

FileNet Deployment Manager Team October 21, 2014

Product Maintenance Training (PMT)

FileNet Deployment Manager v5.2.1

Content Platform Engine Assets Support and Other Enhancements





Introduction

Course Overview

- 5.2.1 Content Platform Engine assets migration and deployment:
 - New object types support including workflow system configuration
 - Enhancements to export manifest editor
- Overview of command-line interface (CLI) changes
- Asset deployment in multi-domain environments
- Reassign object stores operation enhancements
- New feature to audit import modifications to destination object store

Target Audience

- Support Teams, Lab Services, Other Development Teams
- Suggested Prerequisites
 - Knowledge of P8 5.2.1 and usage of FileNet Deployment Manager

Presenters

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- Matthew Honkanen
- Dave Keen



Course Objectives

After this course you will be able to:

- Find information in the Knowledge Center that assists with the planning and execution of a FileNet P8-based application deployment as well as how FileNet Deployment Manager manages data (object instances) export/import
- Describe enhancements to P8 5.2.1 FileNet Deployment Manager (FDM) including support for new Content Platform Engine objects
- Build an export manifest for object store objects using a CPE SQL Search and FDM's export manifest editor
- Utilize FDM to build and utilize a deployment package that includes both workflow system configuration and object store assets
- Understand Reassign Object Stores enhancements
- Generate and read an audit report for the modifications that will occur or did occur during an import operation using FDM



Course Roadmap

- → FileNet Deployment Manager enhancements overview
- Integration for workflow system assets
- Export manifest editor new features
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Enhancements General: Improved documentation for migration and deployment

- Additional information to describe overall application migration and deployment model
- Enhanced information for products and assets that use other deployment processes and tools
- Clarified and streamlined procedures for using FileNet Deployment Manager as a part of application migration and deployment

- New information for usage of FileNet Deployment Manager to migrate data (object instances) in addition to application assets
- Examples and tips based on real-life scenarios



Table of Contents

Migrating and deploying applications

Migration and deployment overview

Migration and deployment phases

Data migration

Overview of a migration and deployment process with FileNet Depl

- Deployment planning
- Deployment scenarios
- Deploying assets based on Content Platform Engine
- Deploying assets with FileNet Deployment Manager
 - Defining the deployment environment
 - Prepare data for deployment
 - FileNet P8 asset deployment
- Completing additional system configuration tasks
- Verifying the destination environment
- The FileNet Deployment Manager tool
- FileNet P8 assets

Migrating data with FileNet Deployment Manager

Data migration: Recommendations for export include options

Data migration: Recommendations for import options

Data migration: Recommendations for analyzing migration results





Enhancements General: New object store assets supported

- Background Search Template definitions and supporting constructs
 - Class definitions based on the Background Search base class
 - Class definitions based on the Abstract Search Results base class including subclasses of Background Search Results
 - Instances of Search Function Definition (which is a subclass of Sweep Action)
 - Not search results which are transitory and specific to a particular system
- Sweep management assets enhanced to include custom sweeps
 - Sweep actions
 - Sweep policies
 - Queue sweeps
 - Sweep target class definitions
- IBM Case Manager 5.2.0 assets stored as documents
 - User will not explicitly export/import but instead manages via a solution package
 - FDM augmented in P8 v5.2.0.3 to support new ICM asset types in the solution package



Enhancements General:

New object store assets supported (continued)

- IBM® Content Navigator assets stored as documents
 - Support for ICN 2.0.2 (ICN designed saved searches) released in P8 v5.2.0 and retrofit to P8 v5.1.0.4
 - Support for ICN 2.0.3 (ICN designed entry templates) released in P8
 5.2.1 and retrofit into P8 v5.1.0.5 and v5.2.0.3 IF3
- Email templates (derived from Email Services Extensions add-on)
 - Export and import of other constructs such as the associated sweeps also managed by FDM via support of the sweep management infrastructure



Enhancements General: Mappings, Import Options

- Mapping of advanced storage areas
 - Treated simply as another type of storage area
 - Appears on existing storage areas submap of object store half map and data map
- Mapping of connection points
 - Described later in this presentation
- Import option Transfer workflows after import
 - Released in P8 5.2.0.3
 - If a workflow definition document is current version in the destination environment FDM automatically transfers the workflow definition
- Import option Remove deleted property definitions from class definitions
 - Released in P8 5.2.1 (described later in this presentation)



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Integration of workflow system configuration assets

Export Manifest:

- Add Assets extended to include selection of workflow system configuration data
- Single export manifest can contain both object store assets and workflow system configuration.*
- Single export manifest can handle multiple connection points.*

Deploy Data Set and Deployment package:

- Can contain both object store assets and workflow system configuration

Notes:

- FDM uses same API used by Process Configuration Console (PCC) to export / import workflow system configuration.
- FDM features same Merge and Overwrite import options as used by the PCC.
- -Workflow system configuration data is imported first followed by object store assets providing for intelligent ordering of work
- New feature to produce an audit of an import does not cover workflow system configurations

^{*}All connection points must belong to a single workflow system and the workflow system must be contained within that single object store.



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Export manifest editor: New asset types and SQL Search

Workflow System configuration: New object store assets:

Work Queues Background Search Templates

Component Queues Sweep Management (custom)

User Queues Email Templates

Rosters

Event Logs

Application Spaces

SQL Search:

Saved Searches* (Built in ACCE)

Ad hoc Queries*

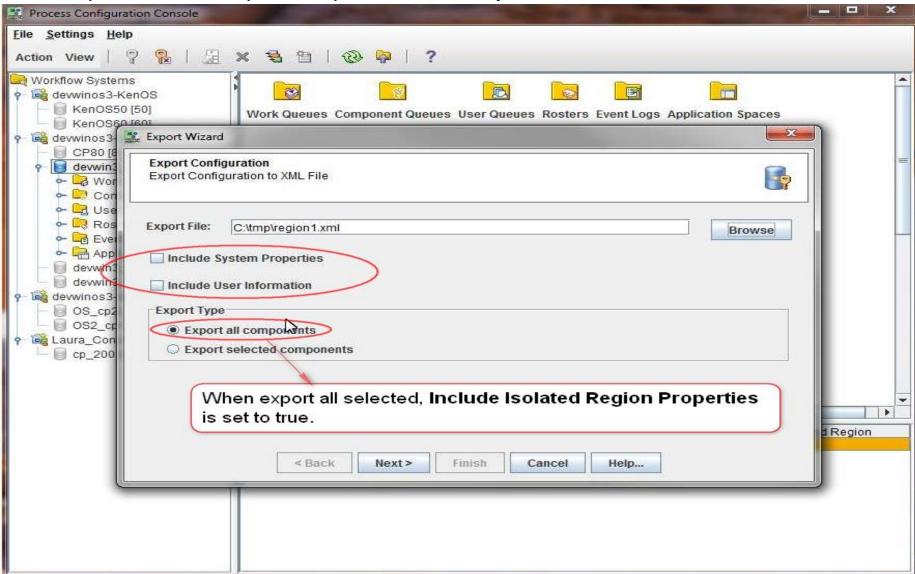
Retrieves search results 500 at a time

Supports Add All, with maximum result limit.

^{*}Object store searches; Must return properties for single object type, include the Id, and the ClassDescription.

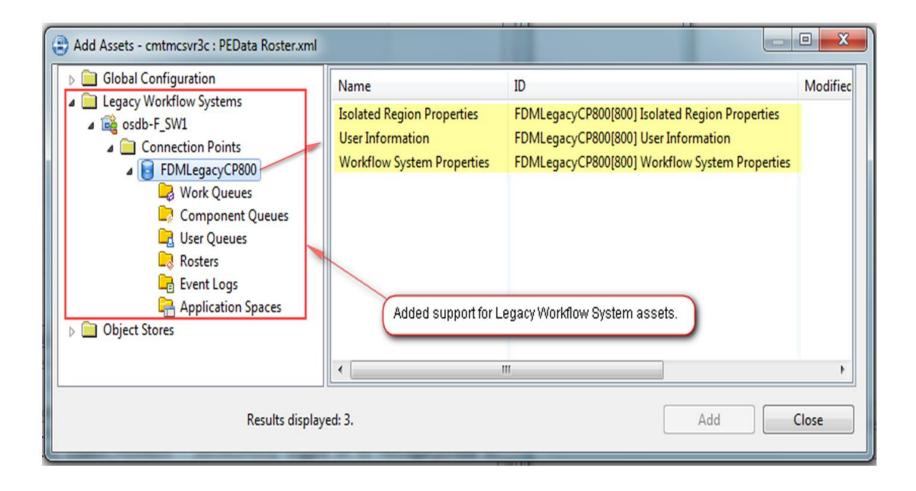


FDM replaces PCC export / import functionality



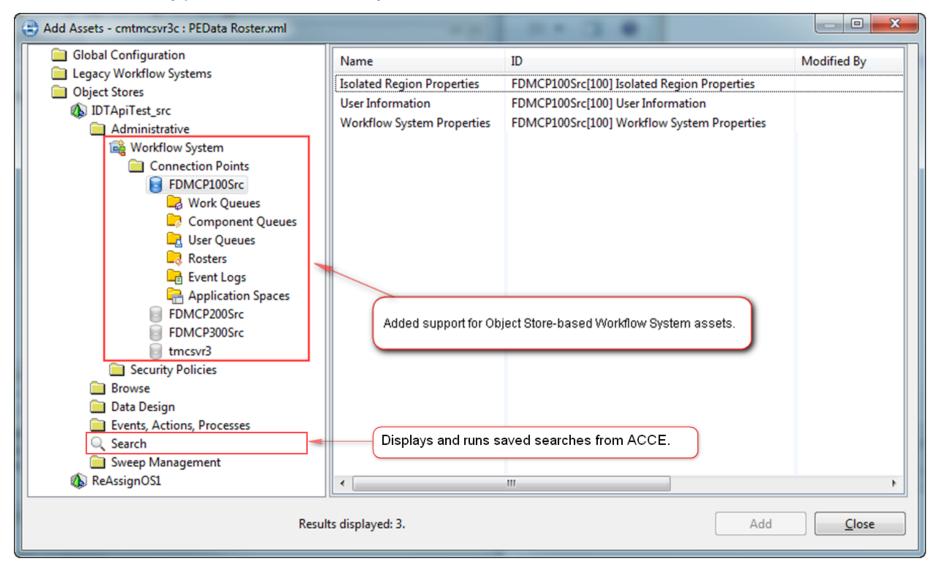


New Asset Types: Workflow Systems - Legacy



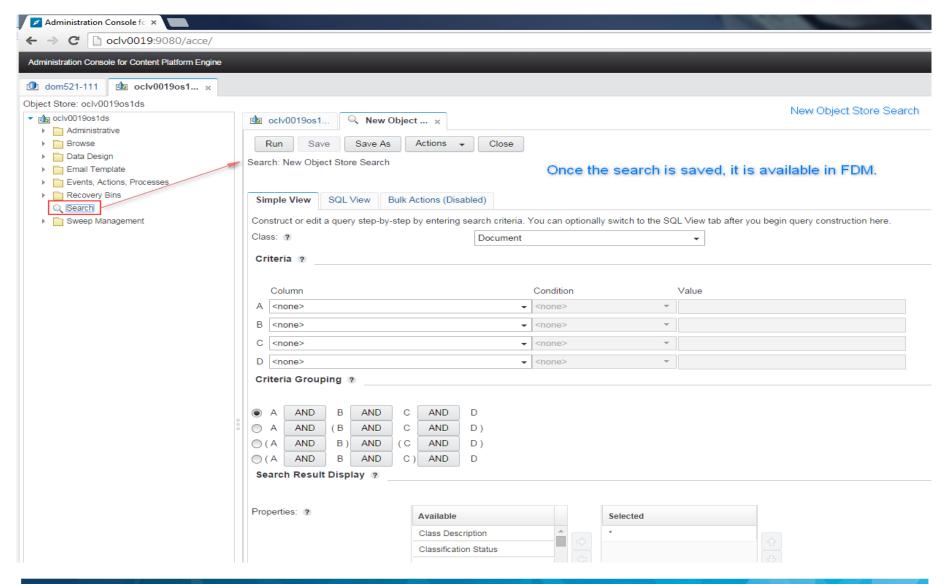


New Asset Types: Workflow Systems





Saved Searches: FDM can use saved searches from ACCE.





Saved Searches: Saved Searches from FileNet Enterprise Manager (FEM) can be imported into ACCE and made available to FDM.

A saved search in FEM is stored on one's local computer as a file with a .sch extension.

To make this search available to FDM you must first import it into ACCE as a saved search.

How to import an FEM saved search:

Using ACCE, import the search by creating a new document within the "/root/Saved Searches" folder and assign it the content of the FEM saved search and set the mime type to ".sch".

Afterwards, open the saved search in ACCE, and resave it – this ensures the SQL query gets built if the query was built using the query builder.*

After that, the search will become available to both ACCE and FDM.

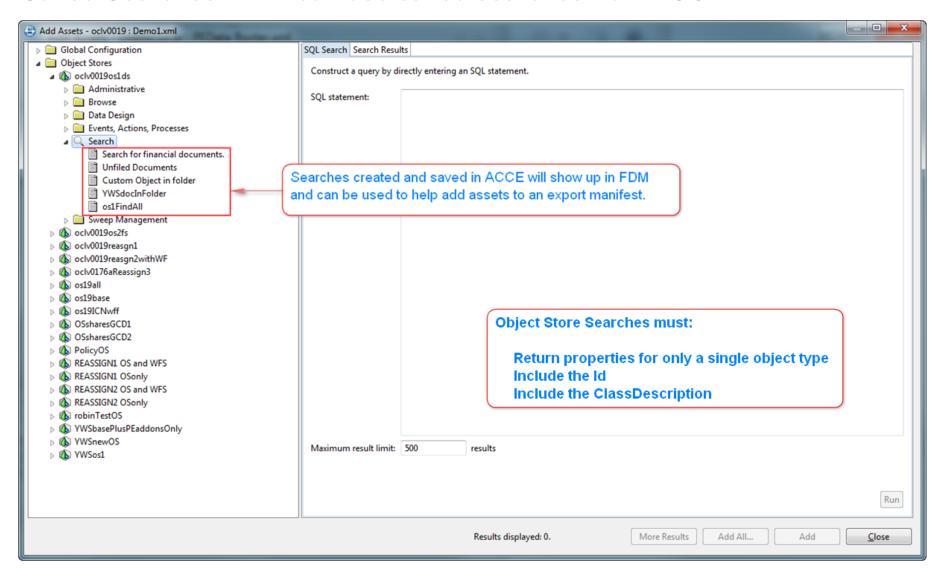
See the following for more info on this topic:

"Importing saved searches from Enterprise Manager" https://cmfogbert.usca.ibm.com:9099/p8ic521_iehsc/topic/com.ibm.p8.ce.admin.tasks.doc/p8pcc189.htm

^{*}Note: Any saved searches in ACCE prior to P8 5.2.1 will also need to be opened and resaved to ensure the SQL query is available for FDM.



Saved Searches: FDM can use saved searches from ACCE.





Demo - Building an Export Manifest using SQL Search



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CLI Operation modifications and additions: Background Information

Deploy Data Set:

Previously only contained object store assets.

Now it can also contain workflow system configuration, to be more CPE-centric.

CLI Operation names have been updated accordingly.

PCC Export Data:

FDM CLI continues to support this – although it is deprecated.

FDM UI no longer supports this in favor of using the new (CPE) DeployDataSet

Connection Points (CP):

Previously an FDM environment could work with a single CP.

Now multiple CPs are supported through use of halfmaps & datamaps.

Mapping of multiple CPs from same isolated region to a single CP is allowed

CLI Upgrade of Deployment tree from 5.2.0 to 5.2.1 generates these new connection point halfmap and datamap files.



CLI Operations: Updated to reflect unified CPE + new operations

Retrieval of data

RetrieveObjectStoreInfoFromDeployDataSet*
RetrievePrincipalInfoFromDeployDataSet
RetrieveServiceInfoFromDeployDataSet
RetrieveConnectionPointInfoFromDeployDataSet*

RetrieveObjectStoreInfoFromDomain RetrievePrincipalInfoFromDomain RetrieveConnectionPointInfoFromDomain*

RetrieveInfoFromEnvironment

Deprecated Operations

RetrieveObjectStoreInfoFromCEDeployDataSet
RetrievePrincipalInfoFromCEDeployDataSet
RetrieveServiceInfoFromCEDeployDataSet
RetrieveConnectionPointInfoFromPEExportXML
RetrievePrincipalInfoFromPEExportXML
RetrievePrincipalInfoFromPEConfigExportXML
RetrieveServiceInfoFromPEExportXML

RetrieveObjectStoreInfo
RetrievePrincipalInfoFromLDAP

^{*}New Operation.



CLI Operations: Updated to reflect unified CPE + new operations

Building of data maps

MapData

Export

ExportDeployDataSet CEExport

Convert

ConvertDeployDataSet ConvertCEExportDataset

ConvertPEExportXML

Deprecated Operations

Analyze

AnalyzeDeployDataSet ValidateCEExportXML

ValidatePEConfigData ValidatePEExportXML AnalyzePEExportXML

^{*}New Operation.



CLI Operations: Updated to reflect unified CPE + new operations

Import / Audit

ImportDeployDataSet GenerateAuditReport*

Package

CreateDeployPackage ExpandDeployPackage

Misc

CreateSamples
UpgradeDeploymentTree*
ReassignObjectStore
CreateEnvironment

Deprecated Operations

CEImport

^{*}New Operation.



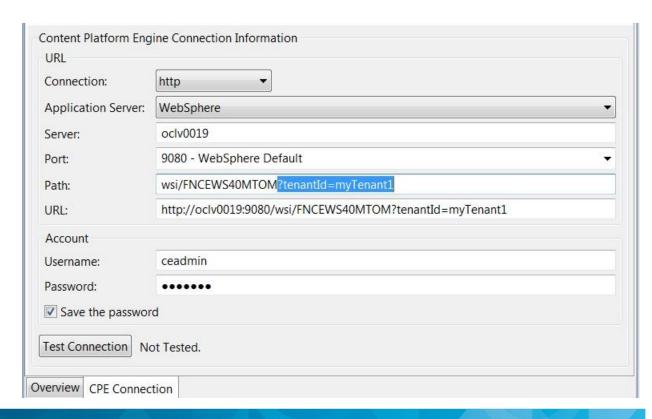
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Asset deployment in a multi-domain environment

- FDM supports deployment in multi-domain environments for both master domains and tenant domains.
- Configuration of tenant domain: edit the environments *CPE Connection Path* or *URL* appending "?tenantId=nameOrGuid".
- Deployment is supported between any combination of master, tenant, or traditional domain.
- Reassign object store is not supported for tenant domains.





Course Roadmap

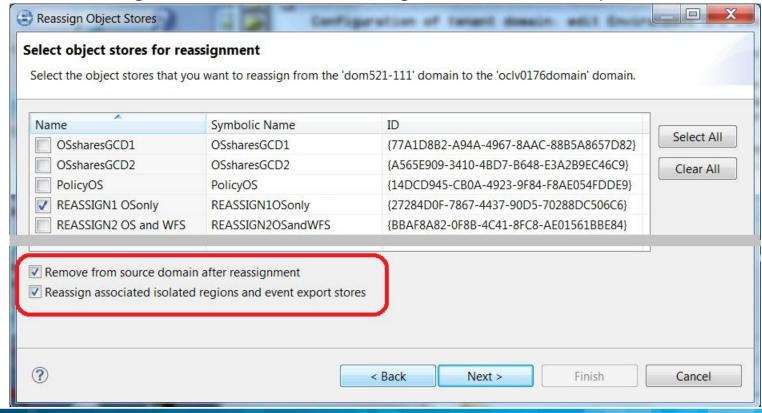
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- Export manifest editor new features
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Reassign object store operational enhancements

- FDM's Reassign object store operation has been enhanced to support dependencies between object stores and workflow system assets including isolated regions, connection points, and event export stores.
- Two new options have been added: Remove from source domain after reassignment and Reassign associated isolated regions and event export stores.

• The second option can only be selected if the first option is selected.





Reassign object store operational enhancements

- Two operation file options have been added for use with the CLI (command-line interface): removeReassignedAssetsFromSource and includeRelatedIsolatedRegionsAndEventExportStores.
- An error is given if the *includeRelatedIsolatedRegionsAndEventExportStores* option is true when the *removeReassignedAssetsFromSource* option is false.



Reassign object store operational enhancements

- After the user selects the object stores to be reassigned, the validation process of the reassign operation searches for isolated regions that are linked to the selected object stores, either by the object store's *IsolatedRegions* property or the isolated region's *ObjectStore* property.
- It also searches for any event export stores that are linked to any of the selected object stores by the *SourceObjectStore* property.
- Finally, the operation looks for any assets that share a database connection with any of the selected object stores or the linked isolated regions and event export stores.
- If the Reassign associated isolated regions and event export stores option is selected, each of these linked isolated regions and their connection points, and the linked event export stores, and their database connections for each, are added to the list of assets to be reassigned.



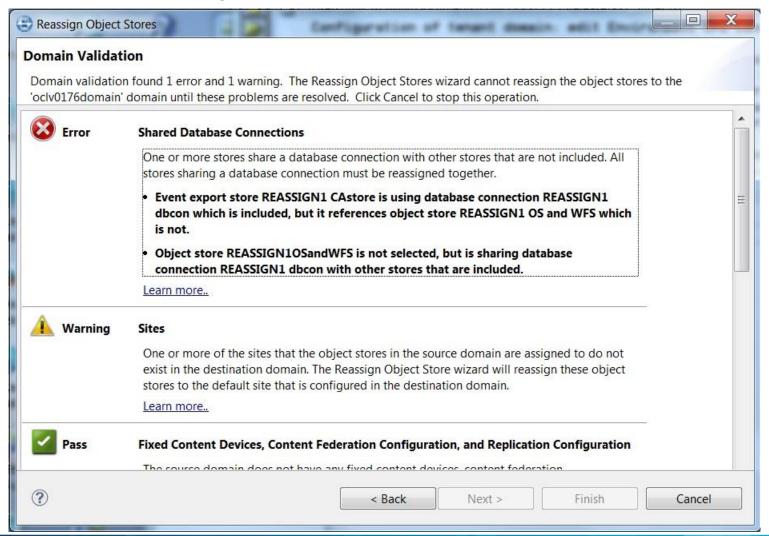
Reassign object store operational enhancements

- If the Reassign associated isolated regions and event export stores option is not selected and any linked isolated regions, connection points, or event export stores are found, then the validation fails and the object stores cannot be reassigned. To correct this, the user should go back and select this option on the previous dialog, then retry the validation.
- If there are any object stores that were not selected, but are linked to an included asset or that share a database connection to an included asset, then the validation fails. To correct this, the user should go back and select the object stores that were not included, then retry the validation.
- If the source domain includes an isolated region that is not associated with an object store (a legacy isolated region), a warning will normally be issued. However, if the legacy isolated region is sharing a database connection with one or more of the assets that is to be moved, then the validation fails.



Reassign object store operational enhancements

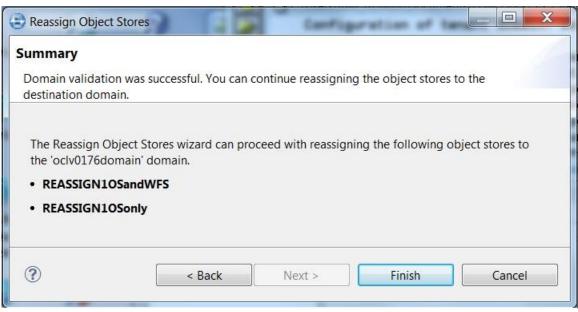
• Example of a reassign object store validation failure.





Reassign object store operational enhancements

• If validation succeeds, the reassign object stores wizard will allow the operation to continue with the reassignment of the object stores along with the associated isolated regions, connection points, and event export stores, and with deletion of the reassigned assets from the source domain.



- During reassignment, the operation creates database connections, if necessary, then moves the object stores, isolated regions, connection points, and event export stores.
- If no error occurs during the creation of these assets, the operation deletes all of the moved assets from the source domain using a single transaction.
- If an error occurs during any of the creates or during the delete transaction, the operation deletes all of the created assets from the destination domain, restoring everything to the original state.



Reassign object store operational enhancements

Known Issues

• After reassigning isolated regions to a new domain, the workflow system cannot be used without additional steps unless the Master Key for the new domain is the same as the source domain's. There is a topic in the Knowledge Center explaining the steps to reset the workflow system to use the new Master Key.

http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.security.doc/p8pst003.htm

• Sharing data sources between different CPE domains is not recommended. The FDM code cannot determine if the GCD is sharing the same data sources as any of the moved database connections. The user should make sure that the GCD's data sources are not shared with any of the moved assets, unless all of the stores and database connections from the source CPE domain are moved. In which case, the source domain's GCD should be deleted.



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- Saving and reusing import option sets
- Audit of import modifications to destination environment
- Additional features
- Course Summary



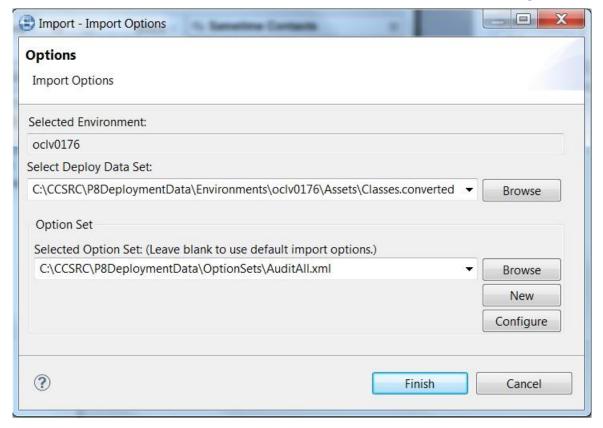
Saving and reusing import option sets

- Import options can be saved as option sets. An option set can include all of the options that can specified for the import operation except the path to deploy dataset and the environment name.
- Option sets are stored in the deployment tree in a new subfolder called OptionSets and used for import operations using either the GUI or CLI.
- For the command-line interface, an option set can be specified in the import operation file using the OptionSetPath node with a file path to the option set.
- Import options specified directly in the operation file will override the options in the option set.



Saving and reusing import option sets

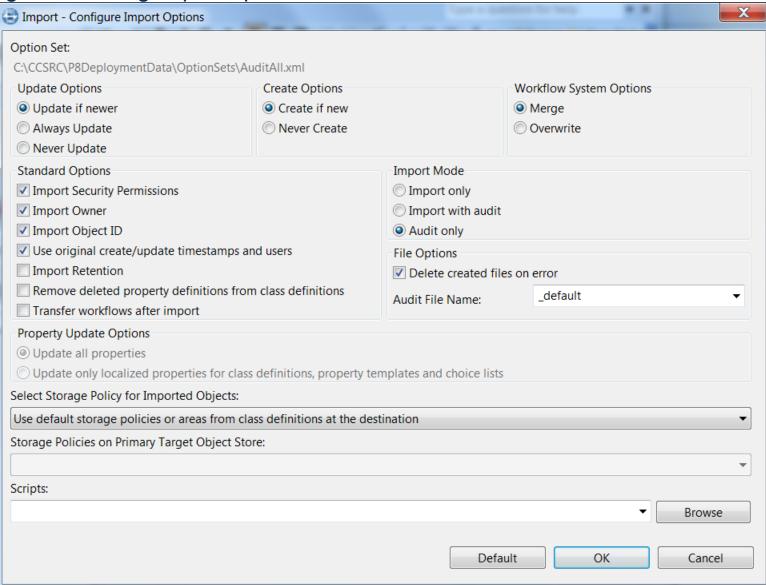
• The import wizard allows option sets to be created, configured, and selected.



- The Configure Import Options dialog allows any of the options to be modified.
- If modified, the option set must be saved.



Saving and reusing import option sets





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Audit of import modifications to destination environment

- With this release, FDM supports generation of an audit file either during an import operation or on its own without doing the import.
- The audit records the options and configuration used to perform the import, or that would have been used. It also records before and after images of the assets that were imported or would have been imported. Auditing currently only records content engine assets, no process engine information.

Audit file generation and contents

- Audit files are created when either the Import With Audit or Audit Only option is selected in the import options.
- Each import audit produces two files: an import configuration audit file with .xau suffix and an import objects audit file with .xao suffix. Both files contain XML.
- The name for the audit files is specified by the ReportFileName import option.



Audit of import modifications to destination environment

Import Configuration Audit File

MergedOptionSet

ObjectsWithError

ElapsedTime

Contains two main sections with various data and several subsections:

Configuration

AuditedObjectsFileName Full path to Import objects audit file

DateCreated Date/time that the audit file was created

CreatedOnHost Host name where the audit was performed

DeployDataSetPath Full path to the deploy data set that was audited

DeployDataSetDate Date/time that the deploy data set was created

DeploymentOperation Complete deployment operation file used for the audit

EnvironmentName Name of the deployment tree environment for the import destination

ConnectionInfo Connection information used to connect to the import destination

ObjectStoreInfo Map of Ids to names for object stores in the destination environment

Complete set of options used for import audit, merger of options from

operation file, saved option set, and default values

SavedImportOptionSet Options saved in the option set file used by the operation, if any

Summary

ObjectsCreated Number of objects that were created, or would have been created

ObjectsUpdated Number of objects that were updated, or would have been updated **ObjectsSkipped**

Number of objects that were skipped, or would have been skipped

Number of objects that had errors during the import or audit

Time from start to finish for the operation

ResultStatus Final status reported for the operation



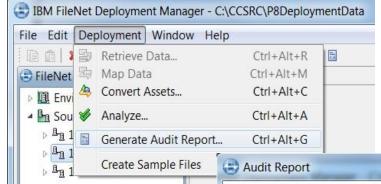
Audit of import modifications to destination environment

Import Objects Audit File

- Contains a list of the audited objects that were, or would have been, imported. For each, there is an original value and a final value.
- For objects that were not found in the destination, the original value is mostly empty, and the final value contains the object's value with a list of properties as they look after the object is created, or as they look when it is ready to be saved in the destination system.
- For objects that were found in the destination environment, the original value contains the object's value with a list of properties as they looked when the object was retrieved, and the final value contains the object's value with a list of properties as they look after being updated on the destination, or when it is ready to be updated.



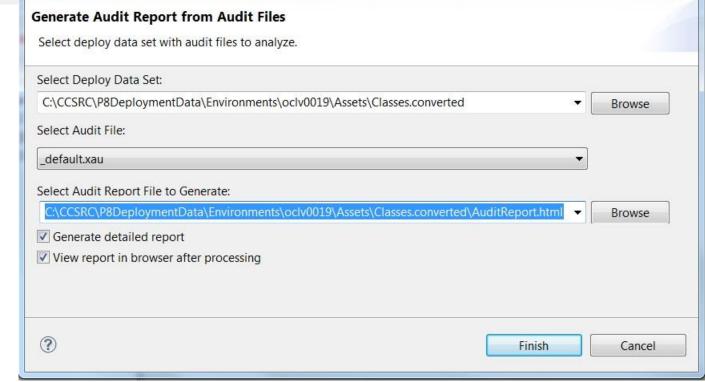
Audit of import modifications to destination environment



Audit report generation

• Select menu item *Deployment > Generate Audit Report...*

..., then browse for the deploy data set and select the audit file, then specify the location for the generated report file.





Audit of import modifications to destination environment

Audit report generation

- An HTML report will be generated. If the *View report in browser after* processing option was selected, the report will be displayed as soon as it completed.
- The report consists of a header section displaying much of the information from the import configuration audit file. If the *Generate detailed report* option was selected, the report will include a list of the audited objects from the import objects audit file.
- For each audited object, the property names and values are shown. If a property has been, or would be, modified by the import, the original value is shown in red with strikethrough, while the new value is shown in green. Unmodified properties are shown in black.



Audit of import modifications to destination environment

Current Limitations

- Only Content Engine objects are audited.
- Audit includes only scalar properties, no object-valued properties.
- Content Engine doesn't support read-only connections, so the import operation isn't able to prevent modifications to the object store or GCD when the Audit Only option is selected. In particular, event actions that are triggered by retrieval of objects will still be activated and could modify assets.
- Import scripts are often used to modify the values of object properties, or to decide whether an object should be imported. The import operation will execute scripts that are specified in the import options even if the Audit Only option is selected. However, scripts are also sometimes used to create or modify objects in the Content Engine. The user should be aware of the impact of running the selected scripts during import with Audit Only.



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Additional features

New import option to remove deleted property definitions from class definitions

When updating class definitions on import, FDM appends new property definitions, but did not remove any that were missing. A new import option directs FDM to remove any property definitions that exist in the existing destination class definition if they are missing in the imported source class definition.

Order of property definitions in class definitions updated

In previous FDM releases, when updating a class definition, the order of existing property definitions in the class definition was never changed. With this release, FDM will update the order of property definitions to match the source class definition's order.



Additional features

New option to retrieve object store half map from deploy dataset

The user can now retrieve data for the object store half map from a deploy dataset, as they have been able to do for security principals and services. If a connection to the CE environment is available, any missing information for each OS will be retrieved from the CE. This is useful since references to object stores found in deploy data sets often only include the GUID.

Downloadable FDM modules

The executable modules of FDM that are used by Case Manager are now included in the CPE download service, so that ICM can download and install them after an upgrade or service pack installation.



Demo – Option sets, audit files and audit reports, and additional features



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You have completed this course and can:

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- Describe enhancements to P8 5.2.1 FileNet Deployment Manager (FDM) including support for new Content Platform Engine objects
- Build an export manifest for object store objects using a CPE SQL Search and FDM's export manifest editor
- Utilize FDM to build and utilize a deployment package that includes both workflow system configuration and object store assets
- Understand how to use the Reassign Object Stores operation
- Generate and read an audit report for the modifications that will occur or did occur during an import operation using FDM



Contacts

- Subject Matter Experts (SME)/Area of Expertise:
 - Robert Payne (Development Manager)
 - Dave Keen (FileNet Deployment Manager)
 - •Matthew Honkanen (FileNet Deployment Manager)
 - Yvonne Santiago (Integration with other components, end-to-end process)
- Quality Assurance
 - Brian Miller (Test team lead and UI testing)
 - Alex Chiang (Test automation and CLI testing)
- Support:
 - Eric Fonkalsrud Jr (L3 Manager)



Product Help/Documentation/Resources

P8 5.2.1 Knowledge Centers (available October 31st)

- IBM Content Foundation V5.2.1 documentation
 http://www.ibm.com/support/knowledgecenter/SSGLW6_5.2.1/
- IBM FileNet P8 Platform V5.2.1 documentation
 http://www.ibm.com/support/knowledgecenter/SSNW2F 5.2.1/

Topics of interest

- Migrating and deploying applications
 http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/p8pdb022.htm
- Deploying assets with FileNet Deployment Manager
 http://www.ibm.com/support/knowledgecenter/SSNW2F 5.2.1/com.ibm.p8.common.deploy.doc/p8pdb020.htm
- FileNet P8 assets
 http://www.ibm.com/support/knowledgecenter/SSNW2F 5.2.1/com.ibm.p8.common.deploy.doc/roadmap_asset_overview.htm
- Reassigning an object store
 http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.ce.admin.tasks.doc/p8pcc217.htm