



INTERSYSTEMS LEARNING SERVICES

InterSystems Change Control



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ICC 330: CCR Tier 0 – Auxiliary Tools and Transitions



Objectives

- Demonstrate how ownership of a CCR can change between users or between organizations.
- Configure peer review routing rules.
- Identify peer review models and workflow strategies.
- Configure peer review documents.



Objectives (cont.)

- Explain how to perform and use cases for additional transitions, including:
 - Reassign.
 - Merge.
 - Clone.
 - Cancel.
 - 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.

Next Peer Reviewer * 

Sam Schafer



Transition Notes 



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.

☐ **Bypass Remaining Peer Reviews** ?

Transition Notes ?



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.

The screenshot shows a user interface for assigning architects. On the right, the 'Architect Controls' section has two rows: 'Primary Architect(s)' with a pencil icon (highlighted by a red box) and 'No Architect Assigned', and 'Secondary Architect(s)' with a pencil icon and 'No Architect Assigned'. A modal dialog box titled 'Assign Architect:' is open in the foreground. It contains three fields: 'Type:' with a dropdown menu showing 'Primary', 'Organization:' with a dropdown arrow, and 'Name:' with a text input field. At the bottom of the dialog are 'Cancel' and 'Submit' buttons.






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."

Default Peer Reviewer
student02

☒ Display FAQ Alerts

☒ Beta Tester 

Default Peer Review Doc  

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.



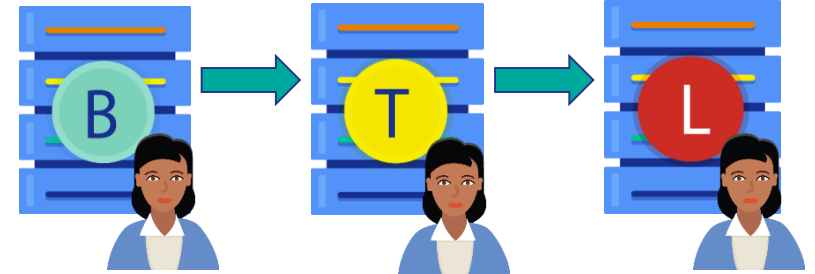
Peer Review Routing (cont.)

- 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.



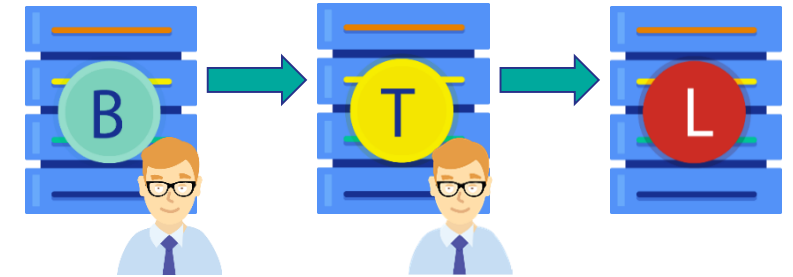
Peer Review Workflow Strategies

- 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).



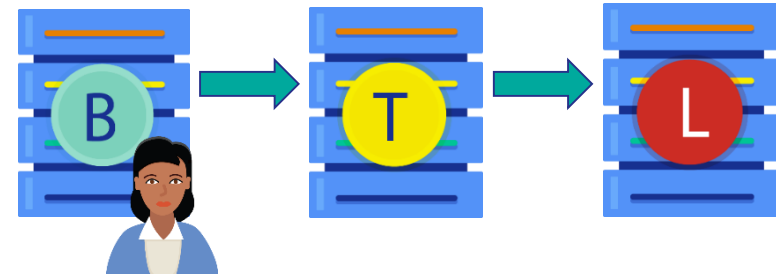
Peer Review Workflow Strategies (cont.)

- 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.



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.)

Peer Review Checklist Document

Peer Review Document

Demo

- Title and Description clearly communicate change
- Appropriate links to other CCRs
- Modified Items field covers all changes described in Implementation Plan field
- All impacted areas identified
- Appropriate Window Required for Move
- Implementation Plan and Testing Plan thorough and complete
- Screenshots, if appropriate, in Testing Steps Taken field

POWERED BY TINY

Perform Transition passPeerReview

BASE_Pending_Peer_Review

passPeerReview

BASEComplete



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.



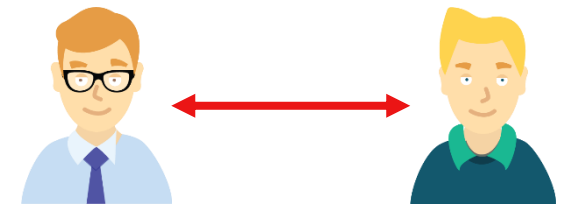
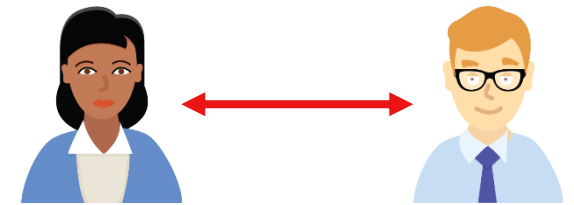
Default Peer Review Documents

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



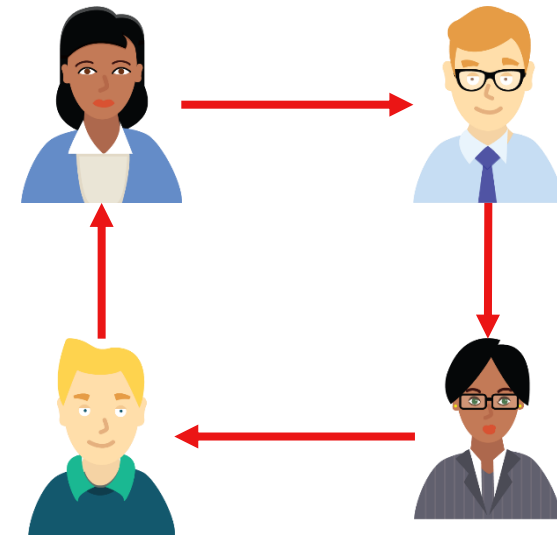
Peer Review Models

- 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.



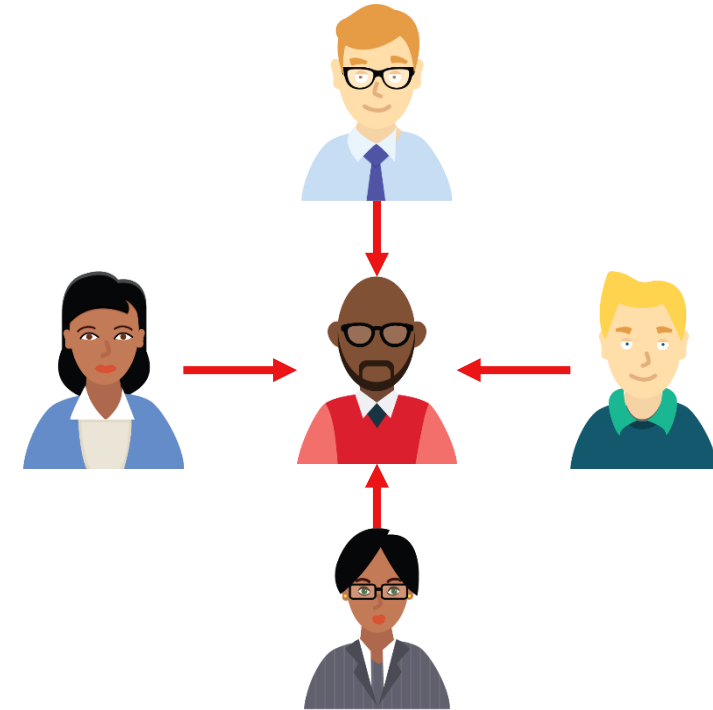
Peer Review Models (cont.)

- 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.



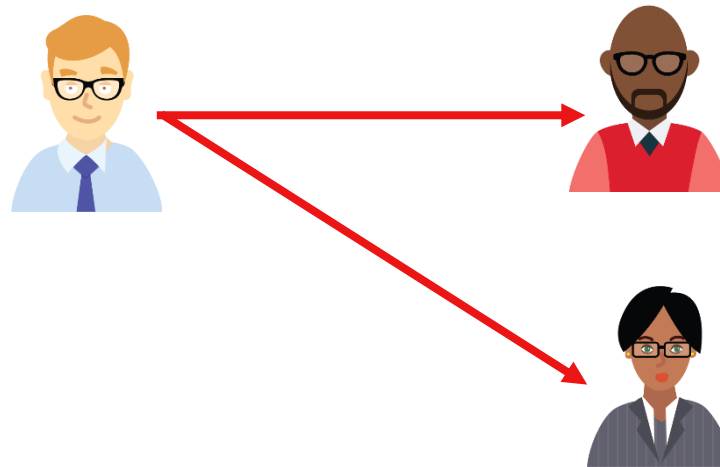
Peer Review Models (cont.)

- 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.



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.



Quiz: Peer Review Models

Question:

Which peer review model should be used when:

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

A. Peer Programming.

B. Mentor/Mentee.

C. Round Robin.

D. Hub and Spoke.



Quiz: Peer Review Models

Answer:

D. Hub and spoke.

Define the same default peer reviewer for everyone on the team so all peer reviews for that team are centralized.



Do Exercise ICC330-1

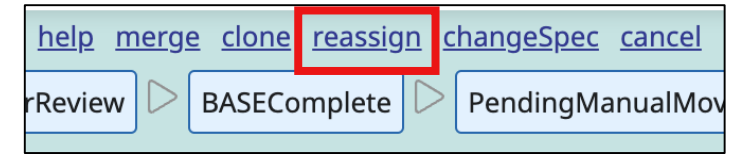


Part 3: Additional Transitions



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.



Perform Transition reassign

In_TEST

reassign

[return]

Description
This action will reassign this CCR to another resource; this resource can only be someone within the same organization.

Responsible Organization* ?
InterSystems Corporation (ISCX)

Owner* ? [Assign to Me](#)

Rose, Shane

Transition Notes ?



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.

Perform Transition reassign

Pending_Manual_Move_To_TEST

reassign

[return]

Description
This action will reassign this CCR to another resource; this resource can only be someone within the same organization.

Responsible Organization* ? [Advanced Reassign](#)

InterSystems Corporation (ISCX)



Quiz: Reassign a CCR

Question:

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

Answer:

False.

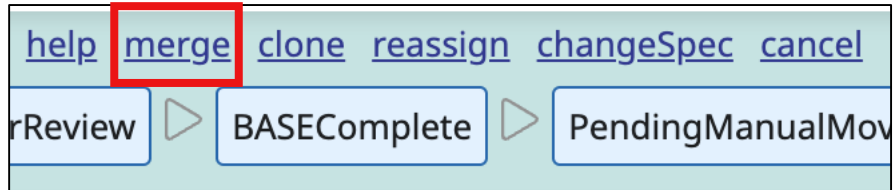
Any user from the current responsible organization can reassign a CCR at any time.

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



Transition: merge

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



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

Transition: merge (cont.)

- 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.



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 any 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.



Merge Use-Cases

- Catch-up CCR.
 - A CCR has progressed to TEST or UAT and a minor change is needed.
 - A “catch-up CCR” is created to capture the minor change and its testing.
 - Once the 2nd CCR catches up it is merged into the original CCR.



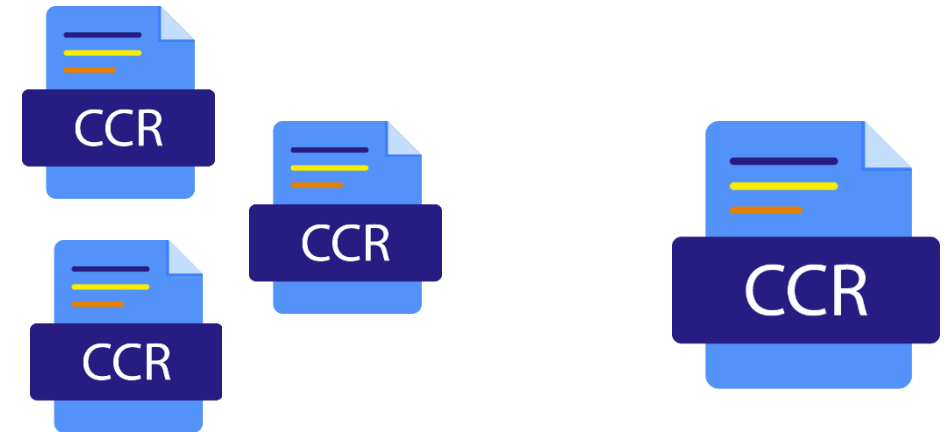
Merge Use-cases (cont.)

- Circular dependency.
 - CCR A has an integration conflict with CCR B, which has an integration conflict with CCR A.
 - Merging A and B will resolve the conflicts and allow the merged CCR to move forward.
- Overlapping CCRs.
 - Two CCRs are impacting the same area/functionality and it makes sense to progress and test them as a single change.
 - Merging the two may save time and streamline the process.



Group Merge

- CCR also supports 'many:1' merges, aka a Group Merge:
 - Allows many smaller pieces in large projects to be combined into a single change.
 - Concatenated CCR fields, association of Perforce changes, and 'Source' CCRs set to 'Merged.'
 - Available through the Group Details page or the System Details page.



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.
 - Cancelling a CCR because of errors and creating new one solves nothing!
 - Not used to resolve errors such as merge conflict!
- 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 transition to move to Cancelled state.
 - Makes clear that changes were successfully backed out upon reviewing CCR of System.
 - Cancelled is an endpoint state.



Quiz: cancel

Question:

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

Answer:

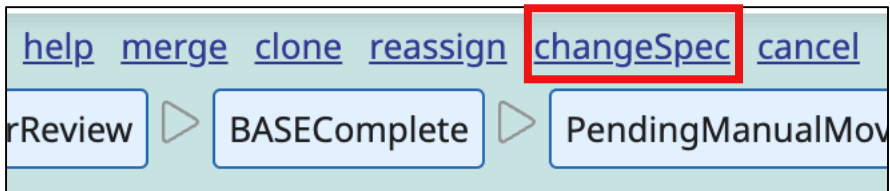
False.

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: 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.)

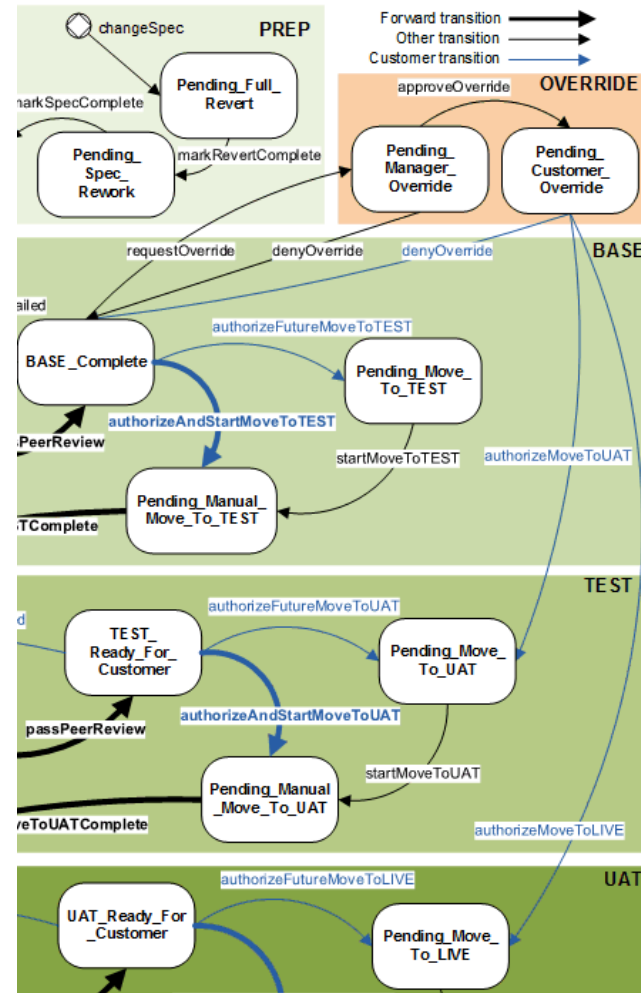
Answer:

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?

