



INTERSYSTEMS LEARNING SERVICES

# InterSystems Change Control



# **InterSystems Change Control**

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# ICC 530: CCR Tier 1 – Interoperability Components



# Overview

- Best practices.
- CCR for interoperability components.
  - Management Portal source control hooks.
  - Studio source control hooks.
  - Items for change control only.
  - Differences between environments.



# Objectives

- Identify subtleties for using change control for interoperability components.
- Identify interoperability components that have source control hooks in the Management Portal.
- Demonstrate how to use Management Portal source control hooks.
- Demonstrate best practices for components without source control hooks in Management Portal.



# Introduction

- Document changes.
  - Always able to document change.
    - Tier 0 CCR.
- Use source control when possible.
  - Tier 1 CCR.
- Goal from product management:
  - Increase range of changes covered by source control.
  - Increase ease of use of source control across the full range of products.



# Best Practices

- Use Tier 0 CCRs when not feasible to maintain item in source control.
- Avoid mapping common items to a central database.
  - No longer best practice.
  - May need to run deployment code in each namespace anyways.
  - Consider using secondary environments instead of mappings.





# Developing Interfaces

- Use iterative process to configure new interfaces.
- Disable interfaces in development.
- Configure by progressing small, discrete CCRs to Closed.
- When interface ready for Go-LIVE, progress CCR enabling finished components.



# Product Versions

- Versions in slides refer to releases for InterSystems IRIS for Health™ and HealthShare® Health Connect.
- HealthShare solutions v2020.1 and v2019.2 powered by v2019.1 InterSystems IRIS for Health.
- HealthShare v2020.2 powered by v2020.1 InterSystems IRIS for Health.
- Solutions powered by InterSystems Caché® and InterSystems Ensemble® will not have features developed for InterSystems IRIS for Health v2019.1+.



# Part 1: CCR for Interoperability Components



# Differences Between Environments

- Some configuration fields for production components differ between environments.
  - File paths.
  - IP addresses.
- Production must be identical to integrate between environments.
  - Cannot make changes to production directly in TEST, UAT, or LIVE.
- Solution is System Default Settings.



# System Default Settings

- System Default Settings allow the same production in each environment to have different settings without changing the code.
- Specify System Default Settings for each environment.
  - Different System Default Settings for BASE, TEST and LIVE.
  - Allows identical production in BASE, TEST and LIVE.
    - Use pool size for LIVE in all environments.
  - Export to /backup subdirectory of source workspace.
    - Add to source control from Studio.



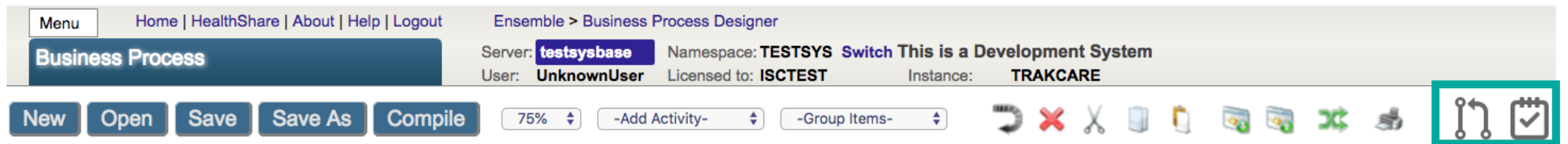
# Source Control Hooks for Interoperability Components

- Not all items have source control hooks.
- Not all items have source control hooks in all locations.
- Possible locations for source control hooks:
  - Studio/Atelier.
  - Management Portal.



# Management Portal Source Control Hooks

- Many pages in Management Portal have embedded hooks.
- Only visible in source control configured namespaces.
- Behavior same as source control menu in Studio/Atelier.
- All items modified using Management Portal hooks automatically imported on ItemSet Deployment.
  - Data Lookup Tables as of February 2019.



# Management Portal Source Control Hooks (cont.)

- Outputs.

- View unread output of control.

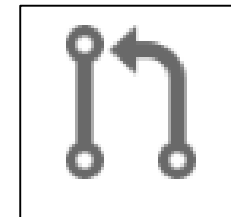


- All source control output has been viewed.



- Commands.

- Add to source control.
- Checkout.
- Undo checkout.
- CCR controls.
- Diff.





# Pages with Hooks

- Production (v2019.4+)
- Data Lookup Tables.
- Business Processes.
- Data Transformations.
- Business Rules.
- Record Maps.
- Complex Record Maps.
- HL7 v2 Custom Schemas (v2019.1+).

<b>Configure »</b>	Production
Build »	Business Partners
View »	Credentials
List »	Schedule Specs
Monitor »	Data Lookup Tables
Manage »	System Default Settings
Interoperate »	Enterprise Systems
Test »	Public-Service Registry
	External-Service Registry
	Message Bank Link

Configure »	Business Processes
<b>Build »</b>	Data Transformations
View »	Business Rules
List »	Record Maps
Monitor »	CSV Record Wizard
Manage »	Complex Record Maps
Interoperate »	
Test »	



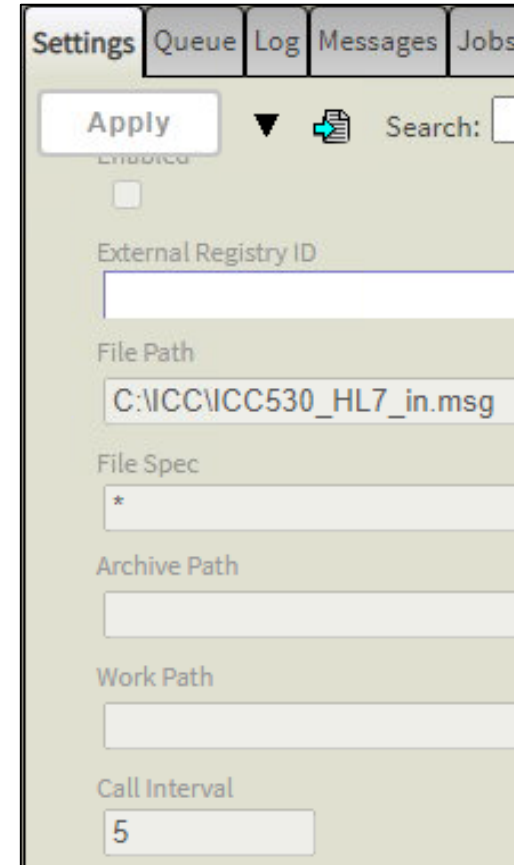
# HL7v2 Schema Editor

- v2019.1+:
  - Has Management Portal hooks.
  - Only visible if privileged to edit a custom schema.
- Pre-v2019.1:
  - Use Studio to edit \*.HL7 files.
    - If not practical, do not include in source control.
  - Management Portal does not honor Studio check out status.
    - Consider locking down page to prevent accidental changes.



# Productions (v2019.4+)


- Use Management Portal hooks.
- Fields greyed out when production read only (pre-v2021.1).
  - Therefore, unable to identify source of value in TEST, UAT, and LIVE.
  - Check out production in BASE environment to see source of setting value.



The screenshot shows the 'Settings' tab of a production configuration page. The page has a navigation bar with tabs for 'Settings', 'Queue', 'Log', 'Messages', and 'Jobs'. Below the navigation bar, there is an 'Apply' button, a dropdown arrow, a document icon, and a search field. The main content area contains several fields, all of which are greyed out, indicating they are read-only. The fields are: 'Enabled' (checkbox), 'External Registry ID' (text box), 'File Path' (text box containing 'C:\ICC\ICC530\_HL7\_in.msg'), 'File Spec' (text box containing '\*'), 'Archive Path' (text box), 'Work Path' (text box), and 'Call Interval' (text box containing '5').



# Productions (v2019.4+): Undo Checkout

- Steps:
  1. Click  > Undo Checkout.
  2. Compile production class in Studio.
  3. Click Update button on Management Portal production page.
- Change not reverted until these 2 additional steps completed!
- Only need to do this 3-step process for productions.
  - Undo Checkout action sufficient for other components with hooks in Portal.

localhost:52773 says

Detected a difference between the Production class definition and the runtime settings that are being used.

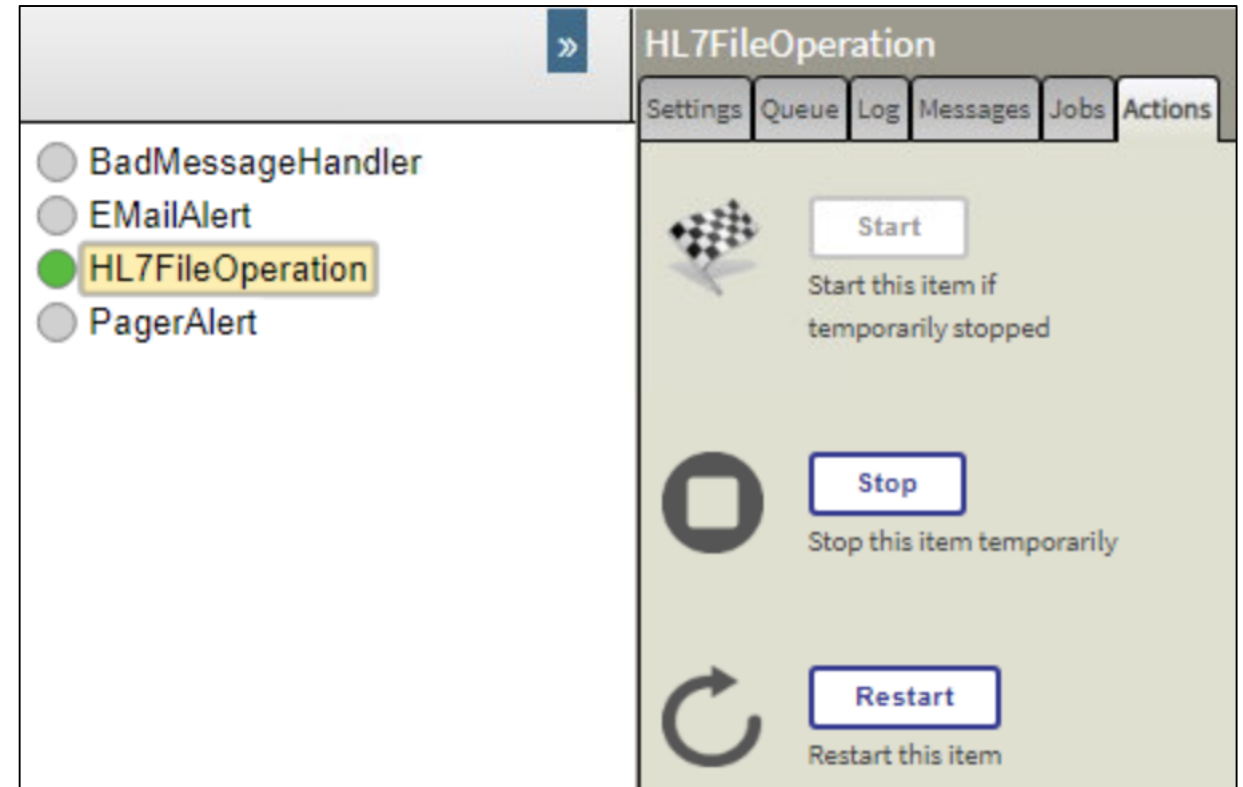
Compiling the Production class will change runtime settings to be the same as the production definition.

OK



# Productions (v2019.4+): Temporarily Start, Stop, Restart

- Normally, double-click component to enable, disable, or restart.
  - Changes production class definition, therefore:
    - Cannot do in TEST/UAT/LIVE.
    - Requires checkout in BASE.
- Able to temporarily stop, start, or restart components.
  - Select component > Actions.
  - Does not require unlocking environment or check out.
  - Cannot temporarily start if disabled.



# No Portal Hooks but Editable in Studio

- Example items:
  - Productions (pre-v2019.4).
  - \*.HL7 files (pre-v2019.1).
  - HealthShare Patient Index Linkage Definitions.
- Use Studio source control hooks.
- Warning: Management Portal pages without hooks do not honor Studio Check Out status.
  - Someone can check out item in Studio and someone else can still edit in Management Portal without checking out.



# No Portal Hooks but Editable in Studio (cont.)

- Example workflow for productions pre-v2019.4:
  1. Checkout production class from Studio.
  2. Modify within Management Portal.
  3. Make modification to production in Studio (such as adding character somewhere).
  4. Compile production.
  5. Undo the change from step 3.
  6. Compile production.
  7. Diff changes to verify exported version accurate.
  8. Bundle and upload production.



# No Portal Hooks, Not Available in Studio, Exportable

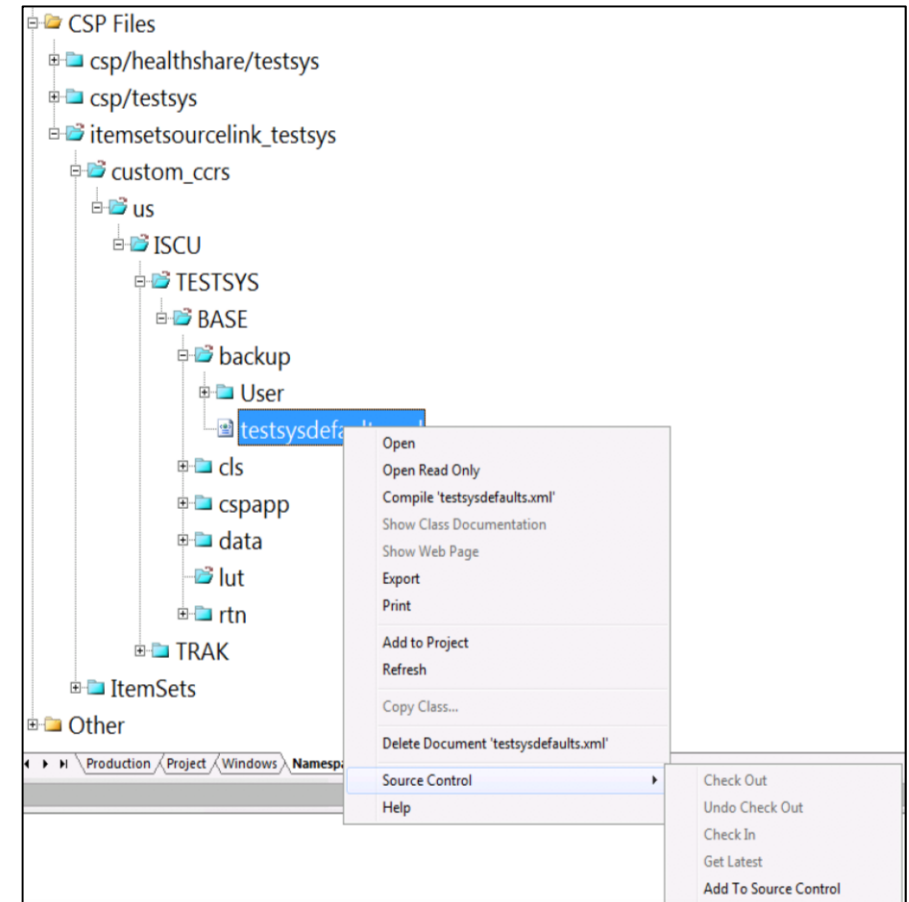
- Example:
  - Business Partners.
  - System Default Settings.
- Export to a subdirectory of source workspace.
  - See ICC420 for special subdirectories.
    - For example, /backup for items that should not be integrated to TEST/UAT/LIVE.
- Add exported file to source control from Studio.





# Add Exported File to Source Control

- File must be exported to folder under source workspace.
- In Studio, from namespace view > CSP Files > itemsetsourcelink\_ *system* > custom\_ccrs > *CountryCode* > *SiteCode* > *System* > BASE > ... > right-click file > Source Control > Add To Source Control > Yes.
- Bundle and upload to a CCR like any other change.



# Quiz: CCR for Interoperability Components

## Question:

Which of the following is recommended for using CCR on InterSystems IRIS v2020.1?

- A. Keep environment specific configuration in production class.
- B. Use System Default Settings.
- C. Always use Tier 1 CCRs.
- D. Use Management Portal hooks for productions.
- E. Map shared code to central database.



# Quiz: CCR for Interoperability Components (cont.)

Answer:

B. Use System Default Settings.

D. Use Management Portal hooks for productions.

Note: Productions in IRIS or Ensemble do not have hooks prior to products built on IRIS v. 2019.4.



# Do Exercise 530-1



# Summary

- What are the key points for this module?

