INTERSYSTEMS LEARNING SERVICES

InterSystems Change Control

InterSystems
Creative data technology

InterSystems Change Control

COPYRIGHT NOTICE

© 2020 InterSystems Corporation, Cambridge, MA. All rights reserved.
InterSystems is a registered trademark of InterSystems Corporation.

InterSystems, InterSystems Caché, InterSystems Ensemble, InterSystems HealthShare, HealthShare, InterSystems TrakCare, TrakCare, InterSystems DeepSee, and DeepSee are registered trademarks of InterSystems Corporation.

InterSystems IRIS data platform, InterSystems IRIS for Health, InterSystems IRIS, InterSystems iKnow, Zen, and Caché Server Pages are trademarks of InterSystems Corporation.

All other brand or product names used herein are trademarks or registered trademarks of their respective companies or organizations.

This document contains trade secret and confidential information which is the property of InterSystems Corporation, One Congress Street, Boston, MA 02114, or its affiliates, and is furnished for the sole purpose of the operation and maintenance of the products of InterSystems Corporation. No part of this publication is to be used for any other purpose, and this publication is not to be reproduced, copied, disclosed, transmitted, stored in a retrieval system or translated into any human or computer language, in any form, by any means, in whole or in part, without the express prior written consent of InterSystems Corporation.

The copying, use and disposition of this document and the software programs described herein is prohibited except to the limited extent set forth in the standard software license agreement(s) of InterSystems Corporation covering such programs and related documentation. InterSystems Corporation makes no representations and warranties concerning such software programs other than those set forth in such standard software license agreement(s). In addition, the liability of InterSystems Corporation for any losses or damages relating to or arising out of the use of such software programs is limited in the manner set forth in such standard software license agreement(s).

THE FOREGOING IS A GENERAL SUMMARY OF THE RESTRICTIONS AND LIMITATIONS IMPOSED BY INTERSYSTEMS CORPORATION ON THE USE OF, AND LIABILITY ARISING FROM, ITS COMPUTER SOFTWARE. FOR COMPLETE INFORMATION REFERENCE SHOULD BE MADE TO THE STANDARD SOFTWARE LICENSE AGREEMENT(S) OF INTERSYSTEMS CORPORATION, COPIES OF WHICH WILL BE MADE AVAILABLE UPON REQUEST.

InterSystems Corporation disclaims responsibility for errors which may appear in this document, and it reserves the right, in its sole discretion and without notice, to make substitutions and modifications in the products and practices described in this document.

For Support questions about any InterSystems products, contact:

InterSystems WorldWide Response Center
Telephone: +1-617-621-0700
Tel: +44 (0) 844 854 2917
Email: support@InterSystems.com

ICC 330:
CCR Tier 0 – Auxiliary Tools and Transitions

InterSystems
Creative data technology

Overview

- Configure peer review routing rules.
- Identify peer review models and workflow strategies.
- Configure peer review documents.

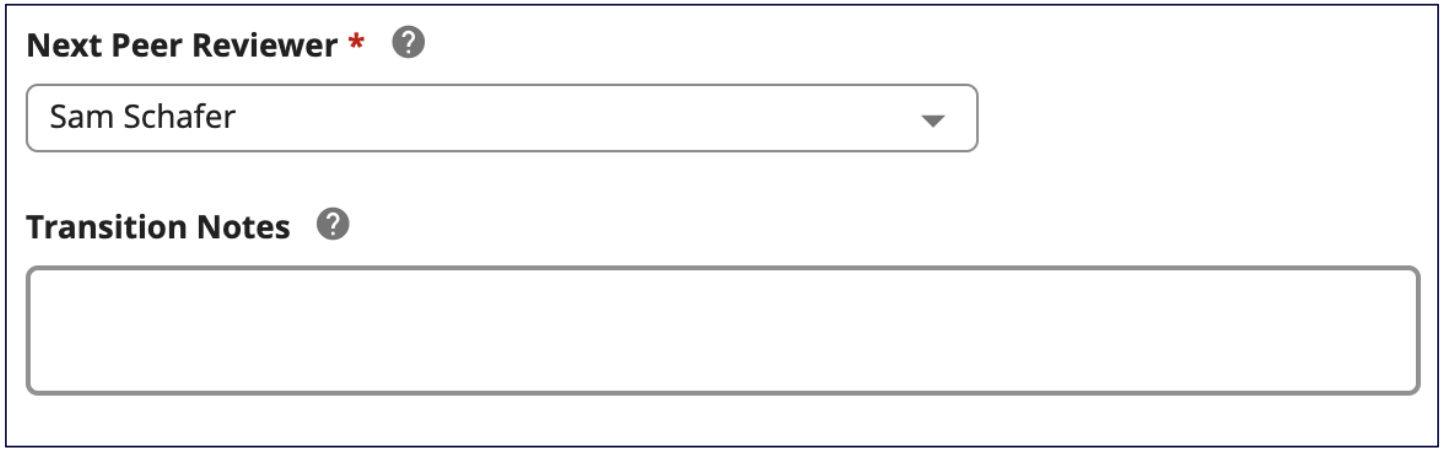
Overview (cont.)

- Additional transitions:
  - Reassign.
  - Merge.
  - Clone.
  - Cancel.
  - MarkIntegrationFailed.
  - MarkValidationFailed.
  - Revert.
  - ChangeSpec.
  - RequestOverride.

Part 1: Peer Reviews Options

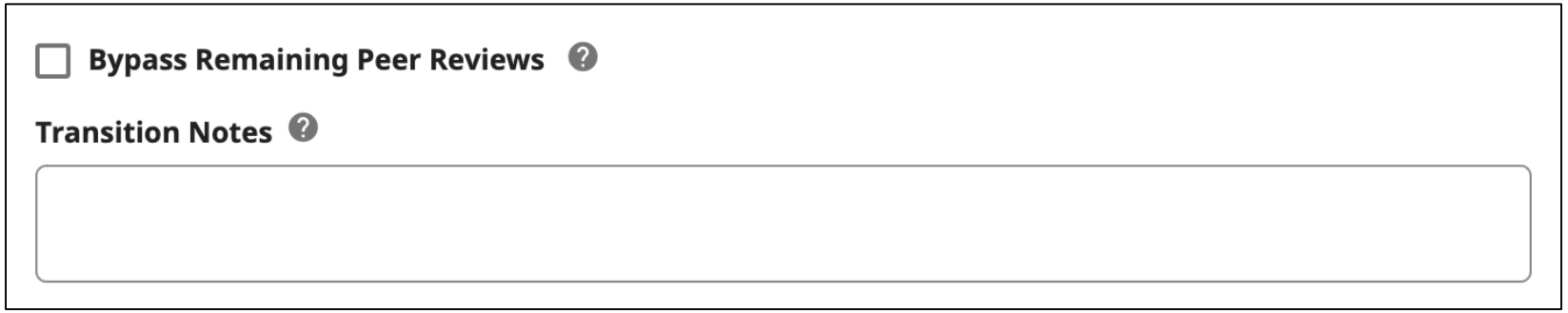
Assigning a Peer Reviewer

- Several options for configuring default value of Next Peer Reviewer Name field.
  - Field shown during transitions into peer review states.
- Owner can change from default value to anyone else from Responsible Organization.



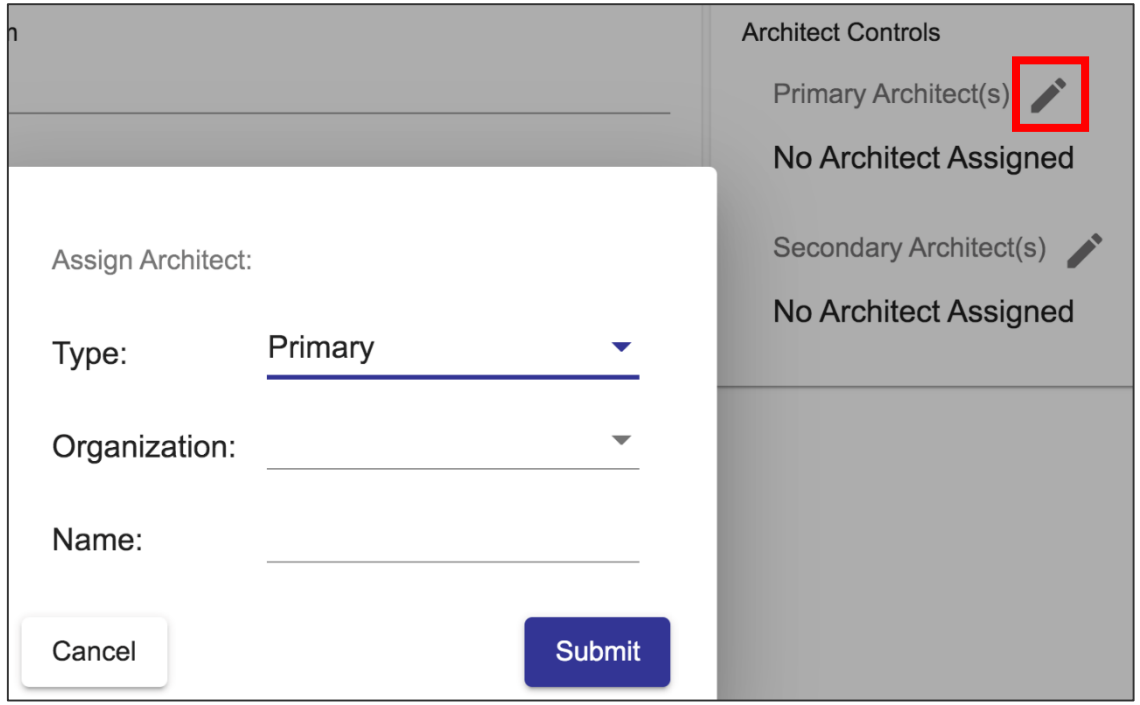
System Architects

- Systems can have users designated as architects.
- Architects receive highlight email notifications for all CCRs.
  - For example when CCRs are opened, moved to a new phase, or closed.
- Architects receive all peer reviews by default.
- Architects can disable remaining peer reviews either:
  - By editing CCR Details Pane.
  - During pass peer review transition.



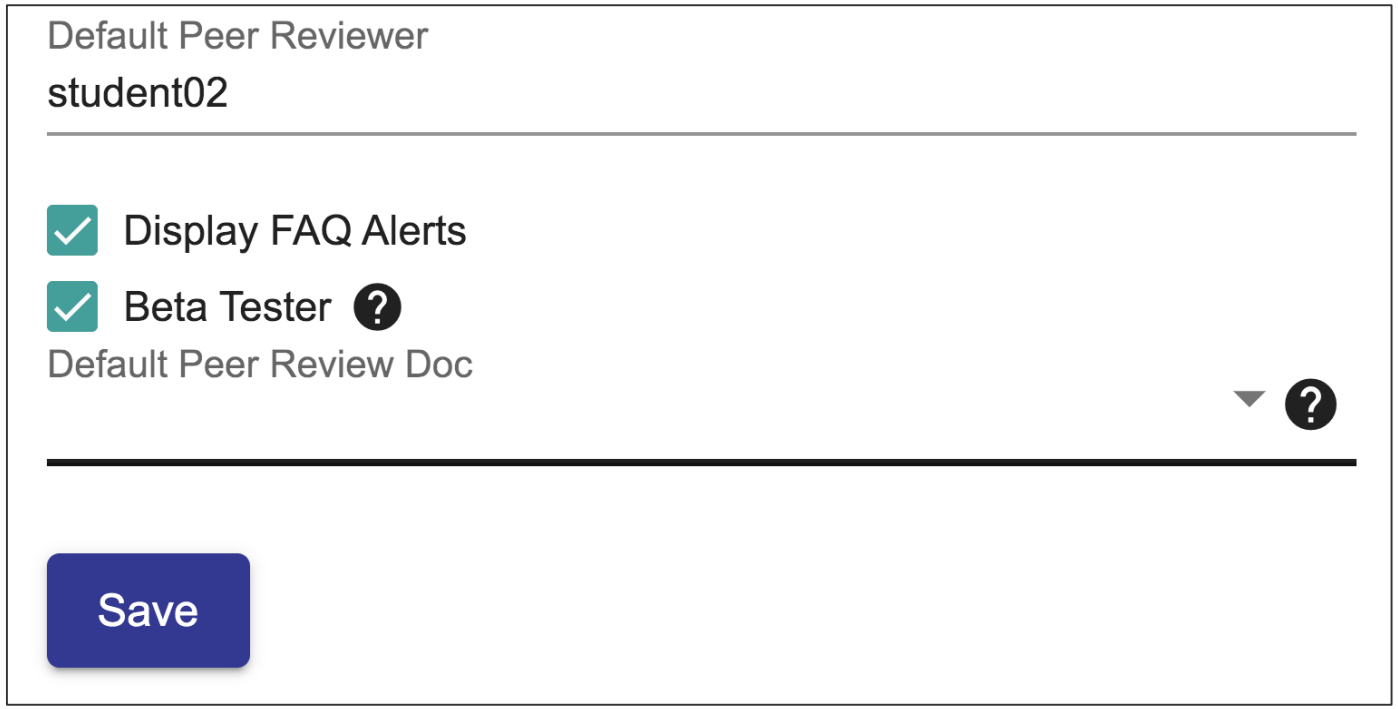
System Architects (cont.)

- Two kinds of architects:
  - Primary architect.
    - Default peer reviewer for all CCRs owned by their organization for that System.
  - Secondary architect.
    - Peer reviews all CCRs transitioned to XXXX_Pending_Peer_Review state by primary architect.
- Architects configured on System Details page.



Default Peer Reviewer per User

1. Menu > Users.
2. Select the org.
3. Select the user.
4. Select the "Default Peer Reviewer."
5. Click "Save."



Peer Review Routing

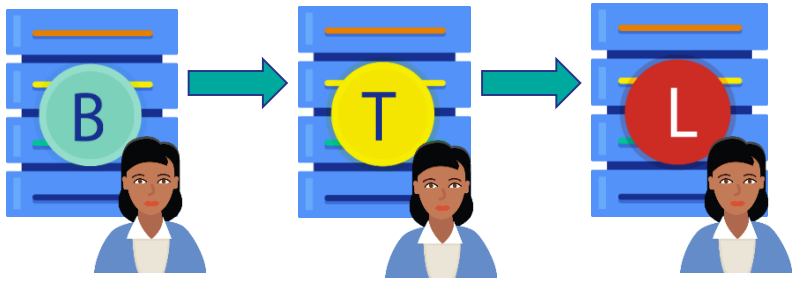
- Default value in drop down for next peer reviewer follows set of rules:
  1. Route to the primary architect for that (ResponsibleOrg + System) if one is assigned.
  2. Route to the secondary architect for that ResponsibleOrg + System if the CCR was authored by the primary architect AND there is a secondary architect assigned.
  3. Route to the default peer reviewer for that user if one is assigned on the User Details page.

Peer Review Routing (cont.)

- Default value in drop down for next peer reviewer follows set of rules:
  4. Route to the user's manager.
     - Only for InterSystems employees.
  5. Remains with user who transitioned into. XXXX_Pending_Peer_Review
     - This user still cannot passPeerReview.

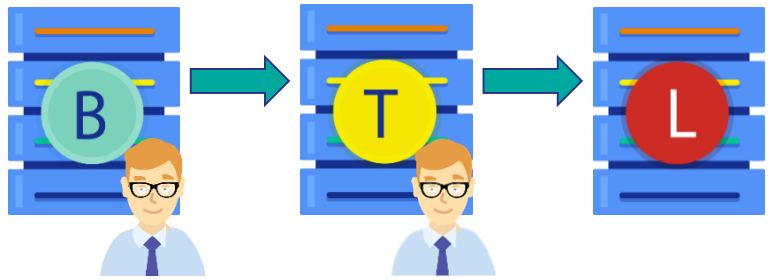
Peer Review Workflow Strategies

- Different peer review workflow strategies can be used for different scenarios.
- Standard peer review.
  - Every CCR gets peer reviewed in every environment.
  - Useful for providing most thorough peer review coverage.
  - Default setup (no configuration necessary).



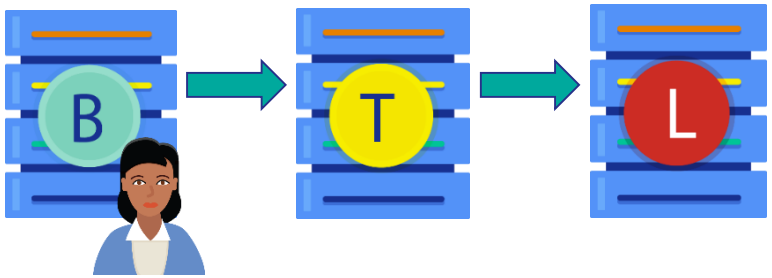
Peer Review Workflow Strategies (cont.)

- Architect with peer review bypass.
  - CCRs routed to architect for all reviews, who can “Bypass Remaining Peer Reviews” for a CCR at any time (even when not in a peer review state).
  - Useful for shortening workflow of low risk CCRs after initial review has passed.
  - Configured by assigning architects on System Details page.



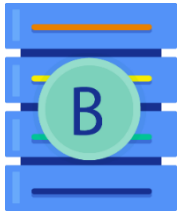
Peer Review Workflow Strategies (cont.)

- BASE-Only peer review.
  - Useful for mid-phase of new projects.
    - Get a second set of eyes on all changes before the system goes into production.
  - Configured by selecting ‘Peer Review BASE Only’ under System Advanced Controls.



Peer Review Workflow Strategies (cont.)

- No peer review.
  - Should *only* be used during early BASE-only phase of a new implementation project.
    - Speed is of the essence.
    - Introduction of a broken change will not put anything at risk.
    - Once other environments are introduced to workflow, enable peer review.
  - Configured by selecting ‘Bypass Peer Reviews’ under System Advanced Controls.



Quiz: Peer Review Routing Configuration

Question:

Which peer review routing feature should be used when:

- Multiple teams are working on the System, and
- One person per team should handle peer reviews for that team.

A. Primary architects.

B. Default peer reviewer setting for each user.

C. Secondary architects.

D. Default group peer reviews.

Quiz: Peer Review Routing Configuration (cont.)

Answer:

B. Default peer reviewer setting for each user.

Since architects cannot be configured per team, only per responsible organization for a system, the only option is default peer reviewer setting.

Quiz: Primary/Secondary Architects

Question:

Which of the following is a feature only available to primary and secondary architects?

A. Receive peer reviews for CCRs by a different responsible organization.
B. Bypass remaining peer reviews on any CCR for that system where their organization is the responsible organization.
C. Perform peer reviews when system level Bypass Peer Reviews setting is true.
D. Pass their own peer reviews.

Quiz: Primary/Secondary Architects

Answer:

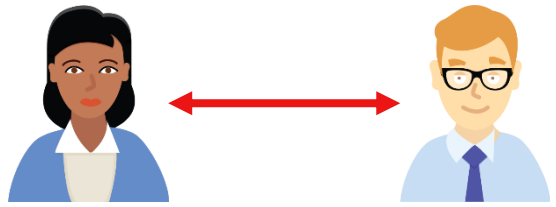
B. Bypass remaining peer reviews on any CCR for that system where their organization is the responsible organization.

A is wrong because it is never possible (only users from responsible organization can modify a CCR). C is wrong because no peer reviews are ever in workflow if bypass peer reviews system setting is true.

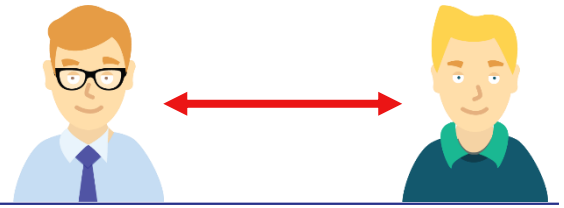
No one can pass their own peer review.

Peer Review Models

- Different peer review models provide different benefits.
- Peer programming.
  - Assign experienced colleagues as each other's default peer reviewer.
  - Useful for cross-training on each others' work.

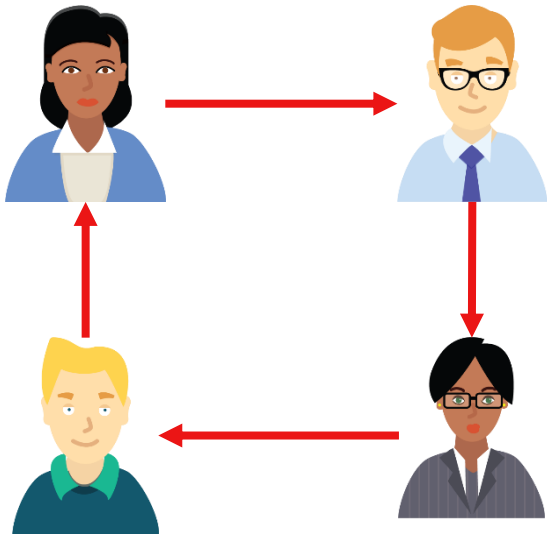


- Mentor/mentee.
  - Assign a senior person to be the default reviewer of a junior person and vice versa.
  - Allows the senior to instruct during reviews of the junior, and the junior to learn from work completed by the senior.



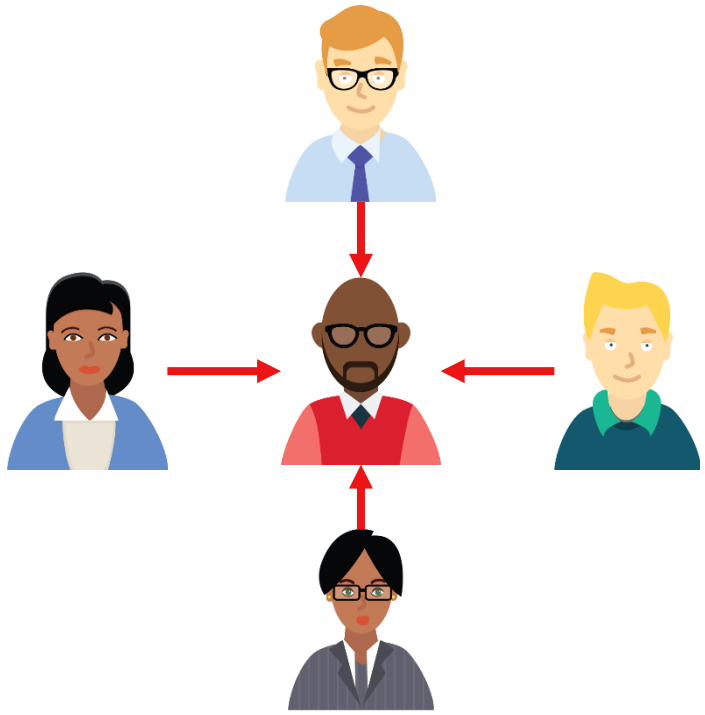
Peer Review Models (cont.)

- Round robin.
  - Assign colleagues in a cycle where each reviews and is reviewed by a different person.
  - Allows for broader collaboration within a team.
  - Useful for getting members to engage more broadly within the team.



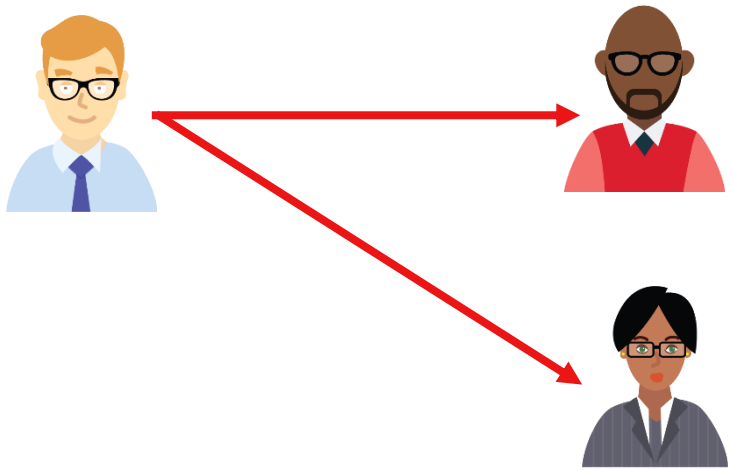
Peer Review Models (cont.)

- Hub and spoke.
  - Assign a central person as default peer reviewer for all other teammates.
  - Useful when there are multiple teams working on a System and a single primary architect will not suffice.



Peer Review Models (cont.)

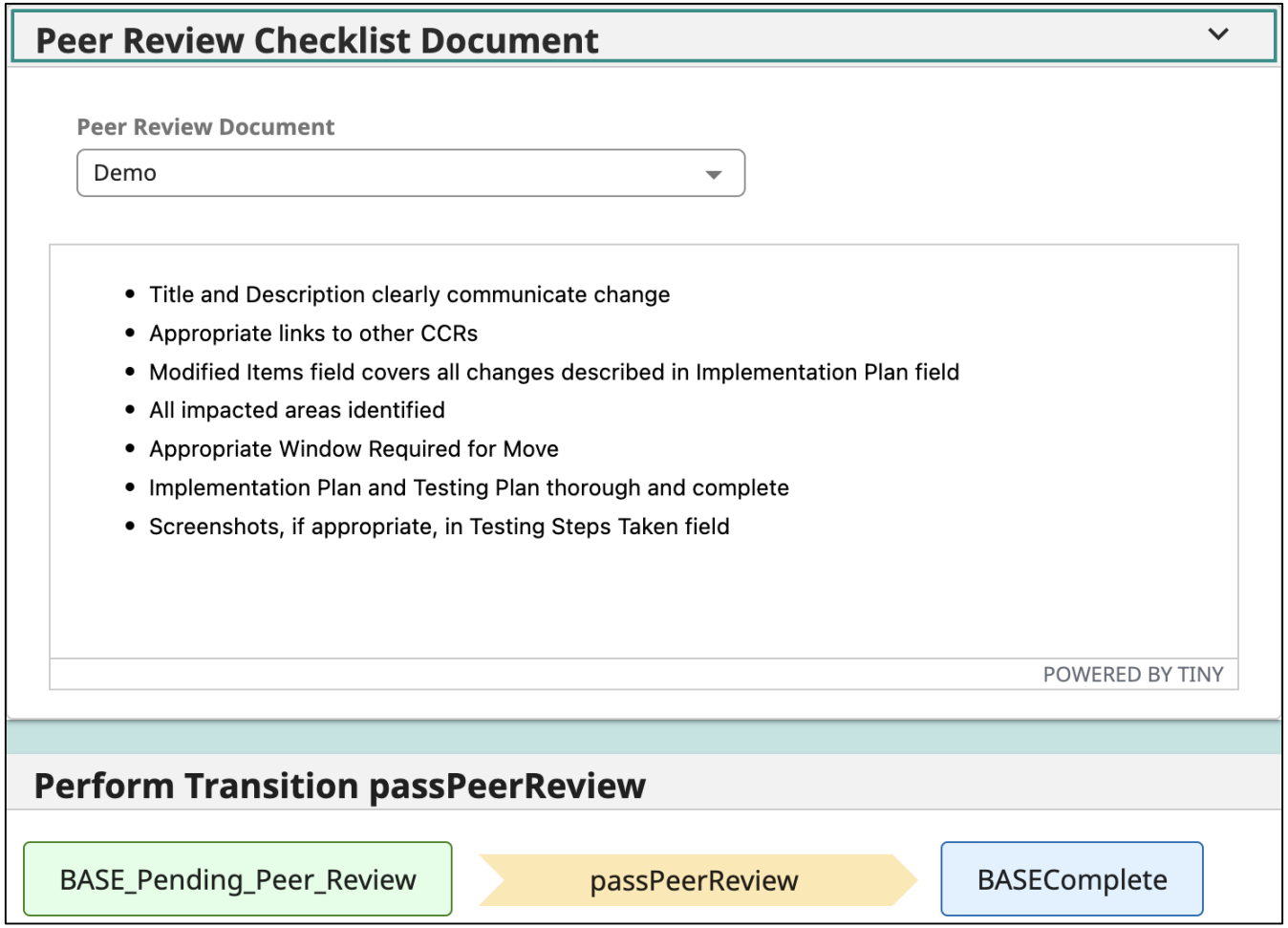
- Different peer reviewers in each phase.
  - Multiple people verify change and documentation.
    - Reduce risk of mistakes.
    - Increase cross-training on new changes.
  - No configuration tools in CCR to fully configure this option.



Peer Review Documents

- Can configure Peer Review Checklist Document to display on passPeerReview transition.
- Describes best practices for completing peer review.
  - For reference purpose only; no interactive check boxes.
- Collapsed by default.
- Default checklist for user autoselected.
  - Able to select other documents.

Peer Review Documents (cont.)



Creating Peer Review Documents

- Menu > Peer Review Docs > Add New Document.
- One organization can have multiple peer review documents.
  - Different documents may make sense for technical vs application reviews.

Default Peer Review Documents

- Organization:
  - Menu > Organizations.
- System:
  - Menu > Systems.
- User:
  - Menu > Users.
- Order of precedence:
  - User.
  - System.
  - Organization.

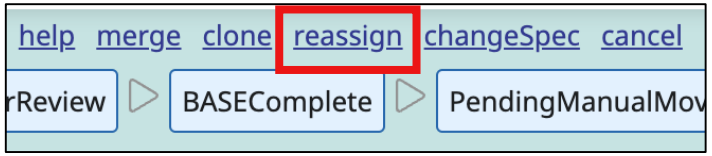
Do Exercise ICC330-1

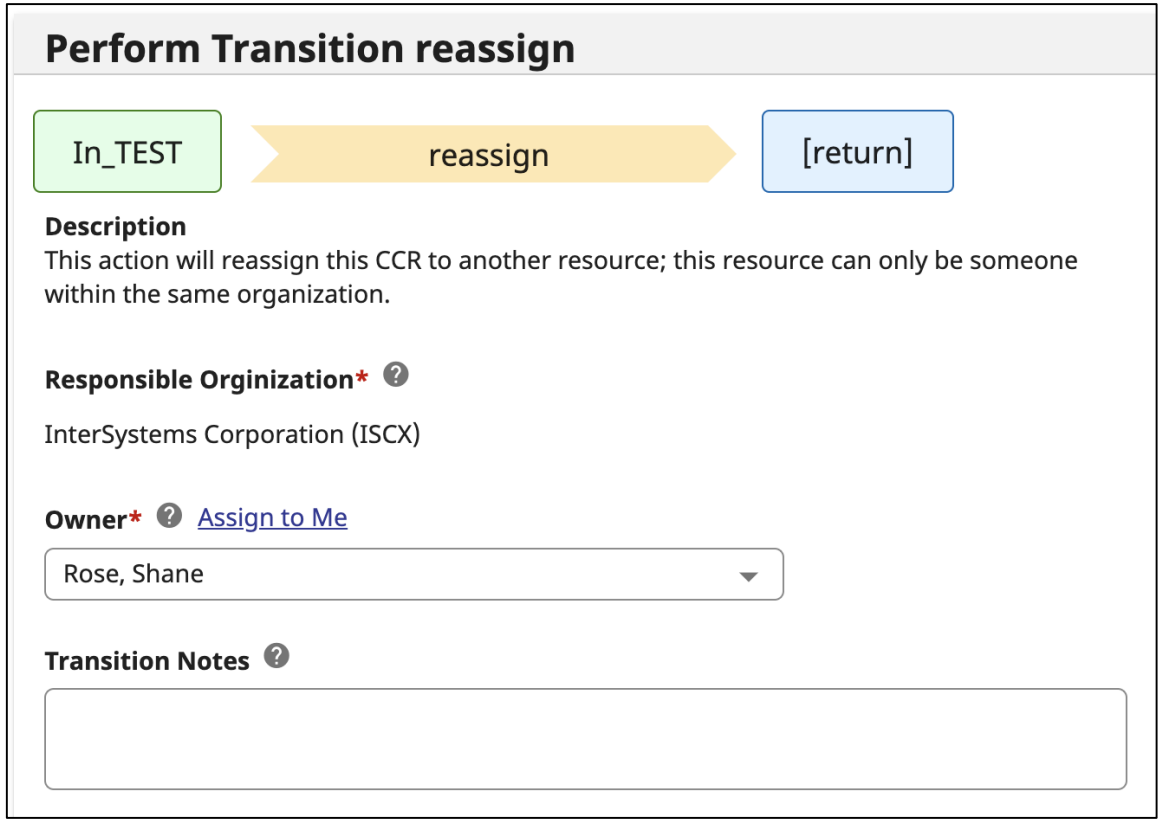
Part 2: Additional Transitions

- Reassign.
- Merge.
- Clone.
- Cancel.
- MarkIntegrationFailed.
- MarkValidationFailed.
- Revert.
- ChangeSpec.
- RequestOverride.

Reassign CCR Owner

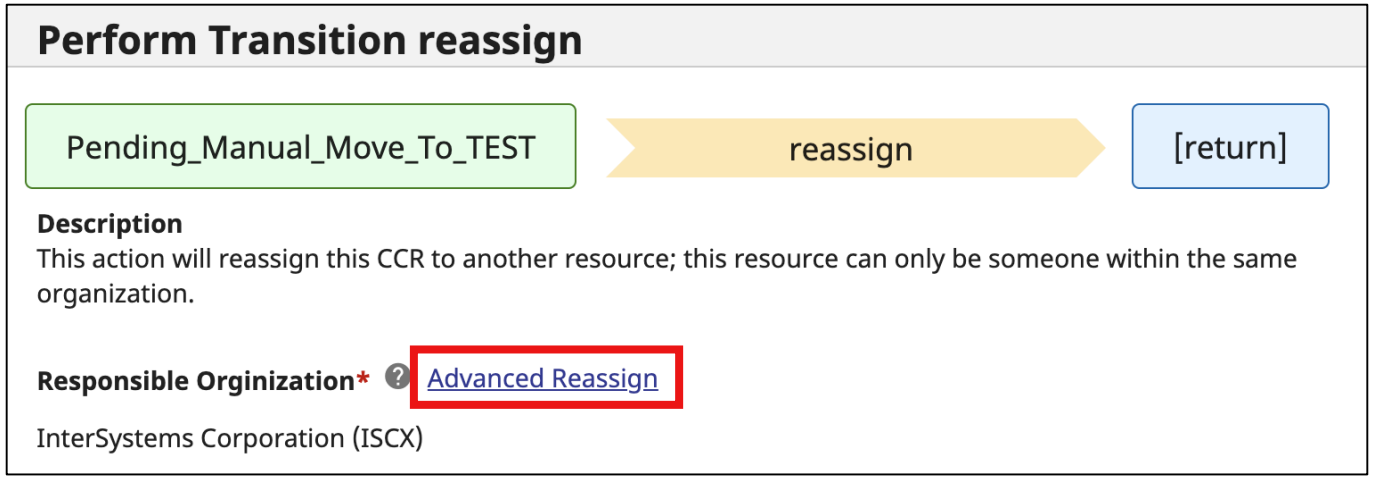
- Users from responsible organization can change owner.
  - Not just current owner.
- Click reassign link at top of CCR.
- Select new Owner.
  - Assign to Me link specifies yourself.
- Optionally use transition notes to specify reason for reassign.
- Click the “reassign” button.





Reassign Responsible Organization

- InterSystems employees can change Responsible Organization.
- Click advanced reassign in reassign dialogue.
  - Changes Responsible Organization field from text field to drop-down menu.
- Select Responsible Organization.
- Select new owner.



Quiz: Reassign a CCR

Question:

Only a CCR's owner can reassign it to another person. True or False?

Answer:

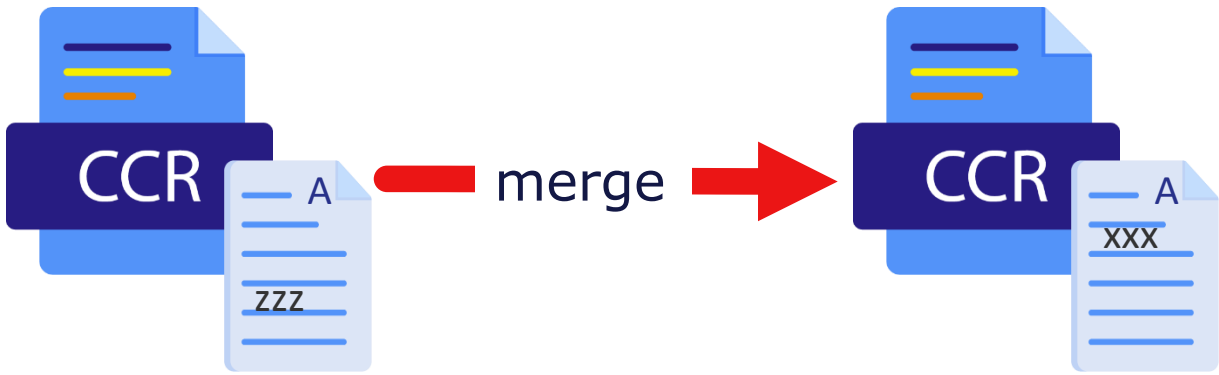
False.

Any user from the current responsible organization can reassign a CCR at any time.

An InterSystems employee can change the responsible organization and pick a new owner from that organization at any time.

Transition: merge

- Merging CCRs combines two or more changes into a single change.
- Moves CCR into MERGED phase and Merged state.
  - An endpoint phase and state.

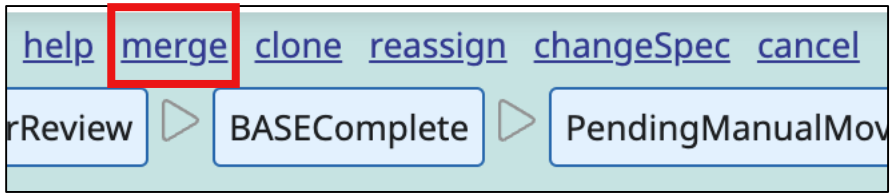


Transition: merge (cont.)

- Merging two CCRs will:
  - Append all fields from the source (aka “Merged From”) CCR to the target (aka “Merged To”) CCR.
  - Associate items in Perforce for the source CCR with the target CCR.
  - Create pointers between the source and target CCRs.
  - Transition the source CCR to a terminal “Merged” State.

Transition: merge (cont.)

- ‘merge’ link is at the top of every active CCR.



- A CCR can only be ‘merged’ into another CCR if
  - Both CCRs are in the same state.
  - Both CCRs are against the same System.
- Merges cannot be undone.

Quiz: Merge Restrictions

Question:

What requirements exist for two CCRs to be merged? (select all that apply)

A. Both CCRs have the same owner.

B. Both CCRs are for the same organization.

C. Both CCRs are against the same System.

D. Both CCRs are in the same CCR Tier (0/1/2).

E. Both CCRs are in the same State.

Quiz: Merge Restrictions (cont.)

Answer:

B. Both CCRs are for the same organization.

C. Both CCRs are against the same System.

E. Both CCRs are in the same State.

CCRs must be same State so neither skips a State; they must be same System to keep Perforce items in same Branch (same System implies same Org).

Quiz: Undoing a Merge

Question:

If a ‘merge’ was performed in error, InterSystems Support can assist in ‘unmerging’ the CCRs in question to return them to their original state. True or False?

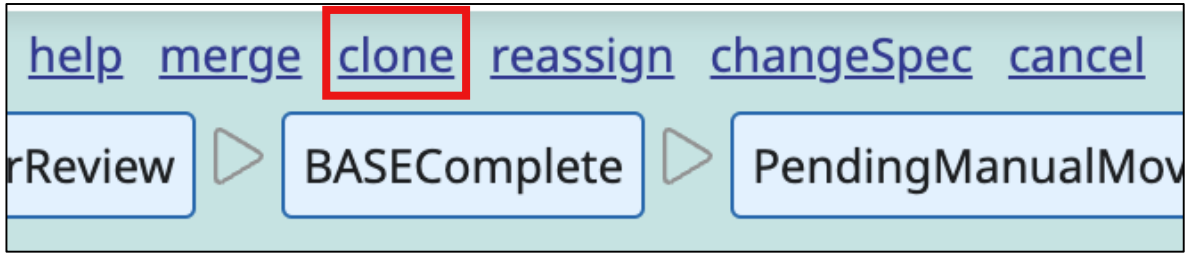
Answer:

False.

Merging CCRs is a non-reversible action.

Transition: clone

- Clone transition link at top of every CCR.
- Used instead of create transition.
- Cloning duplicates reusable content to create new CCR.
  - Automatic reuse of the Description, Testing Plan, Implementation Plan, etc.



Transition: clone (cont.)

- New CCR in In_Base state after clone transition.
- Helpful when a change needs to be repeated or reused.
  - Created for same System (‘repeated’ change) or against different System (‘reused’ change).
- User can integrate Perforce items from source CCR into BASE branch for cloned CCR.
  - Tier 1 or Tier 2 CCRs only.

Quiz: Cloning Timing

Question:

At what point during the workflow can a CCR be cloned?

A. Only during the BASE phase.

B. During any state in which the CCR is still considered ‘Active.’

C. Only after the CCR has been moved to closed.

D. At any time.

Quiz: Cloning Timing

Answer:

D. At any time.

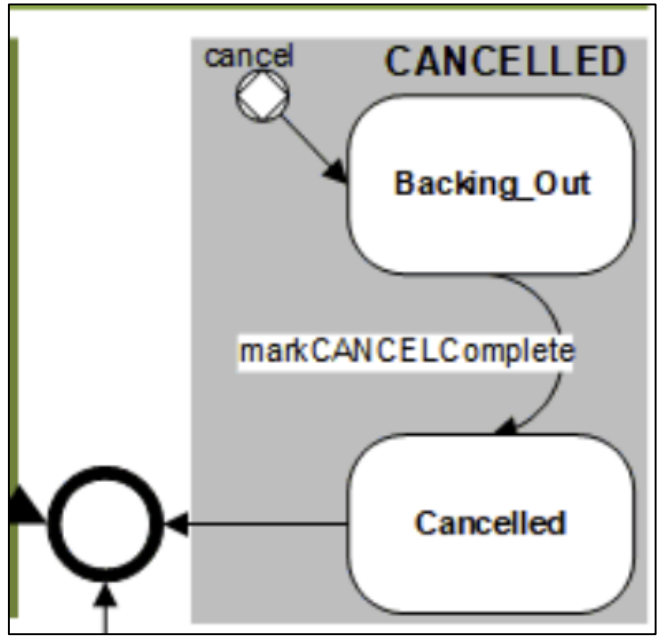
Of course, it may be more useful to clone a CCR which has been progressed further along its workflow. However, you can clone a CCR at any time in the creation workflow.

Transition: cancel

- Used when change no longer needed.
  - Never use to resolve CCR progression errors!
- Completely backout change from all environments according to backout plan.

Transition: cancel (cont.)

- Initiates workflow to cancel CCR.
  - Moves CCR to Backing_Out state in CANCELLED phase.
  - Once backout plan completed, perform markCANCELComplete.
    - Moves CCR to endpoint Cancelled state.
    - Makes clear changes successfully backed out.



Quiz: cancel

Question:

cancel is only necessary for CCRs past BASE phase. True or False?

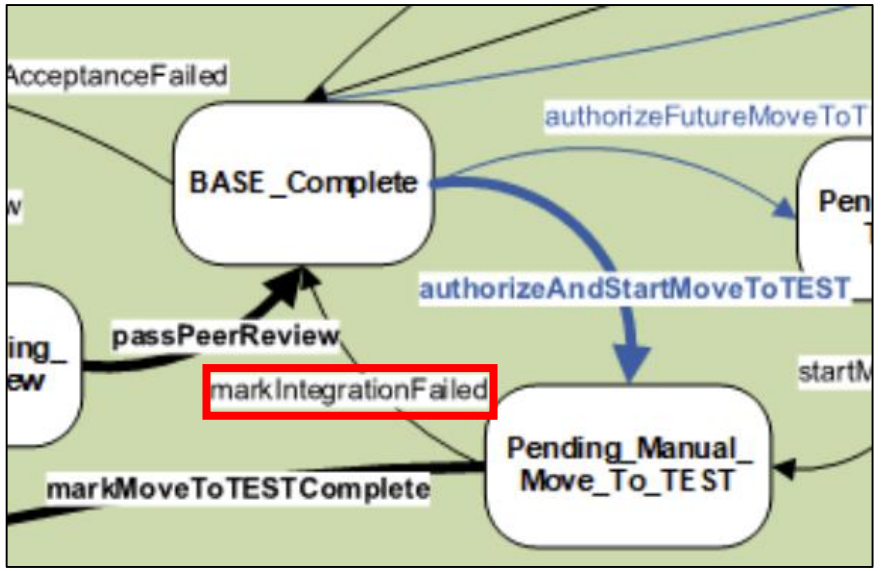
Answer:

False.

Always CCRs when necessary. Also, make sure to fully back out the CCR even if changes only made in BASE. Abandoned CCRs will cause crises.

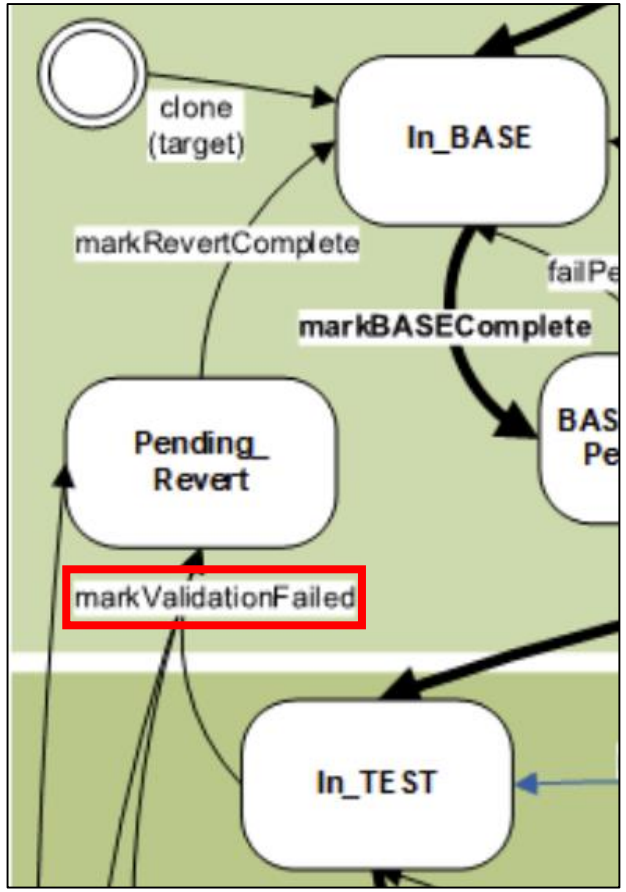
Transition: markIntegrationFailed

- Only for CCRs:
  - In Pending_Manual_Move_To_XXXX.
  - No submitted changes in next Phase.
  - No ongoing Perforce activity.
- Returns CCR to prior state.
- Use cases:
  - Enables best practice of short-lived Pending_Manual_Move_To_XXXX states.
  - Easier resolution of circular conflicts.
  - Enable retriggering automatic integration, when/if appropriate.



Transition: markValidationFailed

- Use for catastrophic failure of change in TEST / UAT / LIVE.
- markValidationFailed workflow:
  - Moves CCR to Pending_Revert state.
  - Follow backout plan to fully backout and then restore changes to BASE.
  - Perform markRevertComplete to transition to In_BASE.

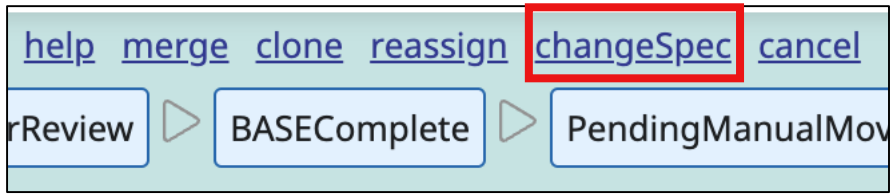


Revert

- Only for CCRs in Closed state.
- Used to reopen CCR and revert to In_BASE.
- Revert workflow:
  - Moves CCR to Pending_Revert state.
  - Fully backout changes, optionally restoring to BASE.
  - Perform markRevertComplete to transition CCR to In_BASE.
  - If appropriate, cancel CCR.

Transition: changeSpec

- ‘changeSpec’ transition link is at the top of every active CCR beyond In_PREP state.



- Used when need to spend time redefining the specification for a change.
  - Should not be In_BASE state because won’t be making changes for significant period of time.
  - Maintains history of change in specification by using same CCR, rather than cancelling.

Transition: changeSpec (cont.)

- Initiates workflow to return CCR to In_PREP state.
  - changeSpec moves CCR to Pending_Full_Revert state.
  - Revert all changes made in CCR progress so far.
  - After all changes reverted, perform markRevertComplete transition.
    - Moves to Pending_Spec_Rework.

Quiz: changeSpec

Question:

What is purpose of changeSpec?

A. Return active CCR to In_PREP to be able to modify backout plan.
B. Return active CCR to In_PREP to be able to modify testing plan.
C. Return active CCR to In_PREP while redefining the specification with customer.
D. All of the above.

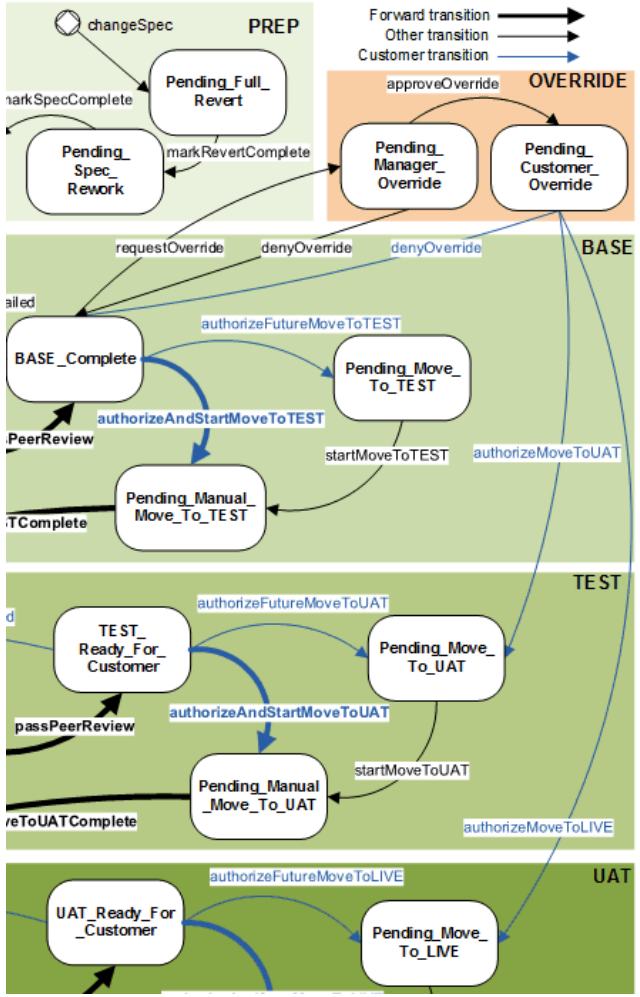
Quiz: changeSpec (cont.)

Answer:

C. Return active CCR to In_PREP while redefining the specification with customer.

You can modify the backout plan and testing plan at any point for an active CCR.

Skipping TEST and UAT Environments



Transition: requestOverride

- Optional transition for BASE_Complete state.
- Used to skip making changes to TEST and/or UAT.
- Only for Tier 0 CCRs.
  - Skipping branches for Tier 1 or Tier 2 will cause integration problems.

requestOverride Workflow

- Moves CCR to Pending_Manager_Override state in the OVERRIDE phase.
- CCR assigned to:
  - Primary architect, if defined.
  - Secondary architect, if primary architect made change.
  - User's manager if no primary or secondary architect.
  - User that performed transition if no manager defined.
- Architect/manager has 2 options:
  - denyOverride, returning CCR to BASE_Complete state.
  - approveOverride, moving CCR to Pending_Customer_Override state.

requestOverride Workflow (cont.)

- If approved by architect or manager, customer has 2 to 3 options, depending on system architecture:
  - denyOverride, returning CCR to BASE_Complete state.
  - If UAT environment exists: authorizeMoveToUAT, moving CCR to Pending_Move_To_UAT state.
  - authorizeMoveToLIVE, moving CCR to Pending_Move_To_LIVE state.

Quiz: requestOverride

Question:

When is it okay to use requestOverride for a Tier 1 CCR?

A. For emergency changes.

B. For standard changes.

C. For normal changes.

D. Never.

Quiz: requestOverride (cont.)

Answer:

D. Never.

Tier 1 CCR’s involve code in source control. Having CCR controlled code in BASE and LIVE but not TEST will cause issues down the road.

Do Exercise ICC330-2

Summary

- What are the key points for this module?