Base URI used to resolve relative grammar URIs.

### reco:ASRDebugWaveLogging
- Boolean property to enable logging of wave data for debugging purposes. The default is "false."

  **Note:** When the reco:RestrictResultTracing property is set to True, the reco:ASRDebugWaveLogging property will automatically be set to False.

### reco:RestrictResultTracing
- The purpose of this property is to prevent sensitive data from being logged in the IP logs.

  Set this property to True for an input operation. This sets a flag in the recognition result that suppresses tracing of the utterance and slot values in the trace logs.

  **Note:** When this property is set to True, it will also disable the ASR Debug Wav recordings.

### reco:ASRBargeinDisabled
- Boolean property to disable barge-in. If this property is set to "true", the plays are not cancelled when speech is detected. The plays will be cancelled when the recognition is complete (successful or failed). Default: "false"

### reco:ASRANII
- Defines the ANII value of the current call. Used for logging.

### reco:ASRApplcationName
- Defines the Application Name to be logged for the current call.

### reco:ASRConfidenceMapping
- Defines a list of confidence mapping pairs which are used to map the native engine confidences into
<table>
<thead>
<tr>
<th>Property</th>
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</tr>
</thead>
<tbody>
<tr>
<td>reco:EnableSpeakerVerification</td>
<td>Specifies whether speaker identification/verification features should be enabled for an engine.</td>
</tr>
<tr>
<td>reco:GrammarCompileTimeout</td>
<td>Specifies the timeout (in seconds) to use when waiting on grammars to be compiled. Depending on the engine, this may not be able to be set through IA and may only have an affect if set in the server's xml config file. Default: 300.0 (5 minutes)</td>
</tr>
<tr>
<td>reco:EndOfSpeechNotifyDelay</td>
<td>Specifies the delay after the end of speech has been detected before the server sends an end-of-speech notification. Default: 0.1 (100 ms)</td>
</tr>
<tr>
<td>recocfg:ASRMaxProxySessionCount</td>
<td>Maximum number of sessions a server proxy may host. Creating more sessions than the maximum number will be refused. Sessions will not be killed if the maximum session count is changed to a lower value than the number of currently active sessions.</td>
</tr>
<tr>
<td>recocfg:ASRServerProxyEnabled</td>
<td>Configuration property specifying whether a server proxy is enabled. A disabled proxy will not allow new sessions (similar proxies whose recocfg:MaxProxySessionCount property are set to 0.</td>
</tr>
<tr>
<td>recocfg:AudioAdvertisedAddress</td>
<td>IP address or DNS name under which the IC server sees the RTP endpoint of the ASR server. The address specified through this</td>
</tr>
<tr>
<td>Property Name</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
</tr>
<tr>
<td>recocfg:AudioConnectionProbeInterval</td>
<td>Interval between audio connection probes in seconds. It specifies the minimum interval between successful connection probe attempts.</td>
</tr>
<tr>
<td>recocfg:AudioConnectionProbeMaxFail</td>
<td>Maximum number of failed audio connection probe attempts before a connection configuration problem is assumed and reported.</td>
</tr>
<tr>
<td>recocfg:AudioListenInterfaceAddress</td>
<td>Local IP address of the NIC which the server should use to receive audio. This address must refer to the same physical device as the recocfg:AudioAdvertisedAddress property. The local NIC address must be specified as &quot;dot&quot; address (no DNS name). IMPORTANT: This property must be used with care and only if the implications are well understood. Misconfiguration may lead to hard to diagnose problems or failures in the audio delivery to the ASR servers.</td>
</tr>
<tr>
<td>recocfg:EnableAudioConnectionProbe</td>
<td>Enables the audio connection probes to check the connection between the IC servers and ASR servers at regular intervals.</td>
</tr>
<tr>
<td>recocfg:ServerProxyPriority</td>
<td>Priority of a server proxy compared to other server proxies for the same engine. When choosing a server for a session, the proxies with low priorities are picked first until their session limit is reached.</td>
</tr>
<tr>
<td>recocfg:SupportedLanguages</td>
<td>List of languages supported by an EIM or ASR server. Note: A value of &quot;en&quot; indicates that all versions of English are supported. A value of &quot;en-US&quot; indicates that only the U.S. English version is supported.</td>
</tr>
<tr>
<td>sensitivity</td>
<td>VoiceXML related property: Relative sensitivity to speech input. 1.0 means highly sensitive to quiet input and 0.0 very insensitive to noise. Not all engines will support this. Default: 0.5</td>
</tr>
<tr>
<td>speedvsaccuracy</td>
<td>VoiceXML related property: Relative tradeoff between recognition accuracy and CPU utilization (faster recognition). 0.0 means fastest recognition, 1.0 means highest recognition accuracy. Not all engines support this. Default: 0.5</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>bargeintype</td>
<td>Type of barge-in performed by the voice input. This property corresponds to the ‘bargeintype’ VoiceXML property. Possible values defined by VoiceXML: speech - The barge-in occurs when speech or DTMF is detected. hotword - The barge-in occurs after a grammar has accepted voice or DTMF input. Input that does not match a grammar is ignored. Thus, the tool will never take the “No Match” exit. The default is “speech”.</td>
</tr>
</tbody>
</table>

**Preloaded Grammars**

Use this page to configure preloaded grammars.

**Name**

This is the name of the preloaded grammar. This name is used to identify the preloaded grammar in the “Reco Register Preloaded Grammar” tool.

**URI**

This is the URI or filename of the grammar to be preloaded.

**MIME Type**

This is the MIME type of the grammar referenced by the URI.

**Mode**

This is the mode of the grammar. Currently, only “voice” grammars can be preloaded.

To add a preloaded grammar click **Add** and enter the **Preloaded Grammar Name**, **URI**, **MIME Type**, and the **Mode**, then click **OK**.
To edit a preloaded grammar select the grammar and click **Edit**. Make changes then click **OK** to save your changes.

To delete a preloaded grammar select the grammar and click **Delete**.

**Recognition Configuration - ASR Engines**

Use this page to arrange in order the list of available ASR engines. Select the engine then use the **Move Up** or **Move Down** buttons to change the order.

Engines appear in this list when they’re enabled (which is done by the install based on the manifest). The order of engines determines in which order the RecoSubsystem picks engines when multiple engines match the parameters (such as the language of the call).

**ASR server configuration**

**Location**

Select the location from the list where this ASR server resides. By default, when an ASR server logs in to the IC server, it is automatically assigned to the default location. You must reassign it if it belongs in a different location. You can also set the location in the **Regionalization Locations** container.

**Launch Web Configuration...**

Click this button to update the configuration of the ASR server. For more information on configuring ASR servers, see the *ASR Technical Reference* in the CIC Documentation Library on the IC server.

**Related topics**

- **Selection Rules**
- **Regionalization Location**

**ASR engine configuration**

**General**

Use this page to set general configuration options.

**Enabled**

This check box enables the use of this ASR engine. For performance reasons, only ASR engines for which there are ASR servers available should be enabled.
EIM Module DLL

This is the DLL that implements the engine integration component for this ASR engine. This field is populated by the install and should not be modified unless directed by support services.

Properties

Use this page to Add, Edit or Delete speech recognition properties. These properties constitute name and value pairs that are maintained by the recognition subsystem. They are retrieved and modified through the ‘Reco Get Property’ and ‘Reco Set Property’ tools.

The “namespace prefix” classifies properties. This is important to distinguish between VoiceXML, I3, and engine specific properties. Properties that have no namespace prefix correspond to their VoiceXML counterparts of the same name. See the table below for a list of property names and values.

Note: For more information on the tools, see the Handler help in the CIC Documentation Library.

To add a property click Add and enter the Property Name. Click Add Value and enter the property value. Click Remove Value to delete a property.

To edit a property select the property and click Edit. Make changes then click OK to save your changes.

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<tr>
<td>Property</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>reco:ASRMinResultConf</td>
<td>Minimum confidence an ASR recognition hypothesis must have in order to be included in the recognition result. Default: &quot;0.1&quot;</td>
</tr>
<tr>
<td>reco:GrammarBaseURI</td>
<td>Base URI used to resolve relative grammar URIs.</td>
</tr>
<tr>
<td>reco:ASRDebugWaveLogging</td>
<td>Boolean property to enable logging of wave data for debugging purposes. The default is &quot;false.&quot;</td>
</tr>
<tr>
<td>reco:RestrictResultTracing</td>
<td>The purpose of this property is to prevent sensitive data from being logged in the IP logs.</td>
</tr>
<tr>
<td></td>
<td>Set this property to True for an input operation. This sets a flag in the recognition result that suppresses tracing of the utterance and slot values in the trace logs.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> When this property is set to True, it will also disable the ASR Debug Wav recordings.</td>
</tr>
<tr>
<td>Property Name</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
</tr>
<tr>
<td>reco:ASRBargeinDisabled</td>
<td>Boolean property to disable barge-in. If this property is set to &quot;true&quot;, the plays are not cancelled when speech is detected. The plays will be cancelled when the recognition is complete (successful or failed). Default: &quot;false&quot;</td>
</tr>
<tr>
<td>reco:ASRANII</td>
<td>Defines the ANII value of the current call. Used for logging.</td>
</tr>
<tr>
<td>reco:ASRApplName</td>
<td>Defines the Application Name to be logged for the current call.</td>
</tr>
<tr>
<td>reco:ASRConfidenceMapping</td>
<td>Defines a list of confidence mapping pairs which are used to map the native engine confidence values into the confidence values returned in the recognition result. This property is thus used to normalize differing confidence values returned by the ASR engines. Each mapping pair consists of two floating point values between 0.0 and 1.0, separated by an equal sign. The first value designates the native value (returned by the engine) and the second value the resulting mapped confidence for that particular engine value. The property may contain an arbitrary number of mapping points. Linear interpolation is used to map confidence values that lie between two point. When mapping confidence values, two implicit mapping points &quot;0.0=0.0&quot; and &quot;1.0=1.0&quot; are always assumed. This results in an identity mapping if no property is defined and to ensure correct handling at the boundaries.</td>
</tr>
<tr>
<td>reco:EnableSpeakerVerification</td>
<td>Specifies whether speaker identification/verification features should be enabled for an engine.</td>
</tr>
<tr>
<td>reco:GrammarCompileTimeout</td>
<td>Specifies the timeout (in seconds) to use when waiting on grammars to be compiled. Depending on the engine, this may not be able to be set through IA and may only have an affect if set in the server's xml config file. Default: 300.0 (5 minutes)</td>
</tr>
<tr>
<td>reco:EndOfSpeechNotifyDelay</td>
<td>Specifies the delay after the end of speech has been detected before the server sends an end-of-speech notification. Default: 0.1 (100 ms)</td>
</tr>
<tr>
<td>recocfg:ASRMaxProxySessionCount</td>
<td>Maximum number of sessions a server proxy may host. Creating more sessions than the maximum number will be refused. Sessions will not be killed if the maximum session count is changed to</td>
</tr>
<tr>
<td>Property Name</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>recocfg:ASRServerProxyEnabled</strong></td>
<td>Configuration property specifying whether a server proxy is enabled. A disabled proxy will not allow new sessions (similar proxies whose recocfg:MaxProxySessionCount property are set to 0).</td>
</tr>
<tr>
<td><strong>recocfg:AudioAdvertisedAddress</strong></td>
<td>IP address or DNS name under which the IC server sees the RTP endpoint of the ASR server. The address specified through this property must refer to the same physical device as recocfg:AudioListenInterfaceAddress. IMPORTANT: This property must be used with care and only if the implications are well understood. Misconfiguration may lead to hard to diagnose problems or failures in the audio delivery to the ASR servers.</td>
</tr>
<tr>
<td><strong>recocfg:AudioConnectionProbeInterval</strong></td>
<td>Interval between audio connection probes in seconds. It specifies the minimum interval between successful connection probe attempts.</td>
</tr>
<tr>
<td><strong>recocfg:AudioConnectionProbeMaxFail</strong></td>
<td>Maximum number of failed audio connection probe attempts before a connection configuration problem is assumed and reported.</td>
</tr>
<tr>
<td><strong>recocfg:AudioListenInterfaceAddress</strong></td>
<td>Local IP address of the NIC which the server should use to receive audio. This address must refer to the same physical device as the recocfg:AudioAdvertisedAddress property. The local NIC address must be specified as &quot;dot&quot; address (no DNS name). IMPORTANT: This property must be used with care and only if the implications are well understood. Misconfiguration may lead to hard to diagnose problems or failures in the audio delivery to the ASR servers.</td>
</tr>
<tr>
<td><strong>recocfg:EnableAudioConnectionProbe</strong></td>
<td>Enables the audio connection probes to check the connection between the IC servers and ASR servers at regular intervals.</td>
</tr>
<tr>
<td><strong>recocfg:ServerProxyPriority</strong></td>
<td>Priority of a server proxy compared to other server proxies for the same engine. When choosing a server for a session, the proxies with low priorities are picked first until their session limit is reached.</td>
</tr>
</tbody>
</table>
**recofg:SupportedLanguages**

List of languages supported by an EIM or ASR server.

*Note:* A value of "en" indicates that all versions of English are supported. A value of "en-US" indicates that only the U.S. English version is supported.

**sensitivity**

VoiceXML related property: Relative sensitivity to speech input. 1.0 means highly sensitive to quiet input and 0.0 very insensitive to noise. Not all engines will support this. Default: 0.5

**speedvsaccuracy**

VoiceXML related property: Relative tradeoff between recognition accuracy and CPU utilization (faster recognition). 0.0 means fastest recognition, 1.0 means highest recognition accuracy. Not all engines support this. Default: 0.5

**bargeintype**

Type of barge-in performed by the voice input. This property corresponds to the ‘bargeintype’ VoiceXML property. Possible values defined by VoiceXML:

- **speech** - The barge-in occurs when speech or DTMF is detected.
- **hotword** - The barge-in occurs after a grammar has accepted voice or DTMF input. Input that does not match a grammar is ignored. Thus, the tool will never take the “No Match” exit.

The default is “speech”.

---

**Preloaded Grammars**

Use this page to configure preloaded grammars.

**Name**

This is the name of the preloaded grammar. This name is used to identify the preloaded grammar in the “Reco Register Preloaded Grammar” tool.

**URI**
This is the URI or filename of the grammar to be preloaded.

**MIME Type**

This is the MIME type of the grammar referenced by the URI.

**Mode**

This is the mode of the grammar. Currently, only “voice” grammars can be preloaded.

To add a preloaded grammar click **Add** and enter the **Preloaded Grammar Name**, **URI**, **MIME Type**, and the **Mode**, then click **OK**.

To edit a preloaded grammar select the grammar and click **Edit**. Make changes then click **OK** to save your changes.

To delete a preloaded grammar select the grammar and click **Delete**.

**Media Servers**

Use this page to set global properties for all Interaction Media Servers, or properties for a specific Interaction Media Server. The list displays the **Name** and **Value** of the properties. Click **Add** to add a new property, click **Edit** to edit a property, or click **Delete** to remove a property.

For a list of valid properties see the **Properties Configuration Page** section of the *Interaction Media Server Technical Reference* document in the **Technical Reference Documents** section in the CIC Documentation Library.

**Notes**: For more information on properties, see the *Interaction Media Server* document available on the Product Information site.

Setting global properties in IA overrides the properties set in the Interaction Media Server web interface and applies to all connected Interaction Media Servers.

**Related topics**

Media Server Introduction

[Media Server General Configuration](#)

[Media Server Properties](#)

[Media Server Web Configuration](#)
Regionalization

Location Assistant

Select Media Server

Packaged Server Parameters

Telephony Parameters - General

Optional Server Parameters

Media Server General Configuration

Use this page to set a specific location of an Interaction Media Server.

Select the **Location** from the list where this Interaction Media Server resides. By default, when a media server logs in to the CIC server, it is automatically assigned to the **<Default Location>**.

To change the virtual location of an Interaction Media Server, use the [Regionalization Locations](#) container.

**Related topics**

- Media Server Configuration Properties

**Servers**

**Media Server Properties**

Interaction Media Server properties are name-value pairs that control the operations of the media server.

These properties can be set in four different places – two in the Media Server configuration pages and two in Interaction Administrator. The properties are used in a hierarchical relationship order, which enables an administrator to have specific control over the scope of these properties, as needed. The default properties are established on each media server, but each property can be overridden by defining it and assigning a different value in Interaction Administrator. Any property can be set from any location, depending on the scope of the property (i.e., which media servers and IC servers it applies to). If you don't set any media server properties in Interaction Administrator, the default properties apply, or whatever you set locally on each media server.

**Note:** When you define media server properties with a different value in Interaction Administrator, those properties are not visibly displayed in the Interaction Media Server's interface, as they are when you define them locally on the media server. To see the complete set of all properties in effect on a media server, look in Interaction Administrator and the Interaction Media Server interface.
The four property configuration locations and the scope and purpose of each are summarized in the following table:

<table>
<thead>
<tr>
<th>Evaluation Order</th>
<th>Property Configuration</th>
<th>Purpose and Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Global media server properties – defined on the media server from the Config -&gt; Properties configuration page</td>
<td>These properties apply to all IC servers connected to this media server. This is the lowest level of priority in the hierarchy as all other property settings can override these. Even properties that are not displayed here have a default value and they may be overridden if set elsewhere. Click here for a location example.</td>
</tr>
<tr>
<td>2</td>
<td>Server properties – defined on the media server from the Properties page linked from the Config -&gt; Servers configuration page</td>
<td>These properties apply only to the connection between the selected IC server and that media server. If there is overlap, properties defined here override the same property defined in the Global Properties page. Click here for a location example.</td>
</tr>
<tr>
<td>3</td>
<td>IC server Global Properties – defined in Interaction Administrator Media Servers/Configuration on the Properties tab</td>
<td>These properties apply to all media servers logged in to this IC server. If there is overlap, these properties override all of the properties set on the web configuration pages of all connected media servers. Click here for a location example.</td>
</tr>
<tr>
<td>4</td>
<td>IC server properties – defined in Interaction Administrator, in Media Servers/Server/ &lt;servername&gt; Properties tab</td>
<td>These properties apply only to the selected media server logged in to this IC server. If there is overlap, these properties override the IC server Global Properties, as well as all properties defined on the web configuration pages of the specified media server.. Click here for a location example.</td>
</tr>
</tbody>
</table>

When the IC server performs a media server operation (e.g., start a recording), the Interaction Media Server uses the aggregate set of properties to determine the current configuration. It evaluates the properties in this order:

1. Start with all of the properties defined in its global Properties page (1st in the table)
2. Add all of the properties defined in the Server Properties page (2nd in the table). If any of the server properties are also set in the global properties, use the server properties.
3. Add all of the properties defined in the global Media Server Properties in Interaction Administrator (3rd in the table). If any of these properties are also defined on the media server, use the global properties from Interaction Administrator.
4. Add all of the properties defined in the specific Media Server <servername> Properties page in Interaction Administrator (4th in the table). Use these properties to override any other property defined with the same name.
5. Add all of the properties together for a specific operation.

Using this hierarchy, you can have a default configuration but choose to override any part of it for a specific operation or server combination. If the properties you need to set are identical on all media servers, you can set them all once in Interaction Administrator and you won't have to set them at all in the Interaction Media Server interface.

**Property Configuration Example:**

Consider the RecordingMimeTypeDefault property, which controls the audio recording format when Interaction Recorder is configured to use “μ-Law (Mono)” as its compression format, or when a custom handler initiates a recording and does not specify a “Mime Type” parameter.

Suppose you specified audio/PCMA as the recording format in the **Config --> Properties** page of the Media server. That means when a recording is created, it is in that format unless specifically overridden. If you later realize the need to record all calls on a particular IC server in the audio/GSM format, you can add the RecordingMimeTypeDefault property with the audio/GSM value to the **Config --> Server --> Properties** page. However, if an IC server uses several media servers, you would have to go to each media server and add that property to the **Properties** page of that IC server’s configuration on the media server. Instead, you can use Interaction Administrator and add that property/value to the **Properties** tab on the **Media Servers --> Configuration --> Properties** dialog. Now all recordings created by that IC server will be recorded in audio/GSM. If you discover that you really need all but one of the media servers to use audio/GSM, you can open the configuration container for that particular media server in Interaction Administrator and specify a different format for that server on the **Properties** tab.

**Related topics**

Media Server Introduction

[Media Server Configuration](#)

[Media Server General Configuration](#)

[Media Server Web Configuration](#)

Regionalization

[Location Assistant](#)

[Select Media Server](#)

[SIP Line Configuration - Session](#)
Media Server Web Configuration

Use this page to launch the web configuration interface for the currently selected Interaction Media Server.

When you click the **Launch Web Interface** button, your default browser will attempt to open the configuration interface on the selected media server. However, if this is the first time that this browser has connected to the media server, you will likely see a certificate warning message because the media server's certificates are self-signed, and it is not yet a trusted site.

Select the **Accept this certificate permanently** radio button to accept the media server's certificate.

If you have multiple media servers connected to an IC server and you want to deactivate an individual media server but keep other media servers active, you can deactivate it in the web interface for that specific media server.

1. Click the **Launch Web Interface** button to open the media server's interface, and log on to the media server.
2. Click the **Config** button in the top right corner of the media server's web interface.
3. On the **Servers** page, click the **Server** button for the media server you want to deactivate.
4. In the **Accept sessions** drop down list, select **No** and click **Apply Changes**. This prevents the media server from accepting any more requests from the IC server.

Related topics

Media Server Introduction

Media Server Configuration

Media Server General Configuration

Media Server Properties

Regionalization

Location Assistant

Select Media Server

SIP Line Configuration - Session

SIP Station Configuration - Session
SIP Proxies

SIP Proxy Configuration - General

Use this page to configure general settings for the SIP Proxy server.

If you want SIP devices to register to both CIC and Interaction SIP Proxy, you must define a SIP proxy in Interaction Administrator and set a registration group to use both a SIP line and the SIP proxy.

**Trust this Proxy**

Select this button to enable the IC server to communicate with the Interaction SIP Proxy server. This button is not displayed if the Interaction SIP Proxy server is currently trusted. If you want to reset or stop using a proxy, you must delete it.

**Location**

Select the location associated with the SIP Proxy server. Each SIP Proxy server can include device configuration data from only one location at a time. Location(s) are available in the list assuming one or more locations are defined in the Regionalization Locations container.

Once you select the location, click **OK** and the IC server will exchange certificates and share its Location configuration data with the SIP Proxy server. The Version, Registration Address and Ports are displayed below the location.

CIC sends updates in the location configuration data to the Interaction SIP Proxy server as needed.

**Related Topics:**

SIP Proxy Configuration - Web Configuration

Add SIP Proxy

Endpoints

Add Registration
If you know the user name and password (see the CIC Administrator) to the Interaction SIP Proxy server, you can access the web configuration interface. Click on the Launch Web Configuration… button to open the web configuration interface for the Interaction SIP Proxy server. You must have a valid user name and password to log in to the SIP Proxy server.

**Related Topics:**

[SIP Proxy Configuration - General](#)

Add SIP Proxy

[Endpoints](#)

[Add Registration](#)

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**MRCP Servers**

**MRCP Servers Configuration**

Use this page to set the MRCP server configuration options.

**Notes:** In order to configure an MRCP server, you must have either the Master Administrator right or the admin access right to edit the MRCP server. For more information, see [Assign the master administrator right](#), [Assign administrator access rights](#), and [Administrator access control groups: System category](#).

If you make changes to the protocol setting, or to the network interface card, you must restart the MRCP server.

**Active**

This check box indicates if this MRCP server is active. By default, this check box is selected (enabled).

**SIP Address**

Enter the SIP address of this MRCP server. The address is in the SIP URI format, i.e., sip:x@y:port, where x=username and y=host (domain or IP). Some examples include:

- `sip:buzz.mullins@123.123.1.123`
- `sip:customercare@inin.com`
- `sip:12345@inin.com`

Port 6060 is recommended for MRCP servers with IC installations to avoid potential conflicts with default ports for SIP endpoints.
Location

Select the region to associate this MRCP Server with.

Notes: When creating an MRCP session, the Location setting of the MRCP Server is taken into consideration. The MRCP Server selection process based on region, where MRCP Servers in a preferred region are considered before MRCP Servers in other regions, is performed before load balancing, where the MRCP Server is selected with the least amount of sessions.

When a new MRCP resource is required, Telephony Services selects the Media Server to use for the audio resource. Telephony Services passes the region/location of the Media Server to the MRCP subsystem. The MRCP subsystem evaluates all the MRCP Servers in the region, and then selects the MRCP Server with the least amount of sessions to create the resource on. If no MRCP Servers are available in the selected Location for the region, the MRCP subsystem defaults to other available MRCP Servers. The MRCP Server with the least amount of sessions is selected to create the resource on.

Priority

Select the priority level for this MRCP server. The MRCP subsystem uses this setting in the load balancing algorithm. When multiple servers can satisfy a request, sessions are created on servers with a lower priority number. By default, the priority is 1.

Vendor

Use this field to optionally describe the MRCP server’s vendor.

Capabilities

This section differs depending on the server's vendor; the Retrieve from server option is not available in a third party server configuration.

Retrieve from server: Select this option to have the MRCP server provide its available capabilities to the Interaction Center server. Select the associated button to immediately request the capabilities of the MRCP specified in the SIP Address box.

- Use refresh interval (sec) – Enable this check box if you want the Interaction Center server to continuously request the capabilities of the MRCP server. Use the associated spin box to set the number of seconds that should elapse between requests.

Use custom: Select this option if you want to manually specify the capabilities of the MRCP server, even if those features are not yet enabled or configured on the MRCP server.

- Text to speech – Enable this check box to allow the MRCP server to convert text to synthesized speech in calls.
- External audio sources – Enable this check box to allow the MRCP server to provide streaming audio that is injected into calls, such as Music on Hold.
- Voicemail – Enable this check box to allow the MRCP server to insert voice mail messages into calls.
**SIP Create Session Supported**

Select this check box to indicate that the TTS server supports INVITES to create an empty session with no specific resources defined. By default, this check box is not selected (enabled).

**Enable Session TTL**

This setting enables TTL sessions, when selected. When enabled, either the **Indefinite - Session Stays Live until BYE** option or the **Defined TTL Session Time** option is selected. These options are the time in seconds that an MRCP session is kept alive by the server after the last request. This is used to allow the client to cache the session if needed. If **Defined TTL Session Time** is selected, the default time is 15 seconds. Possible values are from 1 to 3600.

If this check box is not selected, TTL sessions are not enabled, and the options below are grayed-out or unavailable.

**MRCP Version**

This field displays the version of the MRCP server.

**External Audio Sources**

This tab displays the external audio sources that you have defined in the Interaction Media Streaming Server web interface.

**Note:** Interaction Center can use only those external audio sources for which you have provided a name in the Interaction Media Streaming Server web interface.

**Supported Resources**

Use this page to select the resources that are supported for this MRCP server. The options are:

- **Speech Recognition**: This is a full speech recognition resource that is capable of receiving a media stream containing audio, and interpreting it to recognition results. It also has a natural language semantic interpreter to post-process the recognized data according to the semantic data in the grammar, and to provide semantic results along with the recognized input. The recognition resource may also support enrolled grammars, where the client can enroll and create new personal grammars for use in future recognition operations.
• **DTMF Recognition**: This is a recognition resource capable of extracting and interpreting DTMF digits in a media stream, and matching them against a supplied digit grammar. It could also do a semantic interpretation based on semantic tags in the grammar.

• **Speech Synthesizer**: This is a full-capability speech synthesis resource capable of rendering speech from text. Such a synthesizer **should** have full SSML [25] support.

• **Basic Synthesizer**: This is a speech synthesizer resource with very limited capabilities that can generate its media stream exclusively from concatenated audio clips. The speech data is described using a limited subset of SSML [25] elements. A basic synthesizer **must** support the SSML tags `<speak>`, `<audio>`, `<say-as>` and `<mark>`.

• **Speak Verify**: This is a resource capable of verifying the authenticity of a claimed identity by matching a media stream containing spoken input to a pre-existing voice-print. This may also involve matching the caller's voice against more than one voice-print, also called multi-verification or speaker identification.

• **Recorder**: This is a resource capable of recording audio and saving it to a URI. A recorder **should** provide some end-pointing capabilities for suppressing silence at the beginning and end of a recording, and **may** also suppress silence in the middle of a recording. If such suppression is done, the recorder **must** maintain timing metadata to indicate the actual time stamps of the recorded media.

By default, **Speech Synthesizer** is selected as a supported resource.

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**Server Properties**

Use this page to Add, Edit, or **Remove** custom server properties for this MRCP server.

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**Voices**

Use this page to configure the voices (or audio) for the MRCP server. The voices specified on this page are the MRCP voices used to synthesize the text to speech.

Select a voice from the pull-down menu. Click **Add** to enter a synthesizer voice name, or click **Remove** to disable a selected voice.

**Gender**

Select the gender of the voice. The default value is **Neutral**. The other possible values are **Female** and **Male**.
Supported Languages

A voice can support specific languages. By default, the selected voice supports all languages, and the languages are displayed in the **Currently Selected** list. **Add** moves selected languages from the **Available** list to the **Selected** list. **Remove** moves selected languages from the **Selected** list to the **Available** list. **Add All** moves all languages to the **Selected** list, and **Remove All** removes them all from the **Selected** list.

Custom attributes

The Custom Attributes page allows you to add customized attributes so that you can reference your own variables and settings through the IceLib interface.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes to the Custom attributes page in the User Configuration dialog box and the Workgroup Configuration dialog box dialog box are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

The page contains a list for the attributes and displays a **Name** and a **Value** column, and has the following buttons:

**Add**

Click **Add** and select an existing custom attribute from the pull-down list, enter a new custom attribute. If creating a new attribute, use a unique name, otherwise the existing attribute will be overwritten.

**Edit**

Click **Edit** to change the value of an existing custom attribute.

**Delete**

Click **Delete** to delete an existing custom attribute.

**Manage Attributes**

Click **Manage Attributes** to open a dialog box that displays a list of custom attributes. Click **Add** or **Delete** to manage the appearance of the custom attributes in the pull-down list.

The custom attributes are saved in the path of the root container. This **Path** is displayed at the bottom of the dialog box.

**Note:** For more information on the Interaction Center Extension Library (IceLib), see The System APIs section in the CIC Documentation Library on the IC server.
This page provides a way to manually document configuration changes and when they occurred. Changes made in Interaction Administrator are also automatically logged in the Interaction Administrator Change Notification Log (Log ID 7). Later, authorized users can run reports against this log to summarize all configuration changes.

**Note:** If you enabled the Enhanced Interaction Administrator Change log, then all of your changes to the History page in the User Configuration dialog box and the Workgroup Configuration dialog box dialog box are tracked in that log. For more information, see About the Enhanced Interaction Administrator Change Log.

**Last Modified**

This date is automatically updated each time you click the **OK** button, presumably after you make changes to the configuration. To avoid updating this date, exit the page by clicking the **Cancel** button.

**Note:** If you click **Cancel**, none of the changes made to this page will be preserved.

In addition, the history is updated when changes are made to the record elsewhere in Interaction Administrator. For example, when a user change his or her password, the **Last Modified** date is updated.

**Note:** Changes to the licenses for a user or a station do not update the Last Modified date.

**Date Created**

This date is automatically set when the user creates the initial configuration for this page. If the page was initially created during setup, the date could be blank.

**Notes**

Type notes about configuration settings and changes. If you change the configuration page and click **OK**, the **Last Modified** date is updated.

You must manually enter the date beside each entry in the **Notes** field to identify the date of each note.

To create a new line in the **Notes** field, press Enter.
Session Manager Configuration

IC can use an off-server session manager to handle some of the CPU and memory demands on the IC server, thereby improving performance. Use this page to view or manage the off-server domain names and locations of session manager servers.

Session manager servers provide this information to IceLib (Interaction Center Extension Library). Regionalization can use a session manager server as an endpoint to define a location where users and stations are located.

**Note:** See the Session Manager Development Application Note for information on the Off-server Session Manager Install. For session manager server hardware requirements, see Interaction Application Servers on testlab.inin.com.

**Fully Qualified Domain Name:**

This is the FQDN of this session manager server. This field is read-only.

**Override**

Select this check box and enter a different FQDN in the text box to let a connecting client know that the FQDN of this session manager server is not the FQDN stored in Interaction Administrator.

**Location:**

By default, the off-server session manager server uses the location of the IC server as indicated in Use the location of. If the client should connect to another location, select Use this location and choose the location (as defined in Location configuration) from the drop-down menu.

The full name of the location displayed here is the same name as it appears in the location's endpoint container.

**Note:** If you set the location of the session manager to the location of an IC server, then the session manager cannot be removed from that location in the location's endpoint container.

**Switchover Behavior:**

In a switchover environment, off-server session manager servers can connect to the primary IC server, or to the particular IC server they were installed against. It is recommended to use the Always reconnect to the primary IC server on switchover option or 'no switch' mode. The other option, Always connect to: [IC server], is not common and intended mainly for backwards compatibility for WAN switchover sites.

**Related Topics**

Regionalization

Regionalization Location
Use this page to configure an ordered set of rules for routing SMS messages through IC. Based on regular expression matching of the ANI, DNIS, or body, a message can be routed to either a user or workgroup queue, chat or a handler.

The routes are defined by type, regular expression, and destination.

Click **Add** to add a new inbound route.

**Related Topics:**

- **SMS Inbound Route Configuration**
- **SMS Outbound Routing**
- **SMS Outbound Route Configuration**

Use this page to configure inbound SMS routes. Use the **Move Up** and **Move Down** buttons to order the routes in priority. If no inbound routes are configured, messages travel through the email message routing system. If one or more inbound routes are configured, a default inbound route must also be configured.
**Note:** Only one default inbound route can exist, and it must always be the last route in order.

**Type**

Select the type of route from the drop-down menu. The options are ANI, Body (body of the message), and DNIS.

**Expression**

Enter the expression associated with the type of route. The expressions available are:

<table>
<thead>
<tr>
<th>Expression</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>*</td>
<td>Zero or more</td>
</tr>
<tr>
<td>+</td>
<td>One or more</td>
</tr>
<tr>
<td>\d</td>
<td>Any digit (0-9)</td>
</tr>
<tr>
<td>.</td>
<td>Any character</td>
</tr>
<tr>
<td>[ ]</td>
<td>Character in set</td>
</tr>
<tr>
<td>[^]</td>
<td>Character not in set</td>
</tr>
<tr>
<td>?</td>
<td>Preceding group is optional</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>^</td>
<td>Beginning of line</td>
</tr>
<tr>
<td>$</td>
<td>End of line</td>
</tr>
</tbody>
</table>

**Destination**

Select from the drop-down list where to route the message. Setting his option indicates to CIC the type of routing this is required when an inbound SMS matches the expression. The options are Chat (default), Handler and Queue. If a handler is the destination, the handler name must be specified in the **Name** field. If a queue is the destination, select a workgroup or user from the list that appears.

**Name**

Enter the name of the handler if the **Destination** is "Handler", otherwise the user or workgroup is displayed here that is associated with the queue. Name doesn't apply to a Chat type destination.

**Related topics**

- [SMS Inbound Routing](#)
- [SMS Outbound Routing](#)
- [SMS Outbound Route Configuration](#)
**SMS Outbound Routing**

Use this page to configure an ordered set of rules for routing outbound SMS messages through CIC. Based on regular expression matching of DNIS, CIC sends outbound directed SMS messages to a broker using the proper destination number formatting.

The routes are defined by type, regular expression, formatted number, broker and account ID.

**To configure outbound routes**

1. To add a new outbound route, click **Add**.
2. To change the configuration of an existing outbound route, select it in the list and then click **Edit**.
3. To delete an outbound route, select it and then click Delete.
4. To change the sequence of the outbound routes, click a route in the list and then use the **Move Up** and **Move Down** buttons.
5. To consolidate outbound messages, select the **Consolidate Messages** check box. CIC maintains a queue of outbound messages for an interaction. If an outbound message is added to a queue while another outbound message is waiting to be sent, the second outbound message can be added to the first outbound message provided that this check box is selected and the combined length of the messages is less than the SMS maximum length (160 characters).
6. Click OK.

**Related Topics:**

- [SMS Inbound Routing](#)
- [SMS Inbound Route Configuration](#)
- [SMS Outbound Route Configuration](#)

---

**SMS Outbound Route Configuration**

Use this page to configure outbound SMS routes. Use the **Move Up** and **Move Down** buttons to order the routes in priority. If no routes are configured, messages travel through the email message routing system. If one or more outbound routes are configured, a default outbound route must also be configured.
Note: Only one default outbound route can exist, and it must always be the last route in order.

**Type**

Select the type of route from the drop-down menu. Currently, DNIS is the supported type.

**Regular Expression**

Enter the expression that CIC uses match the route against the associated type. This also provides the pattern matches that are used for the formatted number. The expressions available are:

<table>
<thead>
<tr>
<th>Expression</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>*</td>
<td>Zero or more</td>
</tr>
<tr>
<td>+</td>
<td>One or more</td>
</tr>
<tr>
<td>\d</td>
<td>Any digit (0-9)</td>
</tr>
<tr>
<td>.</td>
<td>Any character</td>
</tr>
<tr>
<td>[]</td>
<td>Character in set</td>
</tr>
<tr>
<td>[^]</td>
<td>Character not in set</td>
</tr>
<tr>
<td>?</td>
<td>Preceding group is optional</td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>^</td>
<td>Beginning of line</td>
</tr>
<tr>
<td>$</td>
<td>End of line</td>
</tr>
</tbody>
</table>

**Formatted Number**

Type the formatted number that CIC should use as the outbound dial number for the SMS message. All characters are valid and regular expression pattern replacements are denoted using the $ symbol. $0 represents the input expression as a whole; $1 is the first grouped match, and so on.

**Broker**

Select from the pull-down list the value of the available brokers that CIC should use to deliver this SMS message. By default, CIC uses the default broker (indicated with <Default>). We recommend using the default broker if no other brokers are configured in CIC. Other options are Gateway and HTTP.

**Account ID**

Select from the drop-down list the value of the available accounts for the selected broker that CIC should use to deliver this SMS message. By default, CIC uses the <Default> account, or no account if one is not configured. The default account appears first in the list even when multiple accounts have been configured.

**Access Control**
Click the **Access Control** button to select the phone number classifications for the selected outbound SMS route.

**Notes:**

You must select at least one phone number classification for the outbound SMS route. If you do not select a phone number classification, or do not select a call classification that provides the correct access permissions, then agents and workgroups using this SMS route see an error message when they try to send SMS messages.

You manage the available call classifications as part of your regional dial plans. For more information about call classifications, see [Overview of phone number classifications](#).

**Related Topics:**

- [SMS Inbound Routing](#)
- [SMS Inbound Route Configuration](#)
- [SMS Outbound Routing](#)

---

**SMS Broker**

**SMS Broker: Configuration**

CIC also includes a default HTTP broker, however you can configure any number of additional HTTP brokers. This help topic explains the following SMS HTTP broker configuration options:

**Enable**

This check box enables or disables the broker configuration for MO and MT processing.

**Broker**

Select from the drop-down list the specific broker communication interface that should be used to send and receive SMS messages.
**Profile**

Select from the drop-down list the configuration profile of the broker that should be used as the communication protocol. Many brokers only have one option. This selection must match the communication protocol that was defined when ordering the broker account from the provider.

**Encryption**

Choose type of HTTP communication security to use for the HTTP broker. By default, CIC does not use encryption. When you set the encryption as HTTPS (Basic), CIC uses HTTPS with basic encryption.

**Related Topics**

- SMS Broker: Accounts
- SMS Broker: Proxy
- SMS Broker: Message Originated
- SMS Broker: Message Terminated

**SMS Broker: Accounts**

This page displays a list of accounts you have configured for this broker. Click Edit... to make changes to existing accounts, or click **Delete** the currently selected account.

Click Add... to configure a new broker account.

Click Associate to associate a broker account with a workgroup or user.

**Related Topics**

- SMS Broker: Configuration
- SMS Broker: Serial Ports and Cell Phones
- SMS Broker: Proxy
- SMS Broker: Message Originated
- SMS Broker: Message Terminated

**SMS Broker Proxy**

Use this page to configure the HTTP broker proxy settings if you use a proxy between the IC server and the HTTP broker endpoint, for example, a corporate HTTP proxy. You set the login and password credentials on the HTTP broker as the ‘Proxy-Authorization’ tag using basic scheme authentication.
Address

Type the address of the proxy server.

Login

Type the user name to use when logging in to the proxy server.

Password

Type the password (associated with the log in user name) to use when logging in to the proxy server.

Confirm Password

Type the password again to avoid typos.

Encryption

Select the type of encryption. The options are None or SSL.

Related Topics

SMS Broker: Accounts

SMS Broker: Message Originated

SMS Broker: Message Terminated

SMS Broker: Configuration

SMS Broker: Message Originated

A Mobile Origination (MO) message is an inbound SMS message that comes from a cellphone. Use this page to configure settings when polling for new messages and receiving new messages.

Enable

Select this check box to enable or disable the MO functionality of this broker configuration. However, the broker configuration Enable setting has precedence over this setting.
**Incoming HTTP Port**

Type the IP port that should be used to receive inbound HTTP requests (messages) from the broker provider. Do not share this port with any other application on the IC server, and make sure it is accessible by the public network.

**Incoming Path**

Type the path that an incoming request's URL should be validated against which determines that the request should be processed by this broker configuration.

**Notes:**

If this broker shares an incoming HTTP port with other brokers on this IC server, make sure that the **Incoming Path** and **Delivery Receipt URL** values are unique among all brokers that share this port.

When ordering a service from an SMS provider, you must provide the information on this page. Typically, the information should be in the form of a URL that the provider can send messages to. This URL is composed of http://<CIC Server IP>:<HTTP Port><Path>, so for example, http://172.10.10.8080/MyBroker/IncomingSMS.

**Delivery Receipt URL**

Type the path where the broker pushes incoming delivery receipt notifications for outbound messages.

Most brokers support delivery receipts in one of the following ways:

- The delivery receipt URL is set in the broker account configuration, for example through the broker's web portal.
- The delivery receipt URL is passed by CIC with each outbound message. In this case, you must go to the **Message Terminated** tab and specify a value for the **ExternalDeliveryStatusURI** option.

**Note:** If this broker shares an incoming HTTP port with other brokers on this IC server, make sure that the **Incoming Path** and **Delivery Receipt URL** values are unique among all brokers that share this port.

If the broker provides delivery receipts, CIC writes the success or failure counts to the SMSDeliveryReceipts database table.

**Related Topics**

- [SMS Broker: Accounts](#)
- [SMS Broker: Serial Ports and Cell Phones](#)
- [SMS Broker: Proxy](#)
- [SMS Broker: Message Terminated](#)
SMS Broker: Configuration

**SMS Broker: Message Terminated**

A mobile terminated message (MT) is an outbound SMS message that goes to a cell phone. This is the only type of message that can be used by handlers.

Use this page to configure settings used when CIC sends SMS messages.

**Enable**

Select this check box to enable or disable the MT functionality of this broker configuration. However, the broker configuration Enable setting has precedence over this setting.

**Gateway**

Type the destination of the HTTP request to reach the provider. CIC combines this destination with a service path by the application, before sending the request to create the complete URL. For some brokers the default gateway may be sufficient, however some brokers require a URL with a unique identifier. The default gateway is http://www.24x.com.

**Outgoing Path**

Type the path against which an outgoing URL should be validated. By default, the field contains the outgoing path from the broker file, however, you can override this value.

**Timeout**

Type a timeout value in seconds for CIC to use for outbound HTTP requests. If no response is received prior to this timeout, then CIC considers the SMS message as failed. The default is 60 seconds.

**Internationalize Phone Numbers**

Select this option to send internationalized phone numbers to SMS brokers. Internationalized phone numbers are formatted as FQTN (+CCddddddd).

**Message Parsing**

An SMS message has a limit of either 70 characters or 160 characters, depending on the character encoding. The Message Parsing setting lets you configure how messages should be handled if they exceed the size limit:

- None: Do not alter any MT message that exceeds the SMS limit.
- Split messages: Split an MT message that exceeds the SMS limit into multiple messages.
- Truncate Messages: Truncate a message that exceeds the SMS limit. Send only the characters that fit within the limit.
Options

Options are values that are required by some brokers and are too specialized for CIC to consider as a general configuration option. The broker configuration predefines the Names as empty values. You can specify a value for a name by double-clicking on the name, and add or modify the value. Some brokers may fail SMS messages if you do not populate the information with correct values.

Note: If the ExternalDeliveryStatusURI option appears, then you must specify a value for it in order to receive delivery receipts for SMS messages. This option contains the external URL that receives delivery receipts for SMS messages:

* If the CIC server is directly connected to the Internet, the external URL is typically http://<CIC Server IP>:<HTTP Port> <Delivery Receipt URL>.
* If the CIC server is behind a reverse proxy or other device, the external URL may be different.

For more information, see the description of the Delivery Receipt URL box in the SMS Broker: Message Originated topic.

Related Topics

SMS Broker: Accounts

SMS Broker: Proxy

SMS Broker: Message Originated

SMS Broker: Configuration

Problem Reporter

Problem Reporter enables an authorized user to report a problem with the CIC clients to the user's support representative. When a user selects the Report a Problem option from the Help menu in the CIC client, Problem Reporter automatically creates an email message and addresses it to the user's designated representative. The Problem Reporter also uploads a copy of the user's CIC client logs and, optionally a screen capture of the user's desktop, to the IC server. Specify the upload location with the ProblemReporterPath server parameter.

To specify a problem reporter email message recipient, type a valid email address. Separate multiple address with a comma.

Note: Problem Reporter is enabled for users that have the Problem Reporter security right.
To add a new layout

1. Right-click in the master view area and select New, or click the New button in the master view toolbar:

   The New Item appears in the details view.

2. Complete the following configuration in the first section:

   - Type a unique Name for the layout.
   - Optionally select a Location from the drop-down list. If you do not set the location, the default location as configured in Regionalization is used.
   - Optionally type a word or phrase that describes this layout.
   - Use the up and down arrows to set the pixel width of the layout image. The default is 10 pixels, and the acceptable range is 10 to 2048.
   - Use the up and down arrows to set the pixel height of the layout image. The default is 10 pixels, and the acceptable range is 10 to 2048.

3. Complete the layout configuration in the Positions and Advanced details tabs. The links below open the topics containing procedures for completing each details tabs configuration:

   - Positions
   - Advanced

Related topics

Layouts: positions

Layouts: advanced

Layouts: positions field descriptions

Layouts: advanced field descriptions

Layouts: Positions

The Positions details tab allows you to upload an image to use for the layout display. You can then add positions to represent stations on the layout. Click the name of the details tab for field descriptions.

Note: The image for a layout is automatically removed when it is no longer referenced.

To add an image for the layout:

1. Click the Positions detail tab to display the details view.
2. Click the Browse button to choose an image to upload.
3. Type a unique **Name** for layout image.
4. Save the new image or modified image.

If necessary, the new image or changes made to an existing image can be reverted.

**To add a position on an image:**

**Note:** You can add a maximum of 200 positions per layout.

1. Right-click the image to display the menu.
2. Add a position to the layout. A resizable and moveable box appears.

![Resizable and Moveable Box](image)

3. Type a unique name for the position.
4. Set the position's location on the image and its size.

**Note:** Positions must not overlap. Any overlapping areas are highlighted in red.

5. Select a CIC station from the drop-down list to associate to the position.
6. You can also do any of the following:
   1. Delete an existing position.
   2. Select a position and **Align**. You can select multiple positions using Ctrl-click, and **Align** in more positions on the image.
   3. Select multiple positions using Ctrl-click, and **Size**.
7. Save the new position(s) or the modified position.

If necessary, the new code or changes made to an existing position can be reverted.

**Related Topics:**

- [Add a New Layout](#)
- [Layouts: Advanced](#)
- [Layouts: Positions Field Descriptions](#)
- [Layouts: Advanced Field Descriptions](#)

**Layouts: Advanced**

The Advanced details tab contains the custom attributes and history of the layout. Click the name of the details tab for field descriptions.
To complete the layout's advanced information:

1. Click the Advanced details tab to display the details view.
2. Click Custom Attributes section expander to display the custom attributes section's contents, and complete the following information:
   - To create a custom attribute, click and type an attribute name. You must also enter a value for the new attribute.

3. Click History section expander to display (or hide) the history section's contents, and complete the following information:
   - View the Created and Modified dates for this layout.
   - Type or view information in the Notes field for the layout.

4. Save the new layout or modified layout.

If necessary, the new layout or changes made to an existing layout can be reverted.

Related topics

Add a New Layout

Layouts: Positions

Layouts: Positions Field Descriptions

Layouts: Advanced Field Descriptions

Layouts: Positions Field Descriptions

This topic contains the descriptions for each field in the Positions details view under the View Layouts page.
**Layout Image section**

The following fields are related to the image you are associating with the layout.

**Browse**

This button opens the **Open** dialog box where you select an image. Supported image types include .jpg, .jpeg, and .png.

**Image Display Name**

By default, the file name of the image you select for the layout is displayed here. If necessary, rename the image. All image names must be unique across all layouts.

**Image to Upload**

This is the actual file name that you have uploaded. It is view-only.

**Image Dimensions**

This is the size in pixels of the image you uploaded.

**New Image...**

Click this button to upload a new image for the layout.

**Clear Image...**

Click this button to remove the image from the layout.

**Selected Position section**

The following fields are related to the positions you associate with stations and place on the layout image. You must have the administrative access right to a position in order to view it and select it.

**Name**

Type a name for this position on the layout. The name must be unique across all positions in this layout. You might use a person's name associated with the station, like PattyJ for a station named PattyJ_SIP_Station.
Left

Use the up and down arrows to set the left alignment of the selected position.

Width

Use the up and down arrows to set the width of the selected position.

Top

Use the up and down arrows to set the top alignment of the selected position.

Height

Use the up and down arrows to set the height of the selected position.

Station

Select the station from the pull-down list that you want to associate with this position. You can not add a new station here. The station must be an existing station that is already configured, and it must not be assigned to another position. You can select a station only if you have the administrative access right for it.

Related topics

Add a New Layout
Layouts: Positions
Layouts: Advanced
Layouts: Advanced Field Descriptions

Layouts: Advanced Field Descriptions

This topic contains the descriptions for each field in the Advanced details view under the View Layouts page.

Custom Attributes
Use customized attributes to reference other variables and settings through the IceLib interface. When adding a new attribute, use a unique name, otherwise an existing attribute with the same name will be overwritten. Click **Edit** to change the value of an existing custom attribute, or **Delete** to delete an existing custom attribute.

**History**

History provides a way to manually document configuration changes and when they occurred. Changes made in Interaction Administrator are also automatically logged in the Interaction Administrator Change Notification Log (Log ID 7). Later, authorized users can run reports against this log to summarize all configuration changes.

**Created**

This date is automatically set when the user creates the initial configuration for this layout. If the layout was initially created during setup, the date could be blank.

**Modified**

This date is automatically updated each time the user clicks the **OK** button, presumably after making changes to the layout configuration. To avoid updating this date, exit the page by clicking **Revert**.

**Note:** If you click **Revert**, none of the changes made to this layout since the changes were last saved are preserved.

**Notes**

Type notes about configuration settings and changes. If you change the configuration and click **Save**, the **Last Modified** date is updated.

You must manually enter the date beside each entry in the **Notes** field to identify the date of each note.

**Related Topics:**

- [Add a New Layout](#)
- [Layouts: Positions](#)
- [Layouts: Advanced](#)
- [Layouts: Positions Field Descriptions](#)
Interaction Tracker

Configuring Interaction Tracker

Naming

There are four main logical contact entity labels used by Interaction Tracker. These labels are what appears in the Tracker Client. The singular and plural default values can be changed to any label. For example, you may want to see Person\People, Division\Divisions, Company\Companies or ConnValue for iAddress, instead of the label defaults. Each label is limited in length to 15 characters:

Individual

This entity is where the information specific to a person is stored. Individuals can belong to either a location or an Organization; however, they are not required to belong to either. By default, an individual inherits some of the parent location or organization information, like business address and phone number.

Location

The Location entity typically corresponds to physical location. By default, a location inherits some of the parent organization information, like address and phone number. Locations must belong to an Organization.

Organization

The Organization entity typically correspond to companies. Organizations can have individuals directly associated with them, although it is more likely that individuals will be associated with Locations.

iAddress

The iAddresses entity is where the physical addresses for organizations, locations, and individuals are stored. Addresses have types, such as Home, Business, Business2, Shipping, etc. You can extend the address types. An address entry can also be flagged as the default.

Related topics

Server

Multi-language Support
Interaction Tracker encompasses two new server-side subsystems: Tracker Server and Tracker Tran Server. Tracker Server listens for specific events from QueueManager and inserts and updates interaction records. Tracker Tran Server processes insert and update requests from Tracker Server and insert, update, and query requests from Interaction Tracker Clients.

Use this Server page to configure Interaction Tracker behavior.

**Note:** Change these values only at the request of a certified IC Support Agent.

**Max Thread Count**

Enter the maximum thread count for Tracker Server. The default value is 64. The valid range of values is 16 through 128.

**Num seconds before thread considered being hung**

Enter the number of seconds to allow a thread to process for Tracker Server. The default value is 60.

**Restore Defaults**

Click this button to restore settings on the Server tab to default values.

**Database**

Interaction Tracker stores all information about interactions and participants in tables in the Interaction Tracker Database. These tables are queried for information. Use this Database tab to configure the database behavior.

**Note:** Interaction Tracker data is stored in the same database as Reporting and IC Public and Private Contacts data, although in different tables.

**IC Data Source Name**

Enter the IC Data Source Name for the Interaction Tracker database. The default value is IC Tracker.

**Query Row Limit**

Enter the maximum number of rows to query. The default value is 500.

**Query Timeout (sec)**

Enter the number of seconds to allow for a database query before timing out. The default value is 45.
Transaction Timeout (sec)

Enter the number of seconds to allow a database transaction before timing out. The default value is 10.

Enable Query Optimizations with Hints (SQL Server)

This query optimization only for SQL Server. By selecting this check box, SQL Server Query processor will use join strategy specified by the Tracker application instead of using the default one.

This setting does not apply to Oracle databases.

Restore Defaults

Click this button to restore settings on the Database tab to default values.

Note: For more information regarding the Interaction Tracker database schema and database planning, see the Interaction Tracker Technical Reference.

Multi-language Support

Multi-language support refers to the translation of data that is displayed in the Interaction Tracker, and in reports, in a language appropriate to the login locale you specified created during setup.

If the appropriately localized language is not supported, the values are displayed in the default language.

Parameters


<table>
<thead>
<tr>
<th>Parameter</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attribute</td>
<td>The name of the value to be translated. Translation is elected for only a few values that are displayed in reports or status messages</td>
</tr>
<tr>
<td>Language</td>
<td>The language used for the translation. The default language is that currently set by the administrator. A list of 100 + additional languages appears in the Languages dialog when you click Add Language. This value is Default if no language is specified for your login country in the Languages list.</td>
</tr>
<tr>
<td>Value</td>
<td>The value to display, the translated value.</td>
</tr>
</tbody>
</table>

Buttons
The Multi-Language Support tab also contains the buttons: Edit Value, Add Language, and Remove Language. This is the function they perform:

- Edit Value
- Add Language
- Remove Language

For more information on the function of the scroll buttons and the Confirm auto-save check box, see Interaction Administrator Interface.

Data Purging

Use this page to schedule when the system deletes expired records in the Interaction Tracker database. Expired records are those that have exceeded their retention time.

Enable Purging

Select this check box to enable data purging. By default this checkbox is enabled.

Purge data at this time of day

Type the time of day to begin the data purge. The default value is 2:30:00 AM.

Purge data older than

Type the number of days that defines expired data. The default value is 34.

Related Topics

Cache clean up

Database

Configure Interaction Tracker server cache clean up

The Interaction Tracker server maintains data about active interactions in its in-memory caches. Some custom call scenarios may result in improper cache cleanup, which can lead to incorrect data for impacted interactions. To ensure proper cache clean up, you may want to enable and customize the automated cache clean up mechanism. See the How to enable automated cache clean up in Tracker Server knowledge base article for more information.

Import and Reassignment

This page contains import and reassignment utilities.
The import utility is provided as an easy way of importing or re-importing individuals from current CIC users at a given a Site ID, multiple Site IDs, or all Site IDs.

The reassignment utility is provided as an easy way of reassigned individuals to other locations at a given a Site ID, multiple Site IDs, or all Site IDs.

**IC User Location Reassignment**

In this reassignment area of the page, enter the home site IDs to reassign to the selected location.

**Location**

Select the location to reassign the Home Site(s) to.

**Home Site IDs**

Enter the **Home Site IDs** separated by commas and click **Reassign Now**. Leave this field empty to specify all sites.

**IC User Import**

In the import area pf the page, enter the home site IDs from which to import users.

**Update existing entries**

Select this check box to overwrite already existing entries.

**Home Site IDs**

Enter the **Home Site IDs** separated by commas and click **Import Users Now**. Leave this field empty to specify all sites.

**Image and URL**

Use this page to set images and URLs for CIC users. The Image and URL set the image path and URL of the CIC user's picture in the CIC clients.

**Set Images for CIC Users**

Enter the filename and path for the image to be associated with the CIC user. Click **Set Images Now** to save your settings.
**Set URL for CIC Users**

Enter the location of the URL for the CIC user. Click **Set URLs Now** to save your settings.

**Items Tracked**

Use this page to configure the items for Interaction Tracker to track. Remember, an interaction is a communication between two or more individuals, where one of the individuals is a CIC client user.

**Interaction Types Tracked**

Select the types of interactions to track. The options include:

- Calls
- Chats
- Emails
- Faxes
- Generic Objects
- SMS

**Note:** As of CIC 2016 R4, inbound SMS messages are tracked separately from chats.

**Track Intercom Interactions**

Select this check box for Tracker Server to track intercom interactions. An intercom interaction is a call or chat from one person to another internally or "interoffice". By default, this check box is checked.

**Track Routing Exceptions**

Select this check box for Tracker Server to track routing exceptions, including events like abandons, flowouts, and transferred interactions. By default, this check box is not checked.

**Track Interactions Without a User Connect Event**

Select this check box for the Tracker Server to continue tracking an interaction without a connect event. A user connect event is when a party connects to an interaction, e.g. the user picks up a call in the CIC client or with the headset. By default, this check box is not checked.

**Track Voicemails**

Select this check box for Tracker Server to track voicemail messages.
**Track Additional Segments (i.e., System, Workgroup, Queue, Alert, Messaging, and Hold)**

You can also track additional segments by clicking the check box for the desired option:

- Workgroup queue based interactions
- Non-workgroup queue based interactions
- Intercom interactions
- Interactions without a user connect event

**System Segment Optimizations**

You can configure Interaction Tracker to discard tracked segments that are less than a specific number of seconds.

**Related Topics**

*Track Abandoned Dialer Interactions in InteractionSummary*

**External Utilities**

Reserved for future use.

**Launch External Utilities**

If external utilities for Interaction Tracker are available in the future, you will be able to launch them here.

**Timesheet Reporting**

Use this page to configure the distribution of timesheets for individual users who have been assigned the Billable-Time User Role in Interaction Administrator under the People container.

**Enable Timesheet Reporting**

If you have a Timesheet reporting license, select this check box for Timesheets to be emailed to members of your Billable-Time User role.

**Run the Report**

Select when you want your Timesheets delivered, either Weekly or Daily.

**Time**

Select or type the time to run the data for your timesheet.

**Day**
From the drop-down list, select the day to run the data for your timesheet.

**Role of Users to Receive Timesheet**

From the drop-down list, select the Role of the users you want to receive this report. The default role is Billable-Time User.

**Smallest Billable Time Unit**

Type or select the smallest billable time in minutes. This field is enabled only if "Billing Units" is selected in the **Billable Time Format** field.

**Billable Time Format**

Select or type the time format for your timesheet.

**Note**: Timesheets are delivered in XML format, and can be viewed in an Excel spreadsheet. The XML file is attached to the e-mail that is sent to the members of your Billable-Time User role.

**Related topics**

[Roles](#)

---

**Defining Interaction Tracker Entity Types**

**Individual Types**

You must define your individual types. Enter types such as Public Relations Manager, Marketing Director, Finance Executive, etc.

**Database ID**

This is the database ID of the new attribute. This ID is automatically generated for the new attribute and cannot be changed.

**Note**: Individuals can belong to either a Location or an Organization; however, they are not required to belong to either. By default, an individual will inherit some of its parent location or the organization information, like business address and phone number.

**Organization Types**

You must define your organization types. Enter types such as Public Relations, Marketing, Finance, etc.

**Database ID**
This is the database ID of the new attribute. This ID is automatically generated for the new attribute and cannot be changed.

**iAddress Types**

You must define iAddress types. Enter types such as Home, Mobile, Shipping, etc. An iAddress type can be flagged as default.

**Database ID**

This is the database ID of the new attribute. This ID is automatically generated for the new attribute and cannot be changed.

**iAddress Sub-types**

You may define iAddress Sub-types. Use iAddress Sub-types to extend iAddress types. Enter Sub-types such as Home 1, Business 2, etc.

**Database ID**

This is the database ID of the new attribute. This ID is automatically generated for the new attribute and cannot be changed.

**Tracker Attribute Types**

You may define attribute types for some of the Interactions, Interaction Participants, Individuals, Locations and Organizations to extend the types.

**Tracker Attribute Name**

Enter the name of the attribute.

**Show if Empty**

Select this check box to if you want the attribute name to be displayed in Interaction Tracker Client even if it is empty.

**Database ID**

This is the database ID of the new attribute. This ID is automatically generated for the new attribute and cannot be changed.

**Applies to (Select all that apply)**

Select any of these entities you want for the attribute to apply:
• Individuals
• Locations
• Organizations
• Interaction Segments - default - (selecting this option will enable the Segment Attribute Mapping below)

**Custom Attribute to Interaction Segment Attribute Mapping (server-specific)**

You can specify an interaction attribute name and Tracker Server will retrieve the value at interaction deallocation time and store it with the interaction segment. This custom mapping option is only available if you have selected *Interaction Segments* above.

**Get Value From custom Interaction Attribute check box**

Check this if you want the value of the attribute to come from an interaction attribute.

**Custom Interaction Attribute to Use**

Specify the name of the interaction attribute that will be retrieved at interaction deallocation time. For example, you might create a custom attribute named "Gender".

*Note:* Restart the client for the change to take effect.

**Legal Values Presented in Tracker Client**

Add or Remove values to assign to the attribute. Use the Up and Down buttons to arrange order of selection. For example, for Gender you can specify legal values that will appear as selectable items in a drop down list for the Gender attribute. The order in the list is the order the values appear in the Tracker Client dialog boxes.

**Tracker Address Types**

You may define Address types. Enter types such as Home, Billing, Shipping, etc.

**Database ID**

This is the database ID of the new attribute. This ID is automatically generated for the new attribute and cannot be changed.
You may define titles. Enter titles such as Mr., Mrs., Miss, Ms., etc.

**Database ID**

This is the database ID of the new attribute. This ID is automatically generated for the new attribute and cannot be changed.

**Security**

Interaction Administrator controls Interaction Tracker's security. You control access and rights in Interaction Tracker features by setting Tracker Policies in the Security tab in the User configuration. The rights available to apply to a user are:

- Add Individuals
- Modify Individuals
- Delete Individuals
- Add Organizations
- Modify Organizations
- Delete Organizations
- Modify Interactions
- View Other People's Private Interactions
- Have Private Contacts
- Tracker Administration

**Notes:**

Organizations include Locations.

Interactions include Interaction Participants.

The ability to see other people's non-private interactions is administered via the 'View User Interaction History' category on the Access Control tab of the User Configuration.

Add, Modify, and Delete rights apply to manual operations using the Tracker Client – automatic insertion and modification of interactions by the system is not affected by these rights.

Interaction Recorder's access control is used to determine whether or not users can playback any recorded media for the interaction. The exception to this is when the user is a participant in the interaction; in this case he/she will always be able to playback any recordings for his/her segment of the interaction.

The user who creates a record becomes the current owner. Owners of a record always have full rights (the system prevents you from deleting a record that is being used).
Use this page to configure Interaction Recorder's (IR) Recording Processing.

**Compression Format**

Select the compression format for recordings from the drop-down list:

- **μ-Law (Mono)** - This format does not compress recordings.
- **True Speech (Mono)**
- **GSM 6.1 (Mono)**
- **Opus (Mono)**
- **Opus (Dual-channel)**

**Note:**
The Opus recording and compression format options are available for Interaction Media Server version 2017 R1 or later. If previous versions of Interaction Media Server are connected to this CIC server, it creates the recordings on those servers with the GSM 6.1 format and creates entries in the error log for an unsupported Interaction Media Server version.

The Opus recording and compression formats generate larger recordings due to the increased fidelity of the audio and, in the case of Dual-channel, two channels of audio. Ensure that Interaction Media Servers, Interaction Recorder Remote Content Servers, and Interaction Recorder have enough free storage space to accommodate the larger recordings.

For more information about Opus, see *Interaction Recorder and Quality Manager Technical Reference* and *Interaction Media Server Technical Reference*.

For other recording options that you can set on a SIP line, see [SIP Line Recorder](#).

**Database Processing**

Use this utility to initiate the recovery of failed database transactions. Clicking the Recover Errors button makes Interaction Recorder process the PMQ error files. This function can be used when your database has been unavailable and you want to get the data that has been logged into the PMQ error files into the database.

**Secure Recording Pause Duration (seconds)**

Enter the number of seconds an audio recording is paused when an agent presses the Secure Pause button on the queue toolbar in the CIC clients. The default setting is 20 seconds.

**Related Topic**

Media Servers
The e-mail option contains the configuration information necessary for the Interaction Recorder Server to communicate with the e-mail system in order to send recordings.

**System E-mail Address**

Enter the e-mail address to be used as the Reply To (from) e-mail address when a recording is e-mailed from Interaction Recorder Client.

**Reply To Address For Recordings E-mailed From Recorder Client**

Select **Use System E-mail Address** to use the e-mail address specified in the **System E-mail Address** box. Select **Use E-mail Address of User Logged in to Recorder Client** to use the Recorder Client’s user’s e-mail address.

**Recording Generation**

Use this page to configure Interaction Recorder's recording generation options.

**Recording**

Select the options in the Recording box to configure how Interaction Recorder server initiates recordings.

**Enable Recording**

Select this check box to record all interactions that qualify for recording based on Interaction Recorder Initiation Policies. If this box is *not* selected, recordings will not be generated.

**Stop Interaction Recorder Initiated Recordings at Transfers**

Select this check box to stop recording a call when it is transferred. If this check box is selected, each transferred segment of a call will be its own recording and database entry.

If this check box is clear (not selected), recording continues after the transfer. This applies only to calls that were defined to be recorded by the Initiation Policy. Also, if this box is not selected, it is not possible to play only a segment of the call or skip to a specific segment.

**Default Audio playback device of recordings to the handset**

Select this check box to set the handset as the default audio playback device for a recording. When listening to a recording, the audio playback device can be changed on the Audio menu in the Interaction Recorder Audio Playback window, in IC Business Manager.
**Enable Snippet Recordings**

To enable the snippet recording feature on this IC server, select this check box. This feature allows users to create ad hoc recordings of their interactions.

**Encrypt Snippet Recordings**

To enable the encryption of snippet recordings, select the *Encrypt Snippet Recordings* check box. This option is available only if you enable snippet recordings.

**Note:**

For more information about configuring encryption for recordings, see [Key Generation](#).

In order for users to make snippet recordings, you must also assign the appropriate security rights and permissions to them. Depending on the person, some combination of the following items is necessary:

* Security Rights > Interaction Command Rights > Snip
* Security Rights > My Interaction Rights > Snip Interactions
* Access Control > Queues category > User Queues > Advanced Access Details > Monitor > Snip

For more information about the security rights and permissions that you set in Interaction Administrator, see Assign security rights and Assign access control rights.

For more information about Snippet Recordings, including information about the necessary licenses, see the *Interaction Recorder and Interaction Quality Manager Technical Reference* in the CIC Documentation Library.

**Enable HTTPS Exchanges for Playback, Archiving, and Exporting Recordings**

Select this check box to use HTTPs for: communication and traffic for playback, archiving; and exporting of calls, chat, and email recordings.

**Unlicensed Recordings**

Recordings are encumbered if the user or station was not properly licensed for Interaction Recorder when the recording was made. Encumbered recordings are listed in a search result in the Interaction Recorder client search results view when the Recording is Encumbered search attribute is used. Encumbered recordings cannot be played back.

To unencumber a recording, first fix the licensing for the user that has encumbered recordings. Next, contact Support to get an unencumber key to unlock the encumbered recording that needs to be played back. Then in the Unlicensed Recordings field, enter a valid unlock code to unencumber the encumbered recordings on the server.
Key Generation

Use this page to generate a Master Key for Recording Encryption. A master key securely protects Recording Keys (media keys), which are generated every time a media file is recorded.

Master Key File

The first step in generating a master key is to specify the location of the master key file. Master keys are stored in the master key file in plain text. For security purposes, make sure the location of the master key file has restricted access.

Generate New Key

Click **Generate New Key** to manually generate a new Master Key. When you click OK or Apply for the first time, an initial Master Key is created and appended to the Master Key file. You can also use this button to manually create a new key and append it to the Master Key file.

Import Key File

Click **Import key file** to import a key file and merge it with the existing Master Key File. An Open dialog is displayed to specify the location of the file to be imported. When the key file is successfully imported, a confirmation message is displayed. If the key file import fails, an error message is displayed.

Import key file can be used to import a 3.0 Recorder key file to the current release. You can also use it to import a key file in order to replace a bad key file. For example, if a switchover pair did not share a key file location.

Master Key Password

Use the Master Key Password box to password protect the Master Key File and securely encrypt master key data. To create, change, or deactivate a Master Key Password, the user must be assigned the Security Right **Master Key Password Administrator**.

**Important**: Interactive Intelligence Support cannot recover encrypted recordings if a Master Key Password is lost.

Change Password

Click **Change password** to create a new Master key password or to change the current password.

Deactivate/Activate Password
When you create a new Master key password or change the password, the password is Activated, and the Deactivate password button is displayed. To deactivate the password, click **Deactive password**. To activate the password, click **Activate Password**, and on the Activate Password dialog, type the password and click **Activate**.

**Recurring Key Generation**

Use the **Recurring Key Generation** box to configure parameters to automatically generate a new Master Key on a recurring basis.

**Generate New Key Recurrently**

To automatically generate a new Master Key, select the **Generate New Key Recurrently** check box.

To schedule an automatic key generation: in the Recur every box, type the number for the weekly recurrence; in the drop down-list, select the day of the week to generate the key; and in the time field, select the time of day to run the key generation.

**Note:** For more information on recording encryption and key generation, see *Interaction Recorder and Interaction Quality Manager Technical Reference* in the CIC Documentation Library.

**Cloud Services Configuration**

Use this page to configuration Interaction Recorder's Cloud Services.

You can use Amazon Simple Storage Service (Amazon S3; also referred to as AWS S3) to store your recordings and to archive your retention polices in Policy Editor. For more information on Amazon S3, see [http://aws.amazon.com/s3](http://aws.amazon.com/s3).

**Prerequisite:** Before you begin, configure your Amazon S3 account. Make note of your bucket name and your secret key. For more information, see “Using Amazon Simple Storage Service” in the *Interaction Recorder and Interaction Quality Manager Technical Reference*.

**Amazon S3 Bucket Keys Configuration**

**New Bucket**

Follow these steps to configure a new bucket.

1. Click **New Bucket**.

   The **S3 Keys Editing** dialog appears.

2. In the **Bucket name** box, type the name of the Amazon S3 bucket.
3. In the **Account ID** and **Secret Key** boxes, type the corresponding information from your Amazon S3 account. The Account ID is the AWSAccessKeyId, and the Secret Key is the AWSSecretKey.

4. In the **Region Endpoint** list, select the region where recordings are stored or accessed. This information helps reduce data latency when you access or store recordings with the Amazon S3 service.

   **Note:** Amazon is still adding regions for Amazon S3 version 4. If the region you need is not available in this list, please contact your Interactive Intelligence support representative. We will work to add that region to this list.

5. Click **Test**. This validates that the specified bucket and region configuration is valid and that a test communication with the Amazon S3 service can be successfully completed for read, write, and delete access. The field is not available unless you have specified a bucket name.

   **Note:** You can also create a new bucket when you create a retention policy in Policy Editor.

**Modify Bucket**

To modify an existing bucket, select the bucket and click **Modify Bucket**. The S3 Keys Editing dialog appears. You can modify the **Account ID** and the **Secret Key**.

   **Note:** You cannot modify the region endpoints.

**Delete Bucket**

To delete an existing bucket, select the bucket and click **Delete Bucket**.

**Enable HTTPS exchanges**

This check box determines whether the exchanges between Amazon S3 cloud services and Interaction Recorder Server are HTTP or HTTPS. By default, HTTPS is selected.

**Policy Editor**

Double-click on **Configuration** to open the Interaction Recorder Policy Editor. Interaction Recorder Policy Editor is a single, simple user interface used for creating Policies.

Access the help from the Policy Editor interface for more information.
### Who can see and listen to recordings

The following table summaries the conditions under which users can see recordings.

<table>
<thead>
<tr>
<th>Under these conditions...</th>
<th>You can see...</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>You have the Monitor Columns security right</strong></td>
<td><strong>You are a supervisor</strong></td>
</tr>
<tr>
<td>No</td>
<td>(Any)</td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Note:** Users can always see their own recordings. If the `EnableSupervisoryRecordAndMonitor` server parameter is turned on, then only supervisors can see recordings for other users.

For more information about the `EnableSupervisoryRecordAndMonitor` parameter, see [Packaged Server Parameters](#).

For more information about the `Monitor Columns` security right, see [Assign security rights](#).

### Related topics

**Interaction Recorder**

**Screen Recording**

Use this page to configure Interaction Screen Recorder.

**General**
From the **Default Regional Location** drop-down list, select the location for which region screen recordings will use if Interaction Recorder cannot determine the region based on the interaction or station.

**Capture Settings**

Use the following fields to configure these settings.

**Capture Rate (fps)**

Use this box to type or select the capture rate in frames per second (fps). The default is 1 fps. The available values are: 0.25, 0.5, 1, 2, 4, or 8 fps. Here is a chart of the capture rate settings to consider for storage capacity (The higher the setting the more storage used):

<table>
<thead>
<tr>
<th>Setting</th>
<th>Equals</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25</td>
<td>1 frame every 4 seconds</td>
</tr>
<tr>
<td>0.5</td>
<td>1 frame every 2 seconds</td>
</tr>
<tr>
<td>1</td>
<td>1 frame per second</td>
</tr>
<tr>
<td>2</td>
<td>2 frames per second</td>
</tr>
<tr>
<td>4</td>
<td>4 frames per second</td>
</tr>
<tr>
<td>8</td>
<td>8 frames per second</td>
</tr>
</tbody>
</table>

**Mouse Capture Rate**

Use this box to type or select the mouse capture rate in times per frame. The default is 4. The available values are: 1, 2, 4, 8, or 16.

**Compression**

Use this box to set the compression rate. The default is set to 9. The available options are any integer from 0—no compression, to 9—maximum compression.

**Stop Recording When Agent Becomes Available**

Configure this setting to control the recording of an agent’s screen. Set the value to **Yes** to stop the recording when the agent becomes available. If the value is set to **No**, the recording continues when the agent becomes available. The length of time the recording continues when the agent becomes available is set by the **Lag Time**.

**Lag Time (sec)**
Use this box to add configurable lag time at the end of an interaction for screen capture. The Interaction Recorder Server terminates a screen recording when the lag time expires. The default is 120 seconds (2 minutes). The available options are any integer from 0 to 600 (10 minutes).

**Note:** Your agents may experience up to an additional 10 seconds of lag time during screen recordings. For example, if you set the lag time to be 15 seconds, your agents may experience a lag time from between 15 seconds to 25 seconds during screen recordings. This is the result of internal batch processing.

**Color Depth (bpp)**

Use this box to set the color depth in bits per pixel (bpp). The default is set to Native. The available options are: Auto, 8-bit, 16-bit, and 24-bit. The values will be stored as 0, 8, 16, and 24.

**Max simultaneous screen recordings per agent**

Use the drop-down list to set the value for the maximum number of simultaneous screen recordings per Interaction Screen Recorder Capture Client. When the maximum limit is reached, every new screen recording stops the oldest one in progress.

**Remote Content Server**

You configure Interaction Recorder Remote Content Service through Interaction Administrator. The **Remote Content Server Configuration** dialog box contains the following fields:

**Alternate Fully Qualified**

If you are using Contact Center as a Service (CaaS), enter a replacement fully-qualified domain name (FQDN) for this Interaction Recorder Remote Content Service server in your domain.

In a CaaS environment, this feature enables Interaction Recorder to retrieve and play the recording from this Interaction Recorder Remote Content Service server.

**Active Locations**

Select the check box for the region where you want Interaction Recorder Remote Content Service to reside. You create regions through the **Regionalization** sub-container under the container for your IC server.

**Note:** For Interaction Recorder Remote Content Service to function properly, it must reside in the same region as the media server from which it processes recordings.

Entries are automatically added when a Remote Content Service starts. After the service appears, you can use this page to specify directories. For more information, see **Interaction Recorder Remote Content Service Installation and Configuration Guide** in the **Technical Reference Documents** section of the CIC Documentation Library on the IC server.
**Disable Screen Capture Transfers from this RCS**

Select this check box if you want to prevent Interaction Recorder Remote Content Service from transferring screen recordings from the computers on which they are recorded.

**Disable Other Recording Transfer from this RCS**

Enable this check box if you want to prevent this Interaction Recorder Remote Content Service instance from transferring any recordings—other than screen recordings—from the servers on which they are recorded.

**Related topics**

Configuring Remote Content Services

Regionalization

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**Interaction Optimizer**

**Interaction Optimizer Configuration**

**Advanced Configuration**

**Interaction Optimizer Database Configuration**

This page displays the settings that control the behavior of Interaction Optimizer database transactions.

**Note:** Change these values only at the request of a certified Interactive Intelligence Support Representative.

**IC Data Source**

This is the data source that Interaction Optimizer uses to locate the tables of data necessary to generate volume and headcount forecasts, and to generate schedules. The data source is set during installation.

**Transaction Timeout (seconds)**

This setting is the number of seconds before a database transaction will timeout. Database performance could be involved in a transaction timeout, but there could also be overall databases problem, network load issues, etc.

The default value for this setting is 10 seconds. Acceptable values are 10 through 3600 seconds.
Web Server URI for Interaction Client .NET

This is the URL for Interaction Optimizer - Web Edition. When you type the URL here, agents see the My Schedule view from Interaction Optimizer - Web Edition in the IC Client.

**Note:** If you specify a web address for any other website, an error message appears.

When you specify the URL for Interaction Optimizer - Web Edition, then the IC Client no longer displays the .NET version of the My Schedule view. If you clear this field, IC Client displays the original My Schedule view again.

**Defaults**

Click this button to return these settings to the default values.

**Agents**

**Daily Agent Availability Constraints**

Use this page to configure the availability constraints for the selected agent. Occasionally, agents have work schedule conflicts that need to be accounted for in the shift schedule. These conflicts are less common to schedule around than the more general shift constraints that apply to everyone. Click here for more information on the differences in agent constraints vs. shift constraints.

Interaction Optimizer uses the most constrained value of the daily agent availability constraints and the daily shift constraints, using the maximum of the minimums and the minimums of the maximums.

For example, if an agent's minimum paid time in the daily agent availability constraint has a value of 0, but the agent's minimum paid time in the daily shift constraint has a value of 2, the daily shift constraint value of 2 is used because it's more constrained.

See Agents for a daily agent constraint example.

**Shift Configuration**

Use this section to set start, stop and paid time for this agent. Hours and minutes can be specified in each field. Click on the hours position or the minutes position, then click the up or down arrow keys. Each active day that is assigned a constraint, is listed as an Active Day in the Agent Configuration dialog box.
Earliest Shift Start Time

Select this check box to set the earliest time in the AM or PM hour this agent will be allowed to start the shift. 8:00 AM is the default value for this setting.

Latest Shift Stop Time

Select this check box to set the latest time in the AM or PM hour this agent can end the shift. 5:00 PM is the default value for this setting.

Minimum Paid Time

Select this check box to set the minimum time in hours this agent can be paid for this shift. 4 hours is the default value for this setting. For example, a value of 0 means that the agent is not required to have any paid time for that day.

Maximum Paid Time

Select this check box to set the maximum time in hours this agent can be paid for this shift. 10 hours is the default value for this setting.

Active Days

Select the days that this agent is available for a shift.

Activities

This section lists the scheduled activities during a shift for the selected agent. The Activity Type, Earliest Start, Latest Start, and Activity Length are displayed. Click Add to add a new activity, click Edit to change the existing activity, or click Remove to remove an activity for the selected agent.

Agent Activity Configuration

Use this page to configure an agent activity. An agent activity is an activity that a specific agent completes during the agent's shift.

An agent activity is different than a shift activity. A shift activity is a reoccurring activity for all agents in the shift.

The settings for agent activities either compliment or override the settings for shift activities.
**Activity Type**

Select an activity type from the list. Activity types are mapped to agent status in Activity Types.

**Length**

Set the duration of the activity. Use the format HH:MM. The default length is 1 hour. The minimum length is 5 minutes.

**Start Time Configuration**

Use the section to specify the start time settings for this activity for this agent. Select the hour or minute position to change the time.

*Use Relative Times*

Select this check box to use times relative to start times. If selected, *Earliest Start Time From Shift Start* and *Latest Start Time From Shift Start* appear below. If this check box is not selected, absolute times are used. Absolute times are represented by A.M. and P.M. By default, this check box is not selected.

If the agent is assigned different shifts, then use relative time so that the settings are valid for all of the agent's shifts. For example, select **2:00 hours from shift start** rather than **10:00 A.M.**

*Earliest Start Time (From Shift Start)*

Select the hour or minute position, and then use the up and down arrows to set the earliest time this activity can start. The default value for this field is 8:00 A.M.

*Latest Start Time (From Shift Start)*

Select the hour or minute position, and then use the up and down arrows to set the latest time this activity can start. The default value for this field is 9:00 A.M.

*Start Time Increment*

Select the hour or minute position, and then use the up and down arrows to set the increment in minutes that this activity can start. The default value for this field is 15 minutes. The system uses this increment during schedule generation. To avoid excessive work or time for schedule generation, the number of possible start times can not exceed 50.

For example, if the earliest activity start time is 9:00 A.M., the latest start time is 10:15 A.M., the start time increment is 15 minutes, and the length is 15 minutes, then the scheduling process would first try scheduling this activity at 9:00, then at 9:15, then at 9:30 and so on every 15 minutes until 10:15.
Counts Toward Paid Time

Select this check box if this activity counts toward paid time. For example, lunch is normally not considered paid time. By default, this check box is not selected (enabled).

Counts Toward Contiguous Work Time

Select this check box if this activity counts toward contiguous work time. For example, if an agent needs to attend a meeting from 7:00 A.M. to 8:00 A.M., then start a shift at 8:00 A.M., then this meeting is considered contiguous work time. By default, this check box is not selected.

Schedule generation uses this setting when it assigns activities to an agent. It factors in the minimum and maximum contiguous work time constraints settings in Daily Shift Constraints.

Replaces Shift Activity of the Same Type

Select this check box if this activity should replace another activity of the same type. For example, if this is a lunch activity type, and an agent needs to take lunch exactly at 12:00 P.M., but the weekly shift definition specifies lunch anytime between 11:30 and 1:30, then the schedule generation will force the lunch activity in the 12:00 to 1:00 time slot.

If this check box is not selected and this activity type exists in the Activities section of the Daily Shift Constraints, then the agent will have this activity scheduled in addition to existing activities. By default, this check box is not selected.

Attendance Requirement Type

Select any of the following values:

- **Unspecified**: This is the default selection. This option does the following things:
  - It discards schedules that have agent activities that have been skipped (all remaining activities to be scheduled do not have a start time greater than or equal to the current time).
  - It suppresses schedules that end in agent activities that are both non-paid and non-contiguous.
  - It suppresses schedules that have unscheduled agent activities that are both paid and contiguous.
- **Do Not Schedule**: This option causes the scheduling engine to ignore this agent activity.
- **Optional**: This option causes the scheduling engine to keep schedules that meet minimum constraints and that have optional, unscheduled agent activities.
- **Include**: This option causes the scheduling engine to discard potential schedules that do not contain the scheduled agent activity.
Note: If required Include activities occur during a paid time-off request, then the required activities are ignored. Instead, a schedule containing the time-off request is created.

**Description**

Enter a description of the activity. You can enter up to 2000 characters.

The description appears in a tooltip when a user moves their cursor over an activity in a schedule in Interaction Desktop. It also appears if you double-click an activity to edit it.

**Related topics**

Shift activities versus agent activities

**Interaction Optimizer**

Interaction Optimizer has add-on module in IC Business Manager that supports a wide range of workforce management functionality. Within the module, you can make configuration changes, work with schedules, and evaluate intraday differences between forecast and actual values. Use the intuitive user interface to make all the normal scheduling edits, apply time off requests, and then publish the schedule.

The new interface also allows you to see real-time adherence (RTA) events on current or previous schedules, and to use intraday monitoring to compare actual activity of the day to forecast activity of the day.

Note: Beginning in CIC 4.0 SU6, most Interaction Optimizer functionality, including configuration settings, is available only through IC Business Manager.

For more information on configuring and using Interaction Optimizer, see the *Interaction Optimizer* help.

**Related topics**

[Database Configuration](#)

[Daily Agent Availability Constraints](#)

[Agent Activity Configuration](#)
**Interaction Conference**

**Conference Room Configuration**

You must define at least one conference room before scheduling an Interaction Conference. Additional conference rooms can be defined at any time.

Use this container to configure conference rooms and associated settings.

**Note:** To configure these conference room settings, the Interaction Conference Room administrative access right must be granted. This administrative access right is available at the default user, user, roles, and workgroup configuration levels. See Admin Access Categories in the Admin Access page for more information.

**To create a conference room:**

1. Double-click the *Configuration* entry in the Interaction Conference container. The *Conference Room Configuration* name dialog box appears.
2. Enter a descriptive name in the *Display Name* field. This is the name that appears in notification email messages sent to conference attendees, when a conference is scheduled to use this room.
3. If the General Configuration Settings allow PIN numbers to be defined, you may optionally check *Require a PIN for these conferences*. When checked, attendees must specify a personal identification number when joining a conference held in this room. Selecting this check box also allows more than one conference to occur at the same time in the room because the PINs route each caller to the correct conference.
4. Conference rooms can be physical (a room with a station phone on your premises) or virtual, meaning that the conference is associated with a telephone number. When you select *Physical*, the *Station* drop list is enabled. When you select *Virtual*, you can specify a telephone number. The telephone number associated with a conference room must be configured in your telephony hardware (in a gateway, for example) to route calls to the IC server running Interaction Conference. Do not use a telephone number in more than one conference room.

**Note:** To add one or more phone numbers to the Phone Numbers text box, type the number in the second text box under Phone Numbers, then click **Add**. You can remove a number by highlighting it in the list and clicking **Remove**. You can determine the order which phone numbers are used by moving a telephone number up or down in the list by highlighting it in the list and clicking **Move Up** or **Move Down**.
Special Considerations for Toll-Free Numbers

Special considerations apply to the use of toll-free numbers in Interaction Conference.

• Due to the limitation of call routing in CIC, callers cannot directly reach a physical room using a toll free number. However, a physical station can call into a virtual room that is configured to be reached by a toll free number.

• Use toll free numbers with virtual rooms so guests can call directly to that conference room.

5. To limit the resources available for the room (by default, resources are unlimited up to the limit set in general configuration settings):
   a. Select the Specify Resource Limit radio button.
   b. In the corresponding text box, type the maximum number of resources to allow.

   If necessary, you can select the Disable this room option to prevent the conference room from appearing in the list of available rooms, but without deleting the configuration.

6. Click OK to save changes.

Related topics

Interaction Conference Configuration

Setting Default Conference Options

Station Configuration

Interaction Conference

Interaction Conference Email Templates

Interaction Conference Email Templates

Interaction Conference allows the administrator to define email templates for meeting invitations and cancellations. Features include:

• The ability to create separate templates for invitations, updates, and cancellations.
• The ability to create separate templates (of all three types) for use by hosts and guests.

To create an email template:

2. Click the Email Templates tab.
3. Click **Add**. The New Template dialog box is displayed.

4. Design the template:
   a. In the **Name** text box, type a name for the template.
   b. In the **Subject** text box, type a default subject for the e-mail message (e.g., "Meeting invitation").
   c. In the **Body** text box, type the default text of the e-mail message, inserting macros (4) as needed:
      - **Additional numbers**: Phone numbers, other than the main conference number, on which attendees can call into the conference.
      - **Date**: The date of the conference.
      - **Host**: The host of the conference.
      - **Invitee**: The name of the invitee (the recipient of the email message).
      - **Invitees**: The names of the invitees (the recipients of the email message).
      - **Notes**: Any explanatory notes about the conference.
      - **Phone**: The main (or only) phone number that attendees should use to call into the conference.
      - **PIN**: The PIN number attendees should use to gain access to the conference.
      - **Room**: The room identifier for the conference.
      - **Time**: The time at which the conference will be held.
      - **Title**: The title of the conference.
   d. Click **OK**. Interaction Administrator creates the new template and lists it on the **Email Templates** tab of the Interaction Conference Configuration dialog box.

5. In the Selected Templates area, use the list boxes to assign the template to a message type.

**Related Topics**

[Conference Room Configuration](#)

[Setting Default Conference Options](#)

**Setting Default Conference Options**

Use Interaction Conference configuration to set default options for conferences. You can also either allow conference organizers to change the options or prevent them from doing so by using the **Lock** check box.
To set default conference options:

2. Click the Default Conference Options tab.
3. Select the desired options:

   **Lock** - Select the Lock check box to prevent conference organizers from changing the setting beside the Lock check box. These options will appear in the selected state by grayed out so the conference organizer cannot change them in the Interaction Conference Web Administrator interface.

   **Host Required to Start** - Select this check box to delay starting a conference until a host attendee has joined.

   **Enforce End** - Select this check box to automatically terminate a conference call at the specified ending time. If the ending is enforced, Interaction Conference automatically plays a warning message two minutes before the end of the conference.

   **Allow Mute** - Select one of the options to determine the default audio behavior for guests joining the conference and the level of control hosts have on muting.

      - **Start Muted** – Select this option to mute all guests by default. Conference guests enter the conference muted, but the conference host may unmute individual participants. Use this option if you plan to have more than 20 unmuted participants in the conference. The host can selectively unmute up to 20 participants to speak.

      - **Manual** – Select this option to give the host manual control over muting individual guests in the conference. In this case, guests join the conference unmuted. If there are more than 20 participants, only the first 20 to join the conference are audible. The 21st participant who is a guest (and other guests after) will hear a prompt that they are joining the conference muted. If the conference host un-mutes a host or guest, and there are 20 audible participants, Interaction Conference automatically mutes an audible guest who has been unmuted the longest to stay within the 20-audible-caller limit.

      - **No** – Select this option to prevent hosts from muting any guests in the conference.

   **Record** - Select one of the options to determine the default call recording behavior for conferences.

      - **Yes, send to all** – Select this option to have CIC record the conferences and send the recording to all of the hosts and guests listed on the conference.

   **Note**: This limit on 20 unmuted callers is temporary and is expected to be removed in a subsequent update.
Yes, send to hosts – Select this option to have CIC record the conference and send the recording to all of the hosts listed on the conference.

No – Select this option to not record conferences by default.

Announce Entry - Select one of the options to determine the default announcement behavior when a guest or host joins a conference. By default, CIC plays a tone as each person joins a conference.

None – Select this option if you do not want any audio alert or notification when someone joins a conference.

Tone – (Default) Select this option if you want CIC to play a tone when someone joins a conference.

Name – Select this option if you want guests and hosts to be prompted to say their name before joining the conference. Interaction Conference will then play that name for the rest of the conference participants to hear as they join.

Announce Exit - Select one of the options to determine the default behavior when a guest or host exits a conference. By default, CIC plays a tone as each person exits a conference.

None – Select this option if you do not want any audio alert or notification when someone exits a conference.

Tone – (Default) Select this option if you want CIC to play a tone when someone exits a conference.

Name – Select this option if you want to hear the name of the guests and hosts as they exit the conference.

Announce Number of Attendees - Select one of the options to determine the default behavior if Interaction Conference announces (by playing a prompt) the number of attendees in the conference.

None – (Default) Select this option if you do not want CIC to play an announcement of the number of attendees on a call.

To Hosts – Select this option if you want CIC to announce the number of attendees only to the hosts on the call.

To All – Select this option if you want CIC to announce the number of attendees to all guests and hosts on the call

4. Click OK to save the changes.
This topic describes factors to consider to ensure you are monitoring the most important keywords and phrases for your contact center.

Factors to consider include:

- **Purpose of your contact center**
- **Problems and effectiveness**
- **Meaningfulness of keywords**
- **Keywords from other areas of your business**
- **Agent training**
- **Customer Feedback**
- **Basic keywords**

### Purpose of your contact center

One factor to consider is the purpose of your contact center. What is it supposed to achieve? Your contact center may be designed for:

- Technical support/Customer support
- Sales/Lead generation
- Information services
- Complaints
- Collections
- Notifications/Dispatching
- Order taking/Event registrations
- Appointment scheduling
- Surveys/Market research
- Donations/Charities
- Screenings
With all of the possibilities, you must determine the areas on which you want to focus. Do you want to monitor agent interactions to see who is performing well and who is not? Do you want to monitor customer interactions to see what their concerns are or if they are upset? Perhaps, you want to monitor both sides of the interaction to measure many different aspects of your contact center.

Regardless of these considerations, the most important thing you can do is determine those factors upon which you define the success or failure of your contact center.

**Problems and effectiveness**

In your contact center, there are many factors for you to consider to determine the effectiveness of your contact center and how your business is meeting customer needs. The following list provides insight into what keyword categories you could monitor:

- **Customer satisfaction** – Are your customers happy at the end of a call? Are they going to be repeat customers? What do they think about your company, product, or service?
- **Customer problems** – What negative words are customers using in interactions? What products or services do customers mention? Do customers threaten legal action? What common problems are customers experiencing? What questions do customers most often ask?
- **Customer loss** – Do your customers mention competitors or their products? Are customers canceling accounts or stopping service? Do customers demand refunds? Do customers keep calling back?
- **Agent effectiveness** – Are your agents using positive words? Are the agents using the provided script? Do customers praise the agents who helped them? Do agents use words and phrases that indicate apathy to customer problems? Do customers ask to speak to managers or supervisors?
- **Agent satisfaction** – Are some agents getting too many difficult calls? Are agents using positive words that indicate their satisfaction? Are agents using negative words when becoming frustrated? Do customers thank agents for their help?
- **Agent training** – Are agents using personalized language when addressing customers? Do agents use the same words as their customers? Do agents know what to say to customers? Do agents know the solutions to problems? Are agents retaining customers or losing them?

What keywords are involved in the answers to these factors? What would a customer likely say in these situations? What would an agent say? Do you want to track every indication of someone using words that indicate emotion? The answers vary according to the purpose of your contact center, and in what you deem important.

**Meaningfulness of keywords**

When thinking of possible keywords and phrases, determine which are often-used keywords and what information the keyword provides to you.
For example, for a technical support contact center, you could track the word "problem". However, doesn't everyone who calls into that contact center have a problem? What other information does it provide? Instead, try to identify keywords that define the nature of the problem. Is there a specific problem that most customers are having? Does this problem affect customer retention or repeat business?

Careful analysis of recorded interactions and listening to live conversations helps you identify what keywords are most often said, which have the most impact to your business, and which of these differentiate normal interactions from interactions with more importance.

**Keywords from other areas of your business**

To leverage the most out of Interaction Analyzer for your business, consider what words or phrases are important to other departments. For example, are customers asking questions about a certain product? If so, these calls could be valuable sales leads or indicate the success of a marketing campaign.

Other business units can benefit greatly from the keywords you define. Consider asking for input from these other units and ensure valuable customer information is passed on to them. Customer satisfaction and successful sales are great. Business intelligence and customer metrics are even better.

**Agent training**

How well do you train your agents? Do they read from a script? Are they trained to use certain words and phrases in their interactions? Are the agents able to resolve customer problems or answer their questions? If you answer "yes" to any of these questions, you already have a set of keywords you can monitor. Monitoring the use of these keywords and phrases can indicate the success of your training methods. It also can help determine which agents need refresher training.

**Customer Feedback**

Determine which keywords and phrases are important to the direction of your business. Are customers asking for the same new features? Do customers complain about the same things? Are agents constantly defending the position of the company or a business practice?

Ensure you define both positive and negative keywords. Monitoring positive customer keywords enables you to track the general happiness of your customers with your contact center. Conversely, monitoring negative customer keywords helps you identify common problems and agent ineffectiveness.

Collecting this information is valuable to your business. It indicates if your business is achieving or failing to meet customer needs. This data can inform you as to where your business must go and what services, products, or solutions it offers.

**Basic keywords**
When you determine keyword phrases you want to monitor, think about how that phrase can be said in different ways. One of the most important aspects in creating keyword phrases is to define only those words that are always said. The following examples show how some keyword phrases can be dissected to contain only important words. The optional portions of these phrases are displayed within parentheses.

- (They/The company/My boss) didn’t train me (for/to/on)
- I completely understand (the situation/your concerns/the problem/the trouble)
- (Since/Because) you are a valued (customer/client/partner)
- Your satisfaction is (important/very important/our main concern/my goal)
- Is there anything else (I can do/I can help you with/causing you problems)
- You’re not listening (to me/ to a word I say/at all)

**Related topics**

Keyword organization

Keyword definitions

Example keywords

**Interaction Analyzer keyword definitions**

This topic provides descriptions of the various methods you can use to create keywords for use in Interaction Analyzer.

- [Interaction Analyzer keyword entry](#)
- [Interaction Analyzer keyword spelling entries](#)
- Keyword synonyms
- Keyword acronyms
- Keyword punctuation
- Keyword numbers
- Keyword contractions
- Keyword abbreviations
- Interaction Analyzer anti-spellings
- User-defined pronunciations

**Interaction Analyzer keyword entry**

You enter keywords, up to 120 characters, through the Interaction Analyzer interface of Interaction Administrator or Interaction Center Server Manager. Spell keywords as you would enter them in any document intended for communication. The speech recognition engine uses that spelling entry to match it to its usual phonetic pronunciation.

**Interaction Analyzer keyword spelling entries**

You can also add multiple spelling entries of a keyword, depending on the different ways in which a person pronounces a word, such as *data*. For this word, some people pronounce it as *dayta* while others pronounce it as *dahta*. The dictionary through which Interaction Analyzer compares pronunciations already handles many words with
multiple pronunciations. However, if you enter terms that are specific to a specialized field, such as medicine or science, you may need to provide alternate spelling entries or user-defined pronunciations to ensure recognition by Interaction Analyzer.

Keyword synonyms

One method you must avoid regarding spelling entries is that of synonyms. For example, if you wanted a keyword of home, do not enter the following synonyms as alternate spelling entries:

1. House
2. Abode
3. Domicile
4. Casa
5. Hacienda
6. Chateau
7. Castle
8. Shack
9. Hut
10. Home
11. Condominium
12. Apartment
13. Dwelling

Interactive Intelligence recommends that you do not enter synonyms as alternate spelling entries because Interaction Analyzer determines the spotability factor by the lowest, least discernible entry. In the previous example, the lowest, least discernible spelling entry would be “Hut.” Instead, create a keyword set with the name of home and enter each synonym as a keyword. This method insures that each synonym keyword has a separate spotability factor and confidence threshold, and can be further discerned through more spelling entries and user-defined pronunciations.

Keyword acronyms

If you want to create a keyword that contains an acronym that is pronounced as separate letters, enter the acronym with either periods or spaces between letters.

Examples:

1. U S A
2. F.B.I.
3. I D
4. E.T.A.
5. E U
6. C.O.D.
7. H T T P
8. F.T.P.

For acronyms that are pronounceable as a word, enter the acronym as you would any other keyword without spaces or periods between letters. Letter case is not important.

Examples:

9. SCSI (scuzzy)
10. RAM
11. PIN
12. NASA
13. SCUBA

In the case of mixed pronunciation acronyms, such as DVD-ROM, you must enter the acronym so that the portion pronounced as letters contain spaces or periods between letters while the portion pronounced as a single word does not, as in the following example:

D.V.D.-ROM

**Keyword punctuation**

Interaction Analyzer ignores any punctuation characters in keywords. These characters include commas, periods, exclamation points, hyphens, dashes, question marks, colons, semicolons, special characters ($, %, &, (, ), @), and quotation marks.

**Keyword numbers**

Each digit that you enter in a keyword is recognized as a word. For example, if you enter H20, Interaction Analyzer recognizes this keyword as "H two O." However, if you enter multiple digits, Interaction Analyzer recognizes each number separately. For example, if you enter 100, Interaction Analyzer recognizes this keyword as "one, zero, zero", not "one-hundred." Likewise, "21" is identified as "two, one", not "twenty-one."

**Keyword contractions**

Interaction Analyzer recognizes contractions when you enter them as keywords. Words such as "don't," "can't," "won't," "couldn't," "it's," and "I'll" are acceptable.

**Keyword abbreviations**

Interaction Analyzer does not recognize abbreviations, such as Dr., Mrs., Mr., Jr., Sr., and others.

**Interaction Analyzer anti-spellings**

After you define keywords, you have the option of entering anti-spellings that specify similar-sounding words that you do not want mistaken for that keyword. These words could confuse Interaction Analyzer, which could mark them incorrectly as instances of that keyword; these mistakes are false positives.

For example, the following table presents some keywords and possible anti-spellings that you can add to the definitions:
Additionally, you can also specify anti-spellings where the keyword is part of a larger word. For example, consider the word *form*. You probably would not want Interaction Analyzer to spot this word when it is a part of larger words, such as *uniform*, *formatted*, and *formation*. In this case, if Interaction Analyzer does spot the keyword within the larger words, you can enter the larger words as anti-spellings.

Do not try to determine anti-spellings when you define a keyword. Instead, when your keywords are used in real interactions in a test environment or in the contact center, you can analyze recordings, identify words mistaken as keywords, and then add them as anti-spellings to the keyword definitions.

If you eventually enter anti-spellings in a keyword definition, you can also consult numerous websites that list other rhyming words for that specific keyword.

**Interaction Analyzer keyword user-defined pronunciations**

When you define keywords, Interaction Analyzer also enables you to enter phonetic, user-defined spellings, which are referred to as *pronunciations*. The set of phonemes that Interaction Analyzer uses is a customized version of ARPAbet. ARPAbet was a project that used ASCII characters to define the phonemes that make up all possible sounds in the English (US) language. The Interaction Analyzer phonemes differ from ARPAbet to provide more robust keyword spotting and to support languages other than English (US).

Some languages have sequences of letters that are pronounced differently when they appear in different words. For example, in English (US), *tough, cough, dough, through,* and *bough* are all similar in their spellings ("ough"), but have different pronunciations. Using user-defined pronunciations enables Interaction Analyzer to identify these words correctly. For example, the following table displays how these words are specified using phonemes:

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Anti-keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lawyer</td>
<td>Lower, Loiter, Foyer, Employer</td>
</tr>
<tr>
<td>Surely</td>
<td>Charlie, Surly, Purely, Journey</td>
</tr>
<tr>
<td>Guarantee</td>
<td>Warranty, Guillotine, Green tea</td>
</tr>
<tr>
<td>Unfair</td>
<td>Conveyor, Unveil, Affair, A fare, On there</td>
</tr>
<tr>
<td>Word</td>
<td>Pronunciation</td>
</tr>
<tr>
<td>------</td>
<td>---------------</td>
</tr>
<tr>
<td>tough</td>
<td>t ah f</td>
</tr>
<tr>
<td>cough</td>
<td>c ao f</td>
</tr>
<tr>
<td>dough</td>
<td>d ow</td>
</tr>
<tr>
<td>through</td>
<td>th r uw</td>
</tr>
<tr>
<td>bough</td>
<td>b aw</td>
</tr>
</tbody>
</table>

**Note:** The example words in the previous table are common and already phonetically-defined in the Interaction Analyzer dictionary. The example words are for conceptual purposes only.

User-defined pronunciations are also useful for the different dialects that you can encounter in a language. For example, consider the English (US) word “lawyer” (l ao y er). Someone from the New England region of the United States could pronounce the word as “lahyah” (l aa y ah) while someone from the Deep South of the United States could pronounce it “lawyer” (l ao r y uh r). User-defined spellings enable you to define the keyword further so that Interaction Analyzer can correctly produce a match.

**Important!**

There are words in the medical and scientific fields that are based on Latin and Greek, but the associated pronunciations transformed over centuries of usage, such as *peritonitis*. If Interaction Analyzer has difficulty identifying the keyword based on the correct spelling, Interactive Intelligence recommends that you enter user-defined pronunciations to ensure proper identification of those unique keywords.

**Defining multiple words in pronunciations**

If you want to create a pronunciation or anti-pronunciation, which use phonemes, and it consists of multiple words, you must enter a `wd` character string between each word. This character string enables Interaction Analyzer to focus on the phonemes for each word, which provides a more accurate comparison, instead of the entire phrase.

For example, “Hi my name is” would be entered as “hh ay wd m ay wd n ey m wd ih s.” Enter a user-defined pronunciation only for keywords that Interaction Analyzer does not recognize.

**Related topics**

- Keyword considerations
- Keyword organization
- Keyword examples
This topic provides example keywords and phrases you might set up for use in Interaction Analyzer to spot usage when spoken by agents, customers, or both. Use these examples to help you think about what keywords and phrases are important to your contact center or business and then build upon it.

**Note:** These keywords are only examples and do not represent a comprehensive collection of keywords that can achieve the goals for your contact center.

Examples are provided for the following keyword categories:

- Agent greetings
- Agent training issues
- Call conclusion
- Call escalation
- Competitors
- Cursing
- First Call Resolution (FCR)
- Marketing
- Negative statements
- Positive statements
- Problem identification
- Problem resolution
- Sales
- Service improvement
- Threats
- Upset customer

The following tables contain example keywords, sorted by category and keyword set name.

**Example Keyword Set Category: Agent greetings**

<table>
<thead>
<tr>
<th>Keyword Set Name</th>
<th>Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Agent) Collections Statements</td>
<td>• This is your final</td>
</tr>
<tr>
<td></td>
<td>• You are obligated to</td>
</tr>
<tr>
<td></td>
<td>• Garnish</td>
</tr>
<tr>
<td></td>
<td>• We will send this account to collections</td>
</tr>
<tr>
<td></td>
<td>• We are demanding full payment on this account</td>
</tr>
<tr>
<td></td>
<td>• Forfeiture of discount</td>
</tr>
<tr>
<td></td>
<td>• Final deadline</td>
</tr>
<tr>
<td></td>
<td>• Offer expires</td>
</tr>
<tr>
<td></td>
<td>• Last chance</td>
</tr>
<tr>
<td></td>
<td>• No choice but to</td>
</tr>
<tr>
<td></td>
<td>• Shut off</td>
</tr>
<tr>
<td></td>
<td>• Suspended</td>
</tr>
</tbody>
</table>
### (Agent) Opening Statements
- Hi my name is
- Hello my name is
- How are you today
- My goal is to

### (Agent) Sales Pitch
- You will be able to enjoy
- You will only be charged
- We have a variety of
- It's a wonderful service
- Won't take much of your time
- For special customers like you
- What can I do to get you to
- All I need is your
- Could I have your credit card number
- What would convince you
- You can't go wrong

### (Agent) Survey Pitch
- What is the reason for your call today
- How do you like
- How would you rate
- What is the most important

### Example Keyword Set Category: Agent training issues

<table>
<thead>
<tr>
<th>Keyword Set Name</th>
<th>Keywords</th>
</tr>
</thead>
</table>
| (Customer) Broken Trust  | - You said  
                          | - You told me  
                          | - Wait a minute  
                          | - Wait a second  
                          | - Ask me that before  
                          | - Asked me that before  
                          | - You even listening  
                          | - You listening  
                          | - You're not listening  
                          | - Don't know what you're doing  
                          | - I don't care  
                          | - Don't give me  
                          | - You don't understand  
                          | - Report you  
                          | - I didn't get my  
                          | - I did not receive  |
| (Agent) Excuses          | - I just work here  
                          | - It's not my job  
                          | - I'm just doing my job  
                          | - I'm new here  
                          | - I just started here |
| (Agent) Improper Statements | • They didn’t train me  
• Calm down  
• Hold on  
• Can’t do that  
• Lost your record  
• Lost your file  
• File is lost  
• Shut up |
| --- | --- |
| (Agent) Lack of Knowledge | • I don’t know  
• Beats me  
• Let me get back to you later  
• Let me call you back later  
• I guess so |

**Example Keyword Set Category: Call conclusion**

<table>
<thead>
<tr>
<th>Keyword Set Name</th>
<th>Keywords</th>
</tr>
</thead>
</table>
| (Agent) Ending Statements | • Have a great day  
• Again, my name is |

**Example Keyword Set Category: Call escalation**

<table>
<thead>
<tr>
<th>Keyword Set Name</th>
<th>Keywords</th>
</tr>
</thead>
</table>
| (Customer) Redirection Requests | • Your supervisor  
• A supervisor  
• Your manager  
• A manager  
• Let me speak to  
• Let me talk to  
• I want to talk  
• I want to speak  
• Transfer me to someone who  
• I demand |

**Example Keyword Set Category: Competitors**

<table>
<thead>
<tr>
<th>Keyword Set Name</th>
<th>Keywords</th>
</tr>
</thead>
</table>
| Competitor Names  | • XYZ Company  
• 111 Corporation  
• ABC Incorporated |
| Competitor Products | • Product Name 1  
• Product Name 2  
• Product Name 3 |

**Example Keyword Set Category: Cursing**
<table>
<thead>
<tr>
<th>Keyword Set Name</th>
<th>Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cursing</td>
<td>• Darn</td>
</tr>
<tr>
<td></td>
<td>• Heck</td>
</tr>
<tr>
<td></td>
<td>• Freak</td>
</tr>
<tr>
<td></td>
<td>• Crap</td>
</tr>
<tr>
<td></td>
<td>• Sucks</td>
</tr>
<tr>
<td></td>
<td>• Shove it</td>
</tr>
</tbody>
</table>

**Example Keyword Set Category: First Call Resolution (FCR)**

<table>
<thead>
<tr>
<th>Keyword Set Name</th>
<th>Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Customer) Subsequent Call</td>
<td>• Last time</td>
</tr>
<tr>
<td></td>
<td>• Called before</td>
</tr>
<tr>
<td></td>
<td>• Calling again</td>
</tr>
<tr>
<td></td>
<td>• Calling back</td>
</tr>
<tr>
<td></td>
<td>• Called back</td>
</tr>
<tr>
<td></td>
<td>• Keep calling</td>
</tr>
<tr>
<td></td>
<td>• Time I've called</td>
</tr>
</tbody>
</table>

**Example Keyword Set Category: Marketing**

<table>
<thead>
<tr>
<th>Keyword Set Name</th>
<th>Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Agent) Ad Placement</td>
<td>• How did you hear about</td>
</tr>
<tr>
<td></td>
<td>• What referred you to our</td>
</tr>
<tr>
<td></td>
<td>• How you heard about</td>
</tr>
<tr>
<td></td>
<td>• Did you see our</td>
</tr>
<tr>
<td>(Customer) Ad Placement</td>
<td>• I saw your</td>
</tr>
<tr>
<td></td>
<td>• I heard your</td>
</tr>
<tr>
<td></td>
<td>• I read your</td>
</tr>
<tr>
<td></td>
<td>• On your Web site</td>
</tr>
</tbody>
</table>

**Example Keyword Set Category: Negative statements**

<table>
<thead>
<tr>
<th>Keyword Set Name</th>
<th>Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Agent) Astonishment</td>
<td>• You’re kidding me</td>
</tr>
<tr>
<td></td>
<td>• Got to be kidding</td>
</tr>
<tr>
<td></td>
<td>• That’s unbelievable</td>
</tr>
<tr>
<td></td>
<td>• You’re putting me on</td>
</tr>
<tr>
<td></td>
<td>• No way</td>
</tr>
<tr>
<td>(Agent) Condescension</td>
<td>• You’re not the only one</td>
</tr>
<tr>
<td></td>
<td>• How I feel</td>
</tr>
<tr>
<td></td>
<td>• That’s too bad</td>
</tr>
<tr>
<td></td>
<td>• Aren’t you just</td>
</tr>
<tr>
<td></td>
<td>• Why are you so</td>
</tr>
<tr>
<td>(Agent) Poor Attitude</td>
<td>• I don’t care</td>
</tr>
<tr>
<td>(Customer) Collection Excuses</td>
<td></td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>I don’t believe you</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Sucks to be you</strong></td>
<td></td>
</tr>
<tr>
<td><strong>I’d hate to be you</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Tell someone who cares</strong></td>
<td></td>
</tr>
<tr>
<td><strong>I can’t handle this</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Out of luck</strong></td>
<td></td>
</tr>
<tr>
<td><strong>You should call back</strong></td>
<td></td>
</tr>
<tr>
<td><strong>That isn’t my responsibility</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Will tell you the same thing</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Unemployed</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Bankruptcy</strong></td>
<td></td>
</tr>
<tr>
<td><strong>I don’t have a job</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Lost my job</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Was fired</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Laid off</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Example Keyword Set Category: Positive statements**

<table>
<thead>
<tr>
<th>Keyword Set Name</th>
<th>Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(Agent) Action</strong></td>
<td>• Right away</td>
</tr>
<tr>
<td></td>
<td>• I will make sure</td>
</tr>
<tr>
<td></td>
<td>• I am going to</td>
</tr>
<tr>
<td></td>
<td>• What we can do</td>
</tr>
<tr>
<td></td>
<td>• I will address this</td>
</tr>
<tr>
<td></td>
<td>• The best thing I can do</td>
</tr>
<tr>
<td></td>
<td>• What I will do for you</td>
</tr>
<tr>
<td><strong>(Agent) Adverbs</strong></td>
<td>• Definitely</td>
</tr>
<tr>
<td></td>
<td>• Absolutely</td>
</tr>
<tr>
<td></td>
<td>• Surely</td>
</tr>
<tr>
<td></td>
<td>• Certainly</td>
</tr>
<tr>
<td></td>
<td>• Quickly</td>
</tr>
<tr>
<td></td>
<td>• Positively</td>
</tr>
<tr>
<td><strong>(Agent) Advice</strong></td>
<td>• I would suggest</td>
</tr>
<tr>
<td></td>
<td>• I recommend</td>
</tr>
<tr>
<td></td>
<td>• Your best option is</td>
</tr>
<tr>
<td></td>
<td>• As soon as you receive</td>
</tr>
<tr>
<td></td>
<td>• To avoid this problem</td>
</tr>
<tr>
<td></td>
<td>• All you need to do is</td>
</tr>
<tr>
<td></td>
<td>• The best thing you can do</td>
</tr>
<tr>
<td><strong>(Agent) Cooperation</strong></td>
<td>• Let’s work on this together</td>
</tr>
<tr>
<td></td>
<td>• We can resolve this</td>
</tr>
<tr>
<td></td>
<td>• Let’s figure out what</td>
</tr>
<tr>
<td></td>
<td>• Let’s look at this together</td>
</tr>
<tr>
<td></td>
<td>• Let’s go ahead and</td>
</tr>
</tbody>
</table>
Let's take care
We can fix this

(Agent) Empathy
I see
I understand
Understand the inconvenience
I completely understand
How can I help you
I'm sorry to hear that
Sorry for the inconvenience
You are a valued

(Agent) General
Please
Thank you
I appreciate your patience

(Agent) Reassurance
Rest assured
I will try my best
More than glad
More than happy
Based on our experience
I will ensure that
I assure you that
Your satisfaction is
We value
Of course
Guarantee

(Customer) Trust
Trust you
I can believe that
Straightforward
Honest with me
Honest with you

Example Keyword Set Category: Problem identification

<table>
<thead>
<tr>
<th>Keyword Set Name</th>
<th>Keywords</th>
</tr>
</thead>
</table>
| (Customer) Account Identification | My account number is  
|                             | My number is                         
|                             | My user name is                      
|                             | My customer ID is                    
|                             | My account is                        |
| Product Identification      | Product name 1                        
|                             | Product name 2                        
|                             | Product name 3                        |

Example Keyword Set Category: Problem resolution
### (Agent) Resolution Indicators
- Is there anything else I can help you with
- I’m glad I could help

### (Customer) Resolution Indicators
- I’m happy
- I’m pleased
- Great
- Amazing
- Amazed
- Excellent
- Fantastic
- Perfect
- Working now
- It works
- Wonderful
- Relieved
- Terrific
- Fabulous
- Satisfied
- Outstanding
- That was easy
- Very helpful
- I appreciate
- Thank you
- Thanks
- Thankful
- That’s better
- That’s much better
- You deserve a
- You really know
- Great job
- Good work
- Job well done

---

**Example Keyword Set Category: Sales**

### (Customer) Loss of Business
- Cancel my account
- Canceling my account
- Close my account
- Cancel my service
- Stop service
- Money back
- Refund
- I’ll never purchase
<table>
<thead>
<tr>
<th>Example Keyword Set Category: Service improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Keyword Set Name</strong></td>
</tr>
<tr>
<td>----------------------</td>
</tr>
</tbody>
</table>
| (Customer) Suggestions | • It would be great if  
• What you should do is  
• Would be better if  
• Would be so much better if  
• Want to see  
• Want to hear about  
• Like to see  
• You should consider  
• You should make |

<table>
<thead>
<tr>
<th>Example Keyword Set Category: Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Keyword Set Name</strong></td>
</tr>
<tr>
<td>-----------------------</td>
</tr>
</tbody>
</table>
| Legal Action | • Attorney  
• Lawyer  
• Legal action  
• I’ll sue you  
• I’ll sue your |
<table>
<thead>
<tr>
<th>Keyword Set Name</th>
<th>Keywords</th>
</tr>
</thead>
</table>
| (Customer) Emotional Words | • Unacceptable  
|                   | • Frustrated  
|                   | • Unfair  
|                   | • Isn’t fair  
|                   | • You people  
|                   | • Angry  
|                   | • Makes me mad  
|                   | • Makes me so mad  
|                   | • Outraged  
|                   | • I don’t understand  
|                   | • Ridiculous  
|                   | • Upset  
|                   | • Ticked off  
|                   | • Is that the best  
|                   | • Unhappy  |
| (Customer) Time Issues | • I can’t wait  
|                   | • I don’t have time  
|                   | • Take all day  
|                   | • Hours and hours  
|                   | • Put me on hold  
|                   | • Can you hurry  
|                   | • Waste my time  
|                   | • Wasting my time  |

**Example Keyword Set Category: Upset customer**

- Take you to court
- Lawsuit
- Come down there
- I’ll find you
- Kill you
- Don’t make me
- I’ll get you
- Get even
- Blow up
- Revenge
- Pay back
- Hurt you
- Where it hurts
- Blow you away
- Gun down
- Shoot you
- Stab you
- Taking so long
- Do you know what time it is

**Related topics**

**Keyword considerations**

**Keyword definitions**

**Keyword organization**

**Keyword organization**

This topic contains the purpose of categories, keyword set names, and keywords. The following table displays a brief example of how you can use categories and keyword set names to organize your keyword definitions:

<table>
<thead>
<tr>
<th>Category</th>
<th>Keyword set name</th>
<th>Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing</td>
<td>(Agent) Ad placement</td>
<td>• Where did you see our ad&lt;br&gt;• Where you saw our ad&lt;br&gt;• How did you hear about us</td>
</tr>
<tr>
<td></td>
<td>(Customer) Ad placement</td>
<td>• I saw your ad&lt;br&gt;• I saw your commercial&lt;br&gt;• I read your ad&lt;br&gt;• I heard your commercial</td>
</tr>
<tr>
<td>Sales</td>
<td>(Agent) Sale success</td>
<td>• Could I have your credit card number&lt;br&gt;• I’m very glad that you’ve decided to</td>
</tr>
<tr>
<td></td>
<td>(Customer) Sale success</td>
<td>• You’ve talked me into it&lt;br&gt;• I would like to purchase&lt;br&gt;• I would like to buy</td>
</tr>
<tr>
<td>Agent Greetings</td>
<td>(Agent) Initial greeting</td>
<td>• Hi, my name is&lt;br&gt;• Hello, my name is&lt;br&gt;• Thank you for calling</td>
</tr>
<tr>
<td></td>
<td>(Agent) Reason for call</td>
<td>• How can I help you&lt;br&gt;• What can I do for you&lt;br&gt;• What is the nature of your call</td>
</tr>
</tbody>
</table>

**Keyword categories**

Optionally, you can create categories to group your keyword sets. You can use categories to define the purpose of the keyword sets that it contains. By design, categories are a general description of your organization of keyword sets, and their included keywords. Create your structure from general to specific to make it easier to search for and locate keywords.
CIC uses the categories you create for sorting your keyword sets in the administrative interface and for tagging recordings. These recording tags are visible when you view recordings, which enable you to search for and find keywords quickly.

**Keyword set names**

When you create keywords, you enter those keywords under a keyword set. You can define 128 keywords and phrases under one keyword set. Keyword sets must be unique and long enough to accurately describe the keywords it contains.

Generally, you want to create keyword sets to identify the keywords included in them. If you want to monitor for keywords that an agent might say when receiving a call, you could provide a keyword set of "Agent greeting – Name" or "Agent – initial greeting".

Your keyword set name must not be identical to your category name. Doing so removes the organizational benefits. Ideally, you want two or more keyword sets within each category, which helps you find the area containing the keywords you want to modify or the place to enter new ones.

**Related topics**

- Keyword considerations
- Keyword definitions
- Keyword examples

**Manage keyword sets**

**View keyword sets**

The **View Keyword Sets** page displays keyword sets in a list in the master view, and displays details of the currently selected keyword set in the details view. You can take actions on the keyword sets in the list view, such as add, delete, and copy and paste, and you can add a new keyword set. You can change the way the list is displayed, such as change visible columns, sort by column, and filter.

**To view keyword sets**

1. Under Interaction Analyzer, click **Keyword Sets** or click **Interaction Analyzer** in the breadcrumbs if available.
2. The **View Keyword Sets** page appears.

**Related topics**
Add a keyword set

Search for a keyword set

Add a keyword set

**Important:** It is strongly recommended to define keywords, keyword set names, and categories before attempting to enter keywords. This can save a great deal of time, as opposed to entering keywords without having a defined structure.

**To add a keyword set**

1. In the upper-right pane of Keyword Sets, click . A New Item is created in the lower pane. This new item is a keyword set, which enables you to enter multiple keywords and phrases.

![New Item](image)

2. In the Name box, type the name to assign to this keyword set.

   The keyword set name must be unique from other keyword set names and be descriptive enough to enable you to identify the types of keywords it contains. This name is only for your use in locating keywords through this administrative interface. Other CIC products associated to Interaction Analyzer do not use the keyword set name.

3. In the Category box, type the name of the category to assign to this keyword set. See Keyword categories for more information about categories, their purpose, and how they are used.

4. On the right side of the lower pane, click . The Add Keyword dialog box appears.

![Add Keyword](image)

5. In the Keyword box, type a keyword or phrase you want Interaction Analyzer to monitor and then click OK. The keyword is added to the current keyword set.
6. In the lower-right corner of the lower pane, click ✅ to apply your changes.

**Tip:** You can undo your changes by clicking ☹️ in the lower right corner of the lower pane.

---

**Related topics**

- [Keyword considerations](#)
- [Keyword definitions](#)
- [Keyword organization](#)
- [Modify a keyword set](#)

---

**Copy a keyword set**

**To copy a keyword set**

1. Under Interaction Analyzer, click **Keyword Sets** or click **Interaction Analyzer** in the breadcrumbs if available.

2. In the upper pane, click the **Keyword Set** you want to copy and then click ✋️. The selected keyword set is copied to the Clipboard.

3. In the upper pane, click 📖. A **New item** is created in the lower pane that contains the information from the copied keyword set.

4. Type a new name for the keyword set in the **Name** box, make any other desired changes, and click ✅ to apply your changes.

**Tip:** You can undo your changes by clicking ☹️ in the lower right corner of the lower pane.

---

**Delete a keyword set**

**To delete a keyword set**

1. Under Interaction Analyzer, click **Keyword Sets** or click **Interaction Analyzer** in the breadcrumbs if available.

2. In the upper pane, click the **Keyword Set** you want to delete and then click ✖️. The Delete Item dialog box appears.
3. Click **Yes**. The selected keyword set is deleted.

**Tip:** You can undo your changes by clicking 🔄 in the lower right corner of the lower pane.

---

### Search for a keyword set

This topic contains the steps for searching for a keyword set by name or category.

The filter options for searching for a keyword set are:

- **Contains** – Searches for keyword set names that contain the characters you specify in the **Name** box.
- **Starts with** – Searches for keyword set names that start with the characters you specify in the **Name** box.
- **Matches whole word** – Searches for keyword set names that match the entire word you specify in the **Name** box.

#### To search for a keyword set by name

1. In the upper-right pane of Keyword Sets, click 📊 to the right of the **Name** box and select one of the filter options:
   - **Contains**
   - **Starts with**
   - **Matches whole word**

2. Type the keyword set name to search for in the **Name** box. As you are typing characters, keyword set names that match what you are typing appear below the **Name** box.

3. Click the desired **Keyword Set** to display its information in the lower pane.

#### To search for a keyword set by category
1. In the upper-right pane of Keyword Sets, click to the right of the **Category** box and select one of the options:
   - Contains
   - Starts with
   - Matches whole word

2. Type the category to search for in the **Category** box. As you are typing characters, categories that match what you are typing appear below the **Category** box.

3. Click the desired **Keyword Set** to display its information in the lower pane.

**Related topics**

- **Keyword definitions**
- **Keyword organization**
- **Modify a keyword set**

This topic contains the steps for modifying keyword sets, keyword categories, and keywords. It also contains steps for deleting a keyword from a keyword set.

**Important:** It is strongly recommended to define keywords, keyword set names, and categories before attempting to enter keywords. This can save a great deal of time, as opposed to entering keywords without having a defined structure.

**To modify a keyword set**

1. Under Interaction Analyzer, click **Keyword Sets** or click **Interaction Analyzer** in the breadcrumbs if available.
2. Click the **Keyword Set** to modify. The keyword set appears in the lower pane.

   ![Agent Training Issues]

   - To modify the keyword set name, in the **Name** box, type the name to assign to this keyword set.
   - The keyword set name must be unique from other keyword set names and be descriptive enough to enable you to identify the types of keywords it contains. This name is only for your use in locating keywords through this administrative interface. Other IC products associated to Interaction Analyzer do not use the keyword set name.
   - To modify the category, in the **Category** box, type the category name to assign to this keyword set. See **Keyword organization** for more information about categories, their purpose, and how they are used.
   - To modify a keyword in this keyword set, click the **Keyword** to modify and make your changes. For more information, see **Setting the Confidence Threshold for a Keyword** and **Set the Score for a Keyword**.

3. In the lower-right corner of the lower pane, click ![Save](save-icon) to apply your changes.

   **Tip:** You can undo your changes by clicking ![Undo](undo-icon) in the lower right corner of the lower pane.

**To delete a keyword from a keyword set**

1. In the upper pane, click the **Keyword Set** that contains the keyword to delete. The selected keyword set appears in the lower pane.
2. In the lower pane, click the **Keyword** to delete and then click ✗. The selected keyword is removed from the keyword set.

**Tip:** You can undo your changes by clicking 🔄 in the lower right corner of the lower pane.

**Related topics**

- Add a keyword set
- Keyword considerations
- Keyword definitions
- Keyword organization
- Set the score for a keyword
- Add keyword set notes

This topic contains the steps for adding notes about changes you make to the keyword set.

**To add keyword set notes**

1. In the upper-right pane of Keyword Sets, click the **Keyword Set** for which to add a note. The keyword set appears in the lower pane.

2. In the lower pane, click **Advanced** in the left navigation box. The Custom Attributes and History bars appear.

3. Click **History**. The **Notes** box appears.

4. Click in the **Notes** box and type information regarding changes you made to the keyword set.

5. In the lower-right corner of the lower pane, click 🔄 to apply your changes. The last modified and created dates are automatically updated.

**Tip:** You can undo your changes by clicking 🔄 in the lower right corner of the lower pane.

**Related topics**

- Manage custom attributes
Modify a keyword set

Manage custom attributes

This topic contains the steps for adding, modifying, and deleting a custom attribute for a keyword set.

To access custom attributes

1. In the upper-right pane of Keyword Sets, click the **Keyword Set** for which to add, modify, or delete a custom attribute. The keyword set appears in the lower pane.

2. In the lower pane, click **Advanced** in the left navigation box. The **Custom Attributes** and **History** bars appear.

3. Click **Custom Attributes**. The Custom Attributes appear.

To add a custom attribute

1. Click **+** to the right of the Custom Attributes box. The **Name** and **Value** boxes are available for entry.

2. Click in the **Name** box and type a unique name for the custom attribute.

3. Click in the **Value** box and type a value for the custom attribute.

4. In the lower-right corner of the lower pane, click **✓** to apply your changes.

   **Tip:** You can undo your changes by clicking **撤销** in the lower right corner of the lower pane.

To modify a custom attribute

1. Click in the **Name** box of the custom attribute to modify and type a unique name for the custom attribute.

2. Click in the **Value** box of the custom attribute to modify and type a value for the custom attribute.

3. In the lower-right corner of the lower pane, click **✓** to apply your changes.

   **Tip:** You can undo your changes by clicking **撤销** in the lower right corner of the lower pane.

To delete a custom attribute

- Click the **Custom Attribute** you want to delete and then click **删除**. The selected custom attribute is deleted.
This topic contains the steps for setting the score of a keyword or phrase. It is through scoring that Interaction Supervisor displays score statistics, including the largest positive and negative scores and the cumulative score in the real-time workgroup queue view.

Scoring allows you to assign a degree of importance to the keywords and phrases you defined. For example, you want to assign a low score to keywords and phrases that indicate a customer is becoming upset. Conversely, you want to assign a high score to words and phrases that indicate a customer is responding in a positive manner. You can assign point values to keywords and phrases for both agents and customers.

You can assign to a keyword or phrase any point value from +/-1 to +/-100. Scoring is used to determine which calls need the most attention from the contact center supervisor, who monitors the workgroup queue using a few simple metrics.

**Note:** The maximum cumulative score an Interaction can have is -99999 to 99999. Assigned point values should be within a reasonable range so the cumulative score for the entire Interaction does not exceed the maximum value.

**To set scores for a keyword**

1. In the upper-right pane of Keyword Sets, click the **Keyword Set** that contains the keyword for which to set a score. The keyword set appears in the lower pane.

2. In the lower pane, click the **Customer score** or **Agent score** for the keyword for which to set a score. The keyword entry is highlighted and the scoring field is available to edit.

   **Tip:** If you assign the keyword set to one channel, it is not necessary for you to set a score for both channels.

3. Assign the score by typing a number in the box or using the up and down arrows to increase or decrease the value.

4. In the lower-right corner of the lower pane, click to apply your changes.
Related topics

Keyword considerations

Keyword definitions

Keyword organization

Set the confidence threshold for a keyword

This topic contains the steps for setting the confidence threshold for a keyword. The confidence threshold feature allows you to specify how much certainty Interaction Analyzer uses in reporting an instance of the defined keyword. See Interaction Analyzer confidence threshold for more information about this feature.

Important: The confidence threshold does not affect the spotability factor of a keyword. The feature only informs Interaction Analyzer how certain it must be to report an identification during real-time analysis of the interaction.

Confidence thresholds use a percentage value to determine the amount of scrutiny that Interaction Analyzer uses. A high percentage value indicates that Interaction Analyzer reports the associated keyword if it matches perfectly. A low percentage value indicates that Interaction Analyzer reports the associated keyword if it loosely matches that keyword. The default percentage value for any newly defined keyword is 50%.

To alter the confidence threshold for a defined keyword:

1. In the upper-right pane of Keyword Sets, click the Keyword Set that contains the keyword for which to set the confidence threshold. The keyword set appears in the lower pane.

2. In the lower pane, click and hold the left mouse button on the slider control for the keyword for which to set the confidence threshold.

3. Move the slider control to the right to increase the confidence threshold or to the left to decrease the confidence threshold.

4. In the lower-right corner of the lower pane, click to apply your changes.

Tip: You can undo your changes by clicking in the lower right corner of the lower pane.
Keyword definitions

Keyword organization

Modify advanced keyword definition settings

Once you define a keyword, you can add additional settings for that keyword, such as more accurate spellings and anti-spellings of the keyword. This topic contains the steps for setting these advanced features.

**Important:** Do not attempt to use these advanced features unless Interaction Analyzer is having difficulty in identifying the keyword or is mistaking other words for the keyword. Only through careful analysis can you determine the additions that you must make for the keyword definition.

To modify the advanced settings for a keyword definition

1. In the upper pane of Keyword Sets, click the keyword set that contains the keyword that you want to modify.

2. In the lower pane, select the advanced button for the keyword definition that you want to modify. A new set of controls is displayed below the selected keyword definition.

3. In the **Configuration category** list box, select the advanced feature that you want to modify:

   1. **Spellings** – This feature allows you to enter an alternative spelling for the defined keyword. For example, if the keyword is "read the fine print", you could enter a new spelling of "reed the fine print" to ensure Interaction Analyzer does not identify the alternative pronunciation of "red the fine print".

   2. **User-Defined Pronunciations** – This feature enables you to enter the phonetic spelling of the keyword as defined through phonemes. For more information on the ARPAbet phonemes, see the *Interaction Analyzer Technical Reference* in the CIC.
Documentation Library. When you enter a pronunciation that consists of more than one word, you must enter a `wd` character string between each word. For more information about defining multiple words in a pronunciation, see the *Interaction Analyzer Technical Reference* in the CIC Documentation Library.

- **Anti-Spellings** – This feature enables you to enter spellings that Interaction Analyzer must not mistake for the keyword. For example, if the keyword is "lawyer," you can enter "employer" as an anti-spelling if Interaction Analyzer is mistaking that word for the keyword.

- **User-Defined Anti-Pronunciations** – This feature enables you to enter phonemes as a series of sounds that Interaction Analyzer must not mistake for the keyword. For example, if the keyword is "lawyer" and an anti-spelling of "employer" has not corrected the misinterpretation of the keyword, you would enter "eh m p l oy er" in this field. For more information about phonemes, the *Interaction Analyzer Technical Reference* in the CIC Documentation Library.

**Note:** For each advanced configuration item you add, the keyword count for this definition increases. For example, if you defined a keyword without any advanced configuration, Interaction Analyzer counts it as one keyword. For each spelling, user-defined pronunciation, anti-spelling, or user-defined anti-pronunciation item that you add, Interaction Analyzer increments the cost by 1.

4. To add an entry for the selected advanced feature, click the green **Add** icon to the right of these controls. A dialog box is displayed that enables you to enter the text for the selected advanced feature.

5. In the **Value** box, type the text that you want to add as an entry and click **OK**. The entry is added to the selected advanced feature.

6. Click **Save**. The advanced configuration for the selected keyword is saved.

**Related topics**

- **Keyword definitions**
- **Keyword organization**

**Report Management**

**Report Configuration**

Use Report Management to create custom parameters and related report metadata. The reports configured in Report Management are run in Interaction Reporter in IC Business Manager. The Report Configuration page allows you to edit and manage metadata related to a report.
Report Configuration page

The Report Configuration page has two views, The Master View and Details View.

Master View

The master view displays a list of report Categories and the Reports associated with them.

You can take actions on the master view. The actions include: Adding, Editing, Copying, Deleting, and Ordering Categories and Reports in the lists.

Note: In order to edit a report, you must click the lock icon to unlock the report. You can unlock reports if you have the Interaction Report Administrator security right. For more information, see Assign security rights.

If Interactive Intelligence updates the definition of a standard report, the new version will overwrite any customizations that have been made to it. Therefore, if you want to create a custom report, first copy a standard report. On the General details tab, change the value in the File Name field. Then make your customizations and save the report. Your copied report will not be overwritten by future CIC releases.

Details View

The details view displays specific information about the item selected in the master view, grouped by tabs.

Report Management groups the metadata information in the details view in the following tabs:

- General
- Parameters
- Flexible Columns
- Sections
- Tables
- Custom Data
- Advanced

General Tab

The General details tab contains basic information for the selected report. The detailed information for the fields on this tab is described in the following table.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Name of the report</td>
</tr>
<tr>
<td>SubTitle</td>
<td>Subtitle of the report</td>
</tr>
<tr>
<td>Description</td>
<td>Description of the report</td>
</tr>
<tr>
<td>Friendly Key</td>
<td>A unique value that easily identifies the instance in the database</td>
</tr>
<tr>
<td>Assembly Name</td>
<td>The assembly within which the report exists</td>
</tr>
</tbody>
</table>
Class Name | The class name that identifies the report with the assembly  
Orientation | Identifies if the report is printed in landscape or portrait  
IC Data Source | The CIC data source of the report  
File Name | This is the file name of a Crystal Report. All Crystal Reports must have a file name with an .RPT extension. This field is not used for Active reports.

### Parameters Tab

The Parameters details tab contains metadata information for report parameters. The parameter list displays parameters for the selected report in the master view. The parameter information is defined in sub-tabs by: General, Data, Custom Data, Miscellaneous, SQL Table Columns, and the sub-tab fields are defined in the following table. You can take actions on the Parameters tab. The actions include: Adding, Editing, Deleting, and Ordering Parameters in the list.

<table>
<thead>
<tr>
<th>Sub-tab</th>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>Name</td>
<td>Name of the parameter</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Description of the parameter</td>
</tr>
<tr>
<td></td>
<td>Friendly Key</td>
<td>A unique value that easily identifies the instance in the database</td>
</tr>
<tr>
<td></td>
<td>Assembly Name</td>
<td>The assembly that houses the parameter</td>
</tr>
<tr>
<td></td>
<td>Class Name</td>
<td>The class name of the parameter within the defined assembly</td>
</tr>
<tr>
<td></td>
<td>Required</td>
<td>Check box to select if the parameter is required to run the report</td>
</tr>
<tr>
<td>Data</td>
<td>Source</td>
<td>The source of the parameter, user supplied or fixed</td>
</tr>
<tr>
<td></td>
<td>Data Type</td>
<td>The type of data the parameter is expecting, for example, number, date, or string</td>
</tr>
<tr>
<td></td>
<td>Default Value</td>
<td>Default value for the parameter</td>
</tr>
<tr>
<td></td>
<td>Convert Date to GMT</td>
<td>Check box to select if the datetime value of the parameter should be converted to GMT</td>
</tr>
<tr>
<td>Custom Data</td>
<td>Custom Data 1</td>
<td>A bucket field that can be used for any purpose when building your own parameters</td>
</tr>
<tr>
<td></td>
<td>Custom Data 2</td>
<td>A bucket field that can be used for any purpose when building your own parameters</td>
</tr>
<tr>
<td></td>
<td>Custom Data 3</td>
<td>A bucket field that can be used for any purpose when building your own parameters</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>Allow Sample</td>
<td>A check box to indicate if the parameter allows for a search of distinct values from the reports stored procedure that uses the stored procedure sample</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Allow Or</td>
<td>A check box to indicate if the parameter supports OR logic</td>
</tr>
<tr>
<td></td>
<td>Allow And</td>
<td>A check box to indicate if the parameter supports AND logic</td>
</tr>
<tr>
<td></td>
<td>Parameter Type</td>
<td>Drop-down box to select parameter type, Filter, Informational, or Threshold</td>
</tr>
<tr>
<td></td>
<td>Visible</td>
<td>A check box to select if the parameter is visible within IC Business Manager</td>
</tr>
<tr>
<td></td>
<td>User Control Assembly Name</td>
<td>The assembly that houses the parameter</td>
</tr>
<tr>
<td></td>
<td>User Control Class Name</td>
<td>The class name of the parameter within the defined assembly</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SQL Table Columns</th>
<th>Column Name</th>
<th>The name of the parameter in the Crystal template that maps to the data in the database column.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Column Name2</td>
<td>An additional column name to use if the parameter references two columns in the stored procedure</td>
</tr>
</tbody>
</table>

**Note:** You can configure secure report parameters to limit which data users can report on. For more information, see [Configure secure report parameters](#).

### Flexible Columns Tab

The Flexible Columns details tab contains metadata information for the selected report. The detailed information for the fields on this tab is described in the following table. You can take actions on the Flexible Columns tab. The actions include: Adding, Editing, and Deleting Flexible Columns in the list.

<table>
<thead>
<tr>
<th>Flexible Columns Tab</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Field</strong></td>
</tr>
<tr>
<td>Name</td>
</tr>
<tr>
<td>Description</td>
</tr>
<tr>
<td>Flexible Column Name</td>
</tr>
</tbody>
</table>

### Sections Tab

The Sections details tab contains metadata information for the selected report. The detailed information for the fields on this tab is described in the following table. You can take actions on the Sections tab. The actions include: Adding, Editing, and Deleting Sections in the list.
Tables

The Tables details tab displays the where the data used to build Crystal Reports comes from. For active reports, the fields in the Tables detail tab are unavailable.

Custom Data Tab

The Custom Data details tab contains metadata information for the selected report. The detailed information for the fields on this tab is described in the following table. You can take actions on the Custom Data tab. The actions include: Adding, Editing, and Deleting Custom Data elements in the list.

Advanced Tab

The Advanced details tab contains metadata information for the selected report. The detailed information for the fields on this tab is described in the following table.

Note: Most of the fields on this details tab are for Active reports only. They do not apply to Crystal Reports.
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report Visible</td>
<td>Check box that indicates if the report is visible in IC Business Manager</td>
</tr>
<tr>
<td>Report Type</td>
<td>A list that displays the report type: Active Report or Crystal Report.</td>
</tr>
<tr>
<td>Stored Procedure</td>
<td>Stored procedure the report runs to retrieve its data</td>
</tr>
<tr>
<td>Stored Procedure Count</td>
<td>Stored procedure run to indicate the size of the total return of the reports stored procedure</td>
</tr>
<tr>
<td>Stored Procedure Samp</td>
<td>Stored procedure that returns a subset of the report's stored procedure, usually a collection of single distinct values</td>
</tr>
<tr>
<td>Linked Report Friendly Key</td>
<td>This value represents a Friendly Key of another report. The Linked Report Friendly Key is used to link reports, such as when a summary report might have detail links that a user can click to see all the information for a particular detail.</td>
</tr>
<tr>
<td>Allow Edit Params</td>
<td>A check box that indicates if the user can edit the report's parameters within IC Business Manager</td>
</tr>
<tr>
<td>Allow Count Button</td>
<td>A check box that indicates if the report allows for the stored_procedure_count sproc to be run in IC Business Manager</td>
</tr>
<tr>
<td>Require ACL</td>
<td>A check box, selected for true, indicates that the Access Control List is checked to verify that the user has permission to view the report from the report list in Interaction Reporter.</td>
</tr>
<tr>
<td>Report Timeout Period</td>
<td>The period of time, in seconds, before the report times out--default is 1800</td>
</tr>
<tr>
<td>Notes</td>
<td>User notes field</td>
</tr>
</tbody>
</table>

**Related Topics**

- Report Configuration Export
- Report Configuration Import
- Report System Settings
- Report Management

Restrict report results with secure parameters

**Report Configuration Export**

Use Report Configuration Export to export the report configuration metadata to an XML format file.

Select the reports to export
To export the metadata for one or more reports, expand the report category and select the reports to be exported to XML format. For example:

You can use **Select All** to select all reports to be exported. And you can use the **De-Select All** to clear your selections and select again.

**Specify the destination folder**

Next, specify the destination folder and file name, and export the file.

1. In the **Export File Destination** field, click **Browse**.
2. In the **Save As** dialog, navigate to the destination folder.
3. In the **File Name** field, name your export file. The default file name is `ReportConfiguration.xml`.
4. Click **Save**. The full path name is displayed in the Export File Destination field.
5. Click **Export**. The **Export Completed** confirmation message is displayed.

**Related Topics**

- Report Configuration
- Report Configuration Import
- Report System Settings
- Report Management

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**Report Configuration Import**

Use Report Configuration Import to import the report configuration metadata from a previously exported XML format file.

**Note:** Only supported data types, as listed in the following section, are accepted by the report configuration import feature. If an unknown data type occurs in imported data, an error message appears and the details of the error are logged to the Interaction Administrator log.

**Supported data types**
The following table lists each supported data type and its corresponding numeric value as it is stored in the data_type column of the RPT_Parameters table.

<table>
<thead>
<tr>
<th>Data type</th>
<th>Numeric value</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>Boolean</td>
<td>1</td>
</tr>
<tr>
<td>Date</td>
<td>2</td>
</tr>
<tr>
<td>ICWorkflowName</td>
<td>3</td>
</tr>
<tr>
<td>Number</td>
<td>4</td>
</tr>
<tr>
<td>String</td>
<td>5</td>
</tr>
<tr>
<td>Time</td>
<td>6</td>
</tr>
<tr>
<td>User</td>
<td>7</td>
</tr>
<tr>
<td>DistributionQueue</td>
<td>8</td>
</tr>
<tr>
<td>Role</td>
<td>9</td>
</tr>
<tr>
<td>Guid</td>
<td>10</td>
</tr>
<tr>
<td>Duration</td>
<td>11</td>
</tr>
<tr>
<td>CrystalString</td>
<td>12</td>
</tr>
</tbody>
</table>

**Import an exported file**

To import the metadata from an exported file, follow these steps.

1. In the **Select File** field click **Browse**.
2. In the **Open** dialog, navigate to the saved exported XML file.
3. Select the file to be imported, and click **Open**. The report **Categories/Reports** are displayed in the list.
4. Click **Accept Import**. The **Import Complete** confirmation message is displayed.

**Related Topics**

- Report Configuration
- Report Configuration Export
- Report System Settings
- Report Management
Report System Settings

Use Report System Settings to update reporting system settings, to configure the value for the first day of your work week and set the value for report timeout.

Update Report System Settings

To set the values for report system settings, follow these steps.

1. To set the first day of the week, in the **First Day of Week** drop-down list, select the day to begin your week.
2. To set the report timeout period, use the up and down arrows and select the timeout period in seconds.
3. Click **Save** to save your selections, or click **Revert** to cancel your changes.

Related Topics

- Report Configuration
- Report Configuration Export
- Report Configuration Import
- Report Management

Configure secure report parameters

You can configure report parameters that limit which data users see based on the ACLs to which they have access. Secure report parameters are available for all Crystal Reports that use queue parameters.

Example

Suppose your call center managers want to monitor how workgroups are handling their queues. The Queue Detail Report shows this information, but because it indicates employee performance, you want to limit access to it. To ensure that only the users who should see the report can see the sensitive information, you can configure the report to use secure report parameters. You then assign the user queue ACL to only those users who should see the report results. When a user attempts to run the report in IC Business Manager, the user can select only the workgroups that they have access to.

Secure and unsecure parameter classes

To configure a Crystal Reports report that uses queue parameters, you must indicate a parameter class name.

For each secure parameter class name, there is a corresponding unsecure parameter name.
• If you choose a secure parameter class name, then the user is presented with a list of valid parameter choices based on their access level.
• If you choose an unsecure parameter class name, then a user type any value for the parameter when the user runs the report. This potentially allows the user to report on sensitive information, or to run reports using invalid (non-existent) parameter values.

The following table displays the secure parameter classes and their corresponding unsecure parameter classes

<table>
<thead>
<tr>
<th>Secure Parameter Class Name</th>
<th>Unsecure Parameter Class Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SecuredAutoCompleteUsersComboBox</td>
<td>AutoCompleteUsersComboBox</td>
</tr>
<tr>
<td>SecuredDistributionQueueComboBox</td>
<td>DistributionQueueComboBox</td>
</tr>
<tr>
<td>SecuredUserList</td>
<td>UsersList</td>
</tr>
</tbody>
</table>

For more information on the SecuredUserList parameter, see Configure the visibility of user data in reports

**Parameter class and control class**

For each secure parameter, you must specify both the parameter class name and the control class.

- The parameter class name indicates that the parameter is secure.
- The control class name indicates which type of field the user sees in IC Business Manager.

The following are the secure parameter class names:


The following are the control class names that work with secure parameters

- AutoCompleteComboBox

**A note about migrating from an earlier version**

**Note:** Secure report parameters are available in CIC 2016 R3 and later releases. If you configured Crystal Reports that use queue parameters for an earlier version of CIC, you must edit those reports to use either the secure or unsecure parameters.

**Configure the Queue Detail Report to limit which workgroups a user can report on**
This section shows the configuration steps in order to limit which workgroups a user can report on. You can substitute other secure report parameters, reports, and ACLs as necessary.

**Configure the report**

1. **Report Management > Report Configuration > Categories > Queue Reports**
2. Select the **Queue Detail Report**. This report takes a workgroup as a parameter.
3. On the Parameters tab, click **Workgroup**.
6. Click **Save**.

**Configure the user**

1. **Users > User Configuration > Security > Access Control**
2. In the **Search** box, type workgroup queue.
3. Under the **Search** column, select the workgroups on which the user can report.
4. Click **Close**.

**Configure the User Call Detail Report to limit which users and workgroups a user can report on**

**Configure the report**

1. **Report Management > Report Configuration > Categories > User Reports**
2. Select the **User Call Detail Report**. This report takes a workgroup as a parameter.
3. On the Parameters tab, click **User**.
6. Click **Save**.

**Configure the user**

1. **Users > User Configuration > Security > Access Control**
2. In the **Search** box, type user queue.
3. Under the **Search** column, select the users and workgroups on which the user can report.
4. Click **Close**.

**Related topics**

**Report Configuration**

Configure the visibility of user data in reports