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1. All in-scope product and practice teams will use ServiceNow for Release Management process. However, JIRA may be used to manage the build and test phase that includes capturing requirements, documenting functional and technical specs, developing and testing up to, but not including, P-1 testing.

2. Release activity and configuration items (CIs) comply with Harvard’s Information Security policy.

3. All Financially Significant release requirements for signoffs and significant control points reside in ServiceNow.

4. An Emergency Release can only be used to address a production outage (e.g. major incident, regulatory, security incident).

5. An Exception Release is an out of cycle release, and the business must submit a business case for approval.

6. Release versioning: major number is updated when the platform changes. Minor number is updated for each release.

7. Features must be tested and signed off before they are deployed into P-1 and production.

8. Releases must be approved by the Product Manager, the Practice Manager and the Release Manager before they are deployed into P-1 or production, and must be installed by deployment teams separate to the technical contact in line with the audit requirement for separation of duties.

9. Release Management will inform Change Management of scheduled deployments into production.

10. Change Management is the authority for approving updates to the CMDB. However, Change Management delegates the responsibility of updating the CIs affected by a release and the responsibility for validating those updates to the Release Management process.

11. If a feature is dependent on other features, it must be documented on the Dependent Features tab.

12. The Release Management process shall comply with Harvard’s policies and procedures for IT controls and governance.
RELEASE MANAGEMENT RECORD RELATIONSHIPS (Rev. 2013-12-10)
RELEASEx MANAGEMENT PROCESS PHASES (Rev. 2013-12-10)

Release Record Status

Release Planning
IN PLANNING

P-3 Development
IN DEVELOPMENT

P-2 QA / Test
AWAITING P-1 APPROVAL
READY FOR P-1

P-1 Test/Stage for Production
IN P-1
AWAITING PROD APPROVAL
READY FOR PROD

PRODUCTION
IN PROD
CLOSED

Feature Record Status

DRAFT
When Feature status moves past DRAFT, Tasks are automatically created.

ANALYSIS & DESIGN

IN DEVELOPMENT

READY FOR P-2
IN P-2
READY FOR P-1

Release Approval required

READY FOR PROD

Feature Approval required

Release Level Approvals:
Practice Manager and one or more Product Group Managers must approve the release as a package prior to deploy to P-1 and prior to deploy to production.

All Features must be in Ready for P-1 or Ready for Prod status.

Feature Level Approvals: Practice Manager must approve each Feature prior to deploy to production

All Features in the Release must have a status of Closed or Cancelled in order to close the Release.
## RELEASE PROCESS WORKFLOW TABLE (Rev. 2013-12-10)

<table>
<thead>
<tr>
<th>Release Phase</th>
<th>Release Status</th>
<th>Release Status Update Trigger</th>
<th>Feature Status</th>
<th>Feature Status Update Trigger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>In Planning</td>
<td>Open new Release record</td>
<td>Draft</td>
<td>Open new Feature record</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Analysis &amp; Design</td>
</tr>
<tr>
<td>P-3 Development</td>
<td>In Development</td>
<td>Click button for In Development</td>
<td>In Development</td>
<td>Status update from Pending on task to develop and unit-test code</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>OR</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Click button for In Development</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Ready for P-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Click button for Ready for P-2</td>
</tr>
<tr>
<td>P-2 QA/Test</td>
<td>In QA/Test</td>
<td>Click button for In QA/Test</td>
<td>In P-2</td>
<td>Status update to Completed on task to deploy feature to P-2</td>
</tr>
<tr>
<td></td>
<td>Awaiting P-1 Approval</td>
<td>Click button for Awaiting for P-1 Approval</td>
<td>Ready for P-1</td>
<td>Click button for Ready for P-1</td>
</tr>
<tr>
<td></td>
<td>Ready for P-1</td>
<td>Approval of release to P-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P-1 Test/Stage</td>
<td>In P-1</td>
<td>All features for release have In P-1 status</td>
<td>In P-1</td>
<td>Status update to Completed on task to deploy feature to P-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Request for approval from Release Record</td>
</tr>
<tr>
<td></td>
<td>Waiting for Production</td>
<td>Click button for Awaiting for Production Approval</td>
<td>Ready for P-1</td>
<td>Approval of each feature for release to Production</td>
</tr>
<tr>
<td></td>
<td>Approval</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ready for Production</td>
<td>Approval of release to Production</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production</td>
<td>In Production</td>
<td>All features for release have In Production status</td>
<td>In Production</td>
<td>Status update to Completed on task to deploy feature to Production</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-production</td>
<td>Closed</td>
<td>Click button for Close after all features validated and closed</td>
<td>Closed</td>
<td>Click button for Close after all features validated and CI updated where required</td>
</tr>
</tbody>
</table>
Planning a Normal Release (Rev. 2013-12-10)

1. The Release Manager creates a new Release Record in coordination with the Product and Practice Managers, identifying the Release as Normal.

   Release versioning—major number is updated when the platform changes. Minor number is updated for each release.

2. The Release Manager, Product Manager and Practice Manager establish the release schedule.

   Production start and Production end (i.e. projected maintenance window) dates are mandatory. Use the Schedule tab of the Release Record to specify additional milestone dates.

3. The Release Manager enters any release tasks (e.g., Refresh P-3, etc.) as appropriate by clicking the New button on the Release Tasks tab of the Release Record.

4. The Release Manager, Product Manager and Practice Manager enter features to be included in the release by going to the Features Tab of the Release Record and clicking the New button (to add a new feature) or the Edit button (to edit an existing feature) to the Release. For example, the Release Manager typically enters certain feature types (e.g., Upgrade/Patch, possibly Configuration) and Product and Practice Managers others (e.g., Enhancement, Defect Correction, possibly Configuration).

   The approval of a release as Ready for P-1 defines the “Release Package” for that release.

5. Approval is required at Ready for Production by the Practice Manager for every feature in the release.

6. Release approvals are required at Ready for P-1 and Ready for Production by the Release Manager, Practice Manager and Product Manager.

   Once a Release reaches a status of In P-1, only the Release Manager may add or remove features from a release.
DEPLOYMENT TASKS (Rev. 2013-12-10)

1. Deployment tasks involve deploying features to various HUIT environments and will have the Deployment task checkbox checked on the Task Record. The Release Manager will identify Configuration Items (a mandatory field) associated with the deployment task.

2. The Assigned to individual will open the Task Record, change the status to In Progress and begin deployment activities.

The Assigned to individual for the deployment task may access the Deployment instructions and the Back-out plan for the feature by going to the Deployment Plan tab of the Feature Record.

3. The Assigned to individual completes the deployment activities as instructed by the deployment instructions, updating the Work Notes in the Release Task Record.

If there are Incidents created as a result of the deployment, Incident Management procedures apply.

4. If Issues are identified during deployment, an Issue record is created.

Do not combine multiple issues (bugs) in a single Issue Record. Create an Issue record for each issue or bug identified.

If it is determined that a new feature is required to address the issue in production, the Stabilization issue checkbox in the Documentation tab of the Feature Record should be checked.

5. If the CI needs updating checkbox is checked, the Assigned to individual will select the appropriate designation.

6. When the deployment is completed, the Assigned to individual sets the status of the Task Record to Completed.

If the CI needs updating checkbox is checked, a Confirm CI updates for Feature task will be created and assigned to the Release Manager.
P-1 APPROVALS (Rev. 2013-12-10)

Clicking the Awaiting for P-1 Approval button on the Release Record will display an error message if there are Features included in the Release that are not yet in a Ready for P-1 status.

1. When all Features associated with the release are in a Ready for P-1 status, the Release Manager clicks the Awaiting P-1 Approval button. The release status now reads Awaiting P-1 Approval.

2. The Release Approvers tab shows a related list form listing the approvers for the release.

3. The approvers a) click on the Requested link associated with their approval to open the Approval Record, or b) open the Approval Record by clicking the link from a gauge on their Overview page.

4. Each release approver will open his Approval Record and click the Approve or Reject button to approve or reject the Release.

If rejecting a release, comments are required indicating the reason(s).

The approval of a release as Ready for P-1 defines the “Release Package” for that release. Only a Release Manager can add new features to the release.

When the release is Ready for P-1, the feature task Deploy FEATURE to P-1 is created and the feature status remains Ready for P-1. When the task is completed, the feature status automatically changes to In P-1.

5. The release will remain in a Ready for P-1 status until all the Features associated with that release are in a status of In P-1. Once all the Features associated with a release have a status of In P-1, the status of the Release will automatically change to In P-1.
PRODUCTION APPROVALS (Rev. 2013-12-10)

Clicking the Waiting for Production Approval button will present an error message if any of the features included in the release are not yet in a Ready for Production Approval status.

1. The Release, Product and Practice Managers for the features in the release approve the release for production, and the Practice Manager approves each Feature by opening the Approval Record and clicking Approve or Reject.

If rejecting a feature, comments are required indicating the reason(s).

At this point all features in the release will have a Ready for Production status.

2. The Release Manager clicks the Waiting for Production Approval button that adds release approval records for the release and updates the status of the release to Awaiting Production Approval.

3. The Release Approvers click on the Requested link associated with their approval to open the Approval record, or open the Approval record by clicking the link from a gauge in their Overview/Dashboard page.

Once all release approvers have approved the release, the status of the release will change to Ready for Production.

4. Moving a Release to Ready for Production will trigger the automatic creation of Deploy Feature to Production tasks for each Feature record in the Release.
FEATURE TYPES (Rev. 2013-12-10)

Defect Corrections & Enhancements

- Defect Correction Feature types are used to fix bugs and application defects
- Enhancement Feature types are used to add functionality to an application

Upgrades & Patches

- Upgrade & Patch Feature types are used for operating system, database, application server and/or web server patching
- This feature type does not create tasks unless CIs are added to the Affected CIs tab

Configurations

- Configuration Feature types are used for tuning, changing settings and/or configuration parameters on applications and devices
- While task names vary, Configuration Features follow the same workflow as Defect Correction & Enhancement Features
- Making configuration changes to a front end that are dependent upon the release

Application Deployments

- Application Deployment Feature types are used primarily by practices that use JIRA for development and must be reconciled with ServiceNow to complete the release

Monthly Reporting

- Monthly Reporting Feature types are used specifically for monthly reporting requirements and should not be used for other purposes

Back-End Data change

- Back-End Data Changes are not typically associated with a release
FEATURE: DEFECT CORRECTION OR ENHANCEMENT (Rev. 2013-12-10)

1. The creator of the Feature record selects Enhancement or Defect Correction as the Feature Type when creating the Feature record, enters all mandatory fields and saves the record with a status of Draft.

2. The creator of the Feature record must determine whether additional documentation and/or impact implications are required. If so, he clicks on the Documentation and/or Impact Implications tabs.

3. When the Analysis & Design button is clicked, the status of the Feature record becomes Analysis & Design and the tasks associated with the Feature are created.

   If a checkbox on the Documentation or Impact Implications tabs is checked, additional tasks will be added. The Code Peer Review and Test Plan checkboxes will trigger mandatory fields (Technical / Functional Contacts).

4. When the Develop & unit test code for FEATURE task has a status of In Progress, the Feature record will automatically change its status to In Development. The Ready for P-2 and Ready for P-1 buttons appear.

   Features MUST be associated with a Release before moving to P-1 except for Back-End Data Change Feature types.

5. When the Release is Ready for P-1, the Feature task Deploy FEATURE to P-1 is created and the Feature status remains Ready for P-1. When the task is completed the Feature status automatically changes to In P-1.

6. Moving a Release to Ready for P-1 or to Ready for Production will trigger the automatic creation of Deploy Feature to Production tasks for each Feature record in the Release EXCEPT for Feature Type Upgrade/Patch.
FEATURE: UPGRADE OR PATCH (Rev. 2013-12-10)

<table>
<thead>
<tr>
<th>Feature Record Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Feature Type</strong></td>
</tr>
<tr>
<td><strong>Upgrade/Patch</strong></td>
</tr>
<tr>
<td><strong>Feature Record Status</strong></td>
</tr>
<tr>
<td>DRAFT</td>
</tr>
<tr>
<td>When Feature status moves past DRAFT, Tasks are automatically created.</td>
</tr>
</tbody>
</table>

Tasks

**Feature Type: Upgrades & Patches**

1. The creator of the Feature record selects Upgrade/Patch as the Feature Type when creating the Feature record, enters all mandatory fields and saves the record with a status of Draft.

Upgrade/Patch Feature types are typically created by Release Managers or Practice Managers. The Release Manager adds CIs to the Affected CI tab to create deployment tasks.

2. Click the In Development button to change the status of the Feature to In Development. The Feature displays a Ready for P-2 and a Ready for P-1 button.

The Upgrade/Patch workflow will NOT automatically generate tasks (i.e., the *Deploy updates to P-2 for FETR0000000* task when the Feature status is *Ready for P-2*).

3. Complete tasks as required by the Feature for P-2 and P-1.

Features MUST be associated with a Release before moving to P-1 except for Back-End Data Change Feature types.
1. The creator of the Feature record selects Configuration as the Feature Type when creating the Feature record, enters all mandatory fields and saves the record with a status of Draft.

2. Click the In Development button to change the status of the Feature to In Development. The Feature displays a Ready for P-2 and a Ready for P-1 button.

Adding a configuration item (CI) under the Affected CIs tab triggers the task for deploying the infrastructure change in the development environment.

3. Complete tasks as required by the Feature for P-2 and P-1.

The Configuration Feature type requires identification of the CI for the installation to take place. The rest of the workflow for the Configuration Feature type is the same as Enhancement and Defect Correction Feature types from this point forward.
FEATURE: APPLICATION DEPLOYMENT (Rev. 2013-12-10)

1. The creator of the Feature record selects Application Deployment as the Feature Type when creating the Feature record, enters all mandatory fields and saves the record with a status of Draft.

Application Deployment Feature types are limited to practices that use JIRA.

2. The creator of the Feature record goes to the External Tickets tab of the Feature record and enters the JIRA ticket number and URL.

Documentation tracked in JIRA must be reconciled with ServiceNow before moving the Feature to a Ready for P-2 status.

3. Click the In Development button to change the status of the Feature to In Development.

4. When the status of the Feature changes to In Development, the following tasks are created:
   - Build FETR0000000 application for deployment
   - Reconcile ServiceNow and JIRA Release

Features MUST be associated with a Release before moving to P-1 except for Back-End Data Change Feature types.

5. When the Release is Ready for P-1, the Feature task Deploy FEATURE to P-1 is created, and the Feature status remains Ready for P-1. When the task is completed, the Feature status automatically changes to In P-1.

6. Moving a Release to Ready for Production will trigger the automatic creation of Deploy Feature to Production tasks for each Feature record in the Release EXCEPT for Feature Types Upgrade/Patch.
Back-End Data Changes are not typically associated with a release.

1. The creator of the Feature record selects Back-End Data Change as the Feature Type when creating the Feature record, enters all mandatory fields and saves the record. If the Back-End Data Change must be associated with a specific Release, enter that information in the Release field.

2. The workflow is the same as Enhancements & Defect Correction Feature types. If the HDW Impact is checked on the Impact Implications tab, the Review HDW impact for FEATURE task will be created as well.

When the **Awaiting Production Approval** button on the Feature is clicked, the Feature status will be **Awaiting Production Approval**, and the Feature Approval records will be created for the Practice Manager and the Product Manager.

3. When the Feature is approved the Feature status changes to Ready for Production, and a Deploy FEATURE to Production task is created.

4. When the Deploy FEATURE to Production task status is Completed, the Feature status will be In Production and the Validate production install of FEATURE task is created. The Close Feature button will display on the Feature record.
1. The creator of the Feature record selects Monthly Reporting as the Feature Type when creating the Feature record, enters all mandatory fields and saves the record with a status of Draft.

The Monthly Reporting feature type is identical to the Defect Correction or Enhancement feature type with the following exception:

Awaiting P-1 Approval and Ready for P-1 release statuses do not apply.
1. When the Feature status is In P-2, the Functional Contact will be assigned a Validate and test feature in P-2 for FEATURE task. The Functional Contact clicks on the Number link of the task in the related records list, opens the task by clicking the link from his dashboard or uses the Tasks assigned to me link from the application navigator.

2. Once the task is opened, the Functional Contact changes the status to In Progress and begins testing.

3. The Functional Contact enters information in the Work Notes of the task record as appropriate, and may create a Watch List to inform relevant stakeholders.

4. If a new Issue (bug) is identified, the Functional Contact will create an Issue record by going to the Issue tab on the Feature record and clicking the New button.

   *Assignment group* and *Assigned to* fields are mandatory for *Issue* records. *Due date* is optional.

5. The Assigned to person for the Issue sets the status to In Progress and begins working the Issue, adding Work Notes as appropriate.

6. When completed, the Assigned to person changes the status to Ready for Testing.

7. The Functional Contact continues testing the Feature. When completed, the status of the task is changed to Completed.
## RELEASE MANAGEMENT

Release [and Deployment] Management is the process responsible for planning, scheduling and controlling the build, test and deployment of releases, and for delivering new functionality required by the business while protecting the integrity of existing services.

Source: ITIL® glossary and abbreviations (2011)

## ROLES AND PERMISSIONS (Rev. 2013-12-10)

<table>
<thead>
<tr>
<th>ServiceNow Role</th>
<th>Process Role</th>
<th>ServiceNow Permissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Release User</td>
<td>Practice Group members</td>
<td>View Product &amp; Release records</td>
</tr>
<tr>
<td></td>
<td>Product Group members</td>
<td>Create/Update feature records</td>
</tr>
<tr>
<td></td>
<td>DBAs</td>
<td>Create/Update Issue records</td>
</tr>
<tr>
<td></td>
<td>Sys Admins</td>
<td>Create/Update Task records</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Approve feature</td>
</tr>
<tr>
<td>Release Admin</td>
<td>Release Managers</td>
<td>All Release user permissions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Create/Update product record</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Create/Update release record</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Approve a release</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assign Deployment Tasks to deployment group</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Sys Admin DBA)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Approve feature</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Add/Remove Features to release after <em>In P-1</em> status or later</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Edit the <em>Affected CIs</em> tab</td>
</tr>
</tbody>
</table>

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