



INTERSYSTEMS LEARNING SERVICES

InterSystems Change Control



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ICC 610: CCR Tier 2 – Usage Basics



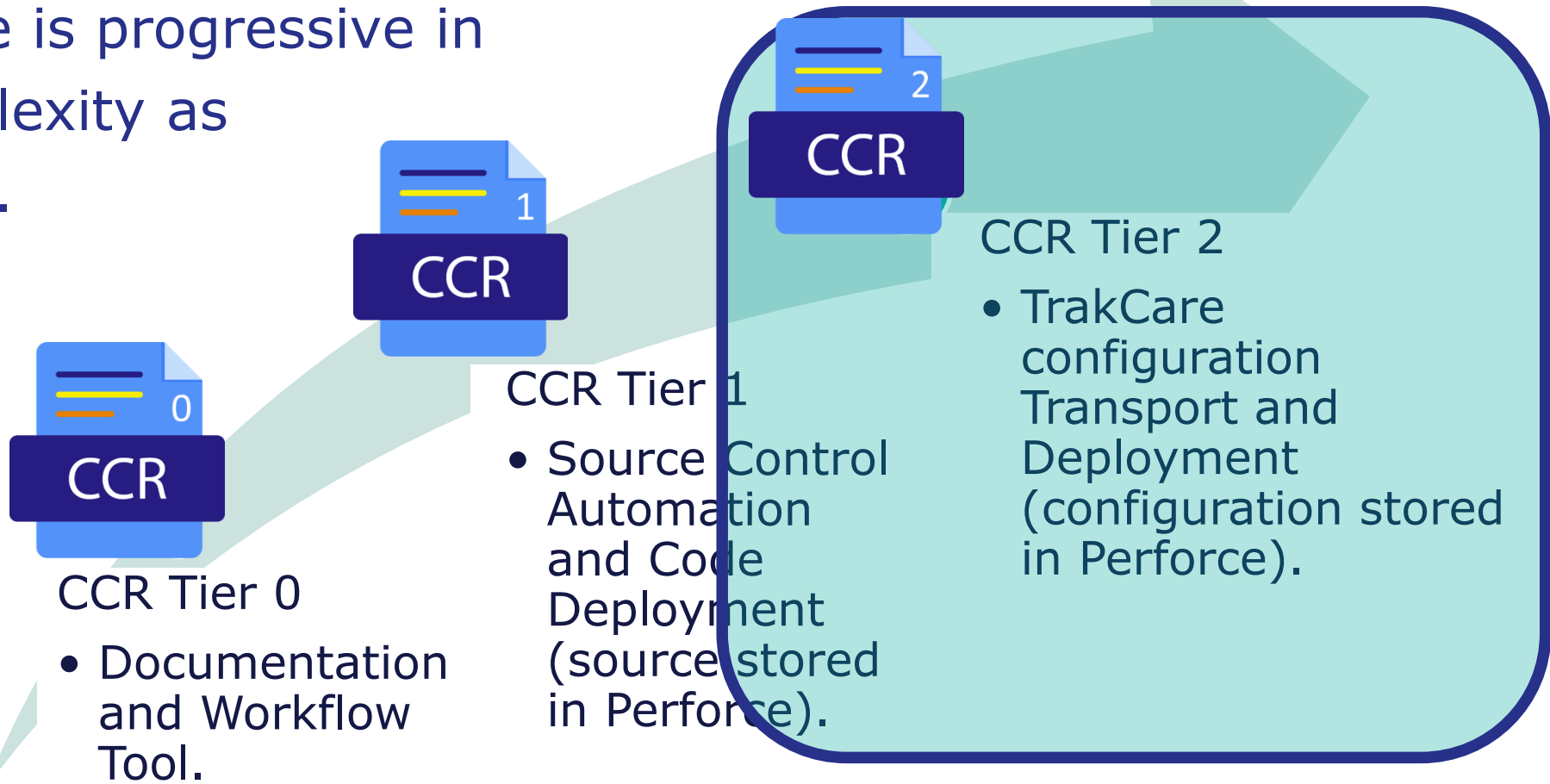
Objectives

- Configure a TrakCare environment for change control.
- Create Tier 2 CCR.
- Progress basic Tier 2 CCR through BASE, TEST, LIVE workflow.



Review: CCR Usage Tiers

- Tiered usage is progressive in terms of complexity as well as benefit.



This series of courses focuses on CCR Tier 2



CCR & TrakCare (CCR Tier 2)

- Can use CCR to track all TrakCare configuration changes, such as:
 - Layouts.
 - Security groups.
 - Questionnaires.
 - Code table changes.
- CCR not used for transactional data such as patient data.
- Use separate CCR disabled environment as playground for experimental changes.
 - Use BASE for changes that you intend to progress.

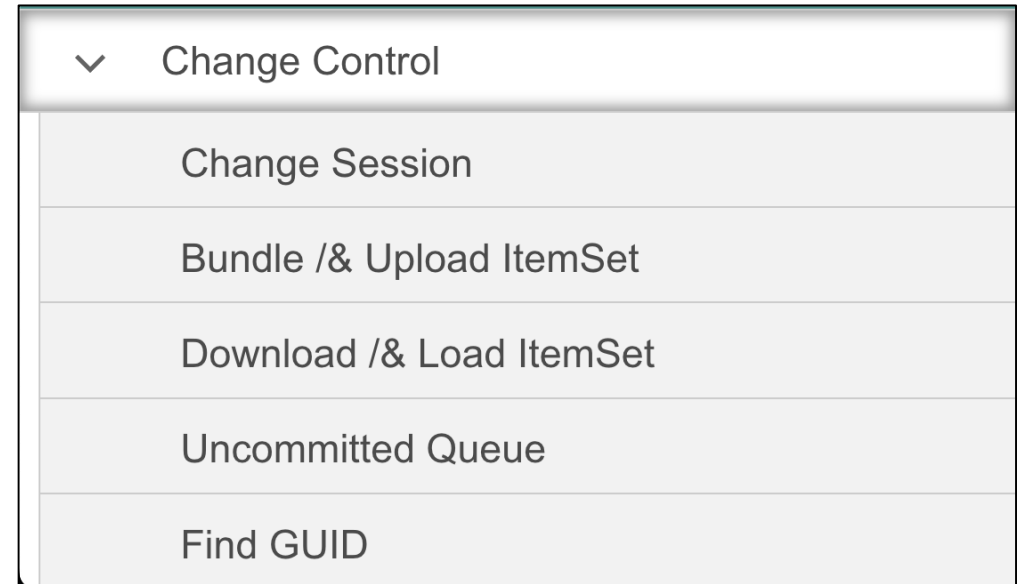


Part 1: Change Control Configuration



Change Control Submenu

- CCR functionality available using Change Control submenu.
 - Tools > Change Control.
- Depending on privileges, menu links to:
 - Change Session.
 - Bundle & Upload ItemSet.
 - Download & Load ItemSet.
 - Recreate ItemSet.
 - Find GUID.
 - Configure.



TrakCare Exclusion Lists

- Exclusion lists disable change control for specific configuration.
 - Tier 2 CCRs will NEVER be used for these items.
 - Examples may include clinics, users, and local printers.
 - Used when:
 - Need to change outside of CCR process.
 - Strict CCR procedure would not permit timely and efficient changes.
- Exclusion list specific to each TrakCare environment.



TrakCare Exclusion Lists (cont.)

- No class should be added to exclusion list without careful consideration.
 - All related classes must also be on exclusion list.
 - Consult experts when considering changes to exclusion list.



Possible TrakCare Exclusion List

- Please contact InterSystems for the most up to date exclusion list.

User.ARCItemKeywords	User.CTZip	User.PACNonGovOrg
epr.CannedText	User.CTZipKeywords	User.PACNonGovOrgKeywords
User.ARCItemKeywords	User.INCSysCounter	User.PACRefDoctorClinic
User.CFSM	User.LBCSystemCounter	User.PACRefDoctorKeywords
User.CFSystemFileDefinition	User.LBCTestSetRevisionReagent	User.PACWardAvailRestriction
User.CFSystemFilePath	User.MHCAgent	User.RBResource
User.CTCareProv (Maybe)	User.MRCICDDx	User.SSHL7
User.CTCity	User.MRCICDkeyw	User.SSUser
User.CTCityHCA	User.ORCOperation	websys.Configuration
User.CTHealthCareArea	User.PACClinic	websys.Print
User.CTHealthCareRegion	User.PACCounterType	websys.Printer
User.CTProvince	User.PACInstrText	websys.PrintService



Possible Pharmacy Exclusion List

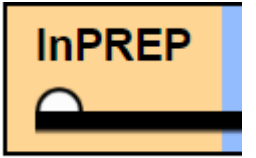
- Please contact InterSystems for the most up to date exclusion list.

User.INCItm	User.INCItmLcDailyTotal	User.INCSterileCategory
User.INCItmBat	User.INCItmLoc	User.INCSterileItems
User.INCItmHosp	User.INCItmRcp	User.INCSterilePriority
User.INCItmHospVen	User.INCItmRecIngr	User.INCStorageBinGroup
User.INCItmHospVenCommItems	User.INCItmStockLocations	User.INCStorageBinType
User.INCItmHospVenDiscount	User.INCItmVen	User.INCStorageBinTypeStockItem
User.INCItmLcBt	User.INCItmVenCommItems	User.INCSysCounter
User.INCItmLcBtBin	User.INCItmVenDiscount	



Part 2: CCR PREP Phase





Tier 2 Considerations: In_PREP

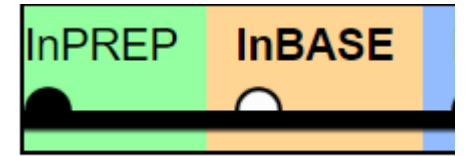
- Confirm Tier field set to “2 – TrakCare Change Control”.
- Modified Items: Usually matches list of submitted changes.
- Perform markPREPComplete transition before checking out files.
 - Only make changes while in In_BASE state.



Part 3: CCR BASE Phase: Making Changes



Tier 2 Considerations: In_BASE



- In order to progress, record must have either:
 - Changelist.
 - Uncommitted ItemSet.
- Implementation Plan and Backout Plan have default values
 - Only change if manual steps needed.



Part 4: Change Session Usage



Change Sessions

- Change session marks changed items with CCR ID.
 - Simplifies identification of changed items.
- Start change session prior to making configuration changes.
- Change session terminates:
 - When you log out of TrakCare.
 - After upload changes to CCR (optional flag).
 - When click termination button on Change Session Menu.



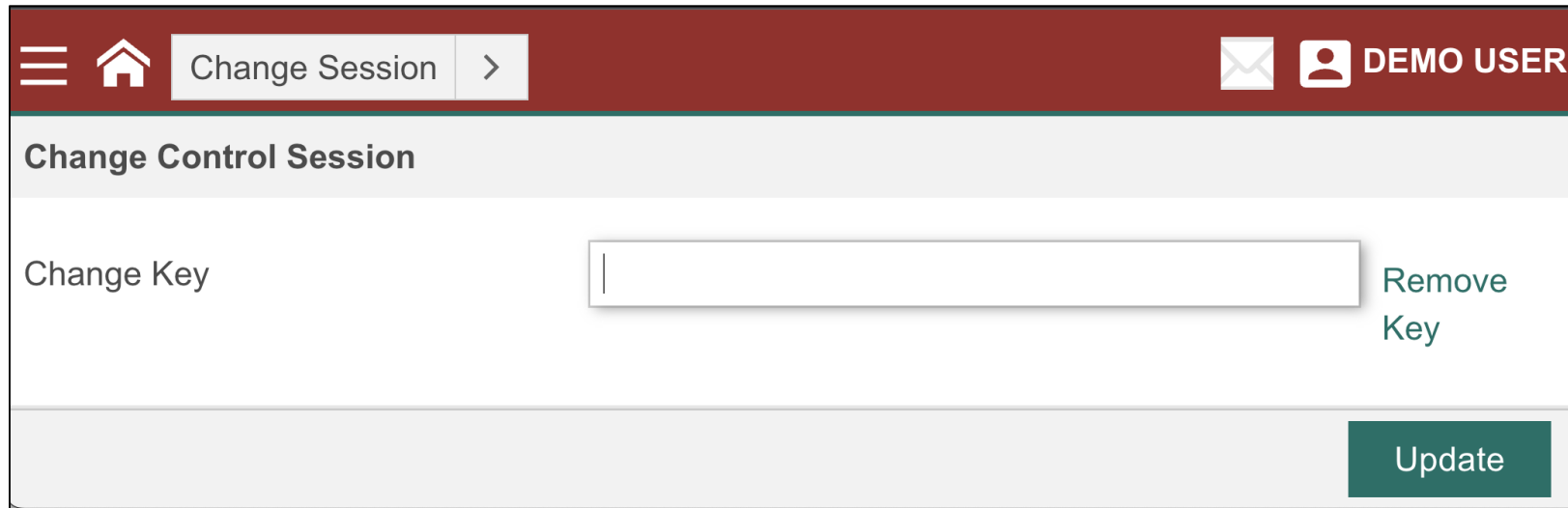
Change Sessions (cont.)

- When change session active, all TrakCare Application changes are:
 - Exported via TCC to XML documents.
 - Added to the uncommitted queue.
 - Checked out to current user.
 - No one else can edit item.



How To: Open a Change Session

1. CCR should already exist and be in In_BASE state.
2. Tools > Change Control > Change Session.
3. Enter CCR ID for Change Key.
4. Click Update.

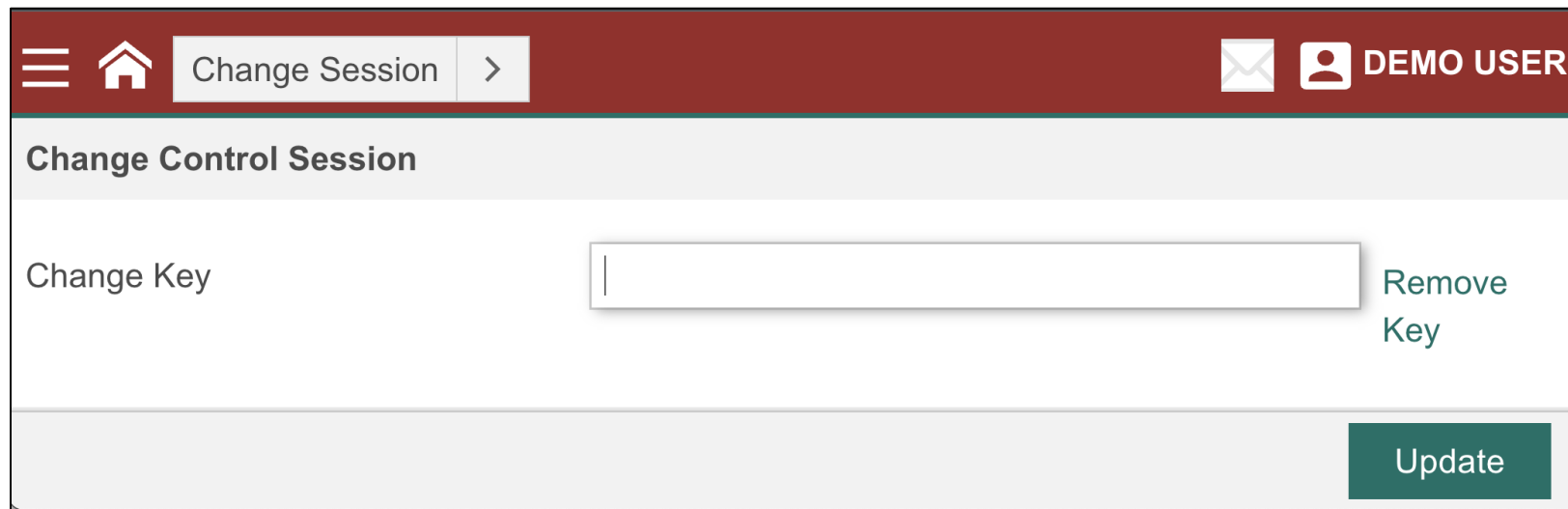


The screenshot shows a web application interface for managing change sessions. At the top, there is a dark red navigation bar with a home icon, a 'Change Session' breadcrumb, and a user profile for 'DEMO USER'. Below this is a light gray header with the title 'Change Control Session'. The main content area features a 'Change Key' label, a text input field, and a 'Remove Key' link. At the bottom right, there is a prominent green 'Update' button.



How To: Manually End Change Session

1. Tools > Change Control > Change Session.
2. Click Remove Key.



The screenshot shows the 'Change Session' page in the InterSystems Change Control application. The page has a dark red header with a home icon, a 'Change Session' breadcrumb, a mail icon, and a user profile icon labeled 'DEMO USER'. Below the header is a light gray section titled 'Change Control Session'. The main content area contains a 'Change Key' label, an empty text input field, and a 'Remove Key' button. At the bottom right of the page is a green 'Update' button.



Exercise ICC610-1 through ICC610-2

Create a CCR and open a change session



Quiz: Change Session

Question:

What is the purpose of a change session? Select all that apply.

- A. To ensure that a CCR has been created for the configuration that is taking place.
- B. To prevent accidental changes from being made in the environment that can't be accounted for.
- C. To automate the tracking of changes made for a specific CCR and make it easier to upload those changes to CCR once the work is complete.



Quiz: Change Session

Answer:

All of the above.



Part 5: TrakCare Bundle & Upload ItemSet



How To: Bundle & Upload ItemSet

- Generate and copy access token.
 - From Perforce Details section of your CCR, click Generate Token.
- Complete Bundle and Upload form in TrakCare:
 - Tools > Change Control > Bundle & Upload ItemSet.
 - Select changed items.
 - Enter CCR ID.
 - Paste access token.
 - Select End Change Session.
- Click Upload.



Bundle & Upload ItemSet Restrictions

- CCR validates ItemSet against following restrictions.
 - CCR state must either:
 - In_BASE.
 - BASE_Pending_Peer_Review.
 - System for CCR record and TrakCare environment must match.
- Returns error after clicking upload button and ItemSet fails to upload.
- Solve issue and redo bundle and upload process.

```
Bundle/Upload ItemSet
-----
Processing list of changes to Bundle into an ItemSet
    Including /User/CTHospital/test 0816C8DD-7853-4C52-955C-532C
    1 changed items selected for inclusion
=====
Creating new Itemset ...

Start-Level-----
LOG_BEGIN: Create() at 2020-07-06 11:29:07

Confirming that ISCU0219 is in a State that will accept ItemSets...
    Org = ISCU
    Sys = TRAK
    CCR = ISCU0219
ERROR #5001: Upload not allowed, record is in state In_PREP
LOG_END: Create() at 2020-07-06 11:29:07
--End-Level-----

ERROR #5001: Upload not allowed, record is in state In_PREP
=====
ItemSet Summary:
    ItemSet Created:
    ItemSet File:
    Number of Items:      1
    Upload Status:
```

[View CCR](#)



Verify Submitted Changes

- After submit changes, always verify correct items listed in CCR.
 - Under Performe Details of CCR, click Submitted Changes tab.

Perforce Details logged into Perforce as sschafer

Perforce Branch ⓘ //custom_ccrs/us/BEST/INTEROP2020/
Perforce Job ⓘ BEST0004 **Access Token** ⓘ 6DHnMd1MC1

Transport Log [View](#) [Download](#)

Itemset Details **Submitted Changes (1)** **Create Itemset** **Perforce Integration** **Perforce Backout**

Changelist 818		Check in: sschafer	2023-08-22 11:17:28 -04:00
Autosubmit to Perforce from ItemSet-BEST0004_BASE_icc-base_5.xml; ItemSet originally created by sschafer on icc-base at 2023-08-22 11:17:25			
	edit	//custom_ccrs/us/BEST/INTEROP2020/BASE/cls/PersonDetails/ClassList.xml#2	
	add	//custom_ccrs/us/BEST/INTEROP2020/BASE/cls/PersonDetails/Example.xml#1	



Quiz: Bundle & Upload ItemSet

Question:

What happens when items are bundled and uploaded? Select all that apply.

- A. They are removed from the Uncommitted Queue.
- B. Changes are integrated to the TEST branch of Perforce.
- C. They become available for others to edit.
- D. They are put into an ItemSet and sent to the CCR server.
- E. The CCR server unpacks them from the ItemSet and checks them into Perforce.



Quiz: Bundle & Upload ItemSet (cont.)

Answer:

- A. They are removed from the Uncommitted Queue.
- C. They become available for others to edit.
- D. They are put into an ItemSet and sent to the CCR server.
- E. The CCR server unpacks them from the ItemSet and checks them into Perforce.

Note that E only occurs if a Perforce user does the upload; otherwise, the ItemSet sits on the CCR server in an uncommitted queue and are checked into Perforce by the next upload performed by a Perforce user.



Part 6: Predicting GUID Loads



Configuration Dependencies

- Many configuration items point to other configuration.
 - Example: Locations point to Hospitals.
- In CCR process, reference done with GUID.
- On deployment of change, all configuration referenced must exist.
 - Therefore, all GUIDs for configuration referenced must exist.



GUID Predictions

- Verifies necessary GUIDs exist in target environment.
- TrakCare GUID Prediction section of CCR displayed when:
 - At least 1 item submitted.
 - At least 1 GUID service reachable from browser.
- Always predict GUID loads before performing authorizeAndStartMoveToXXXX

TrakCare GUID Prediction ▼

BASE environment at https://icc.base.intersystems.com/trakcare/base/web/TC.ChangeControl.API.cls	Predict GUID Load
TEST environment at https://icc.test.intersystems.com/trakcare/test/web/TC.ChangeControl.API.cls	Predict GUID Load



GUID Prediction Messages

- See ICC615 for how to resolve missing GUIDs.

TrakCare GUID Prediction


BASE environment at <https://honeyeater.iscinternal.com/trakcare/test-base/app/web/TC.ChangeControl.API.cls> Predict GUID Load

All required GUIDs were found on the BASE server.

TEST environment at <http://echidna/t2019/test/app/web/TC.ChangeControl.API.cls> Predict GUID Load

LIVE environment at <https://honeyeater.iscinternal.com/trakcare/test-live/app/web/TC.ChangeControl.API.cls> Predict GUID Load

Some GUIDs required by this CCR are missing from the LIVE environment.

 71D58DC2-0268-4415-887F-4329D4A7D67A



Quiz: GUID Predictions

Question:

How can a user determine whether missing GUID errors are likely to occur during an ItemSet load into the TEST environment?

- A. Upon transitioning into BASE_Complete state, CCR will perform a preview check for missing GUIDs in TEST.
 - B. The user must click the Predict GUID Load button for TEST after uploading all changes to their CCR.
 - C. After the ItemSet has been created, the user must click Predict ItemSet Load to see any anticipated errors exist.
-



Quiz: GUID Predictions (cont.)

Answer:

B. The user must click the Predict GUID Load button for TEST after uploading all changes to their CCR.

A is wrong because CCR only checks for merge conflicts.

C is wrong because a Predict ItemSet Load button does not exist.



Exercise ICC610-3

Upload Changes; Run GUID Predictions; Peer Review



Part 7: TrakCare ItemSet Deployment



Deploy ItemSet to TrakCare

- 3 options:
 - Deploy links from CCR.
 - Easiest, least error prone, and most common.
 - Download and load from TrakCare environment UI.
 - Download from TrakCare Terminal.



How To: Use CCR ItemSet Deploy Links

1. Log into TrakCare target environment.
2. Click deploy to XXXX link.



How To: Download & Load Itemset Via TrakCare

1. Open your CCR.
2. Ensure there is an ItemSet ready to download and marked as undeployed.
3. Generate and copy access token.



How To: Download & Load Itemset Via TrakCare (cont.)

4. Log into target TrakCare environment.

5. Go to Tools > Change Control > Download & Load ItemSet.

6. Enter CCR details.

- CCR number.
- Access token.

7. Click List ItemSets.

8. Select the Itemset and click Download.

- All ItemSets for this namespace for this CCR shown.
- Choose ItemSet with most recent TimeStamp if multiple.



Exercise ICC610-4 & ICC610-5

Deploy changes and progress to closed.



Summary

- What are the key points for this module?

