

Course Guide

# IBM FileNet Content Manager 5.2.1: Migrate Applications

Course code F285 ERC 1.0



## July 2016 edition

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# Contents

<b>Trademarks .....</b>	<b>vi</b>
<b>Course description .....</b>	<b>vii</b>
<b>Agenda .....</b>	<b>ix</b>
<b>Unit 1. Application migration overview .....</b>	<b>1-1</b>
Why is this lesson important to you? .....	1-2
Unit objectives .....	1-3
Application lifecycle .....	1-4
FileNet Content Manager application elements .....	1-5
FileNet P8 asset types .....	1-6
Other IBM and external assets .....	1-7
Migration and deployment process .....	1-8
Migration and deployment phases .....	1-9
Migration and deployment tools .....	1-11
Who is responsible for application migration? .....	1-12
Coordinating application migration .....	1-13
Guidelines .....	1-14
Unit summary .....	1-16
Review questions .....	1-17
Review questions .....	1-18
Review questions .....	1-19
Review answers .....	1-20
Review answers .....	1-21
Review answers .....	1-22
Review answers .....	1-23
<b>Unit 2. Plan and prepare for application migration .....</b>	<b>2-1</b>
Why is this lesson important to you? .....	2-2
Unit objectives .....	2-3
Planning for application migration .....	2-4
Plan the migration and deployment strategy .....	2-6
Assemble migration/deployment instructions .....	2-7
Identify application assets .....	2-9
Source and destination environment compatibility .....	2-11
Perform one-time configuration setup tasks .....	2-13
Deployment tree .....	2-15
Deployment tree structure .....	2-17
Environment half maps .....	2-19
Extract a source environment object store half map .....	2-20
Extract a source environment security principal half map .....	2-22
Service and Connection Point half maps .....	2-24
Destination environment half maps .....	2-26
Instructor demonstration .....	2-28
Unit summary .....	2-29
Exercise: Plan and prepare for application migration .....	2-30
Exercise introduction .....	2-31

<b>Unit 3. Export the application assets .....</b>	<b>3-1</b>
Why is this lesson important to you? .....	3-2
Unit objectives .....	3-3
Export the application assets .....	3-4
FileNet Deployment Manager – export tasks .....	3-5
Export the FileNet P8 assets .....	3-6
What is an export manifest? .....	3-8
Add assets to the export manifests .....	3-9
Edit the export manifest .....	3-11
Export include options .....	3-12
Asset Include Option propagation example .....	3-14
Export include options - guidelines .....	3-15
Export include options – guidelines (2) .....	3-17
Export assets to a deploy data set .....	3-18
Deployment.log .....	3-20
Create a deploy package .....	3-21
Export other IBM and external assets .....	3-23
Assemble the application package .....	3-24
Instructor demonstration .....	3-26
Unit summary .....	3-27
Exercise: Export the application assets .....	3-28
Exercise introduction .....	3-29
<b>Unit 4. Convert and analyze the FileNet P8 assets .....</b>	<b>4-1</b>
Why is this lesson important to you? .....	4-2
Unit objectives .....	4-3
Migrating and analyzing phases .....	4-4
Prepare the FileNet P8 destination environment .....	4-5
Prepare for asset conversion .....	4-6
Create a source-destination pair .....	4-7
How do labels affect data maps? .....	4-9
Create the source-destination pair data maps .....	4-11
What options are available for Data Maps? .....	4-12
View a data map .....	4-13
Update a data map .....	4-15
Convert the FileNet P8 application assets .....	4-16
Run a pre-import analysis .....	4-17
Change impact analysis report .....	4-19
Resolving failures .....	4-20
Instructor demonstration .....	4-21
Unit summary .....	4-22
Exercise: Convert and analyze the FileNet P8 assets .....	4-23
Exercise introduction .....	4-24
<b>Unit 5. Import the application assets .....</b>	<b>5-1</b>
Why is this lesson important to you? .....	5-2
Unit objectives .....	5-3
Steps to complete the application migration .....	5-4
Import the assets into the destination environment .....	5-6
FileNet Deployment Manager – import task .....	5-7
Import the FileNet P8 application assets .....	5-8
Import option set file .....	5-10
Import options - defaults .....	5-11
Import options - guidelines .....	5-14
Simulate and audit the import .....	5-15
Sample audit report .....	5-17

Import other IBM and external assets .....	5-18
Complete additional system configuration tasks .....	5-20
Verifying phase .....	5-21
Unit summary .....	5-22
Exercise: Import the application assets into the destination environment. ....	5-23
Exercise introduction .....	5-24
<b>Unit 6. Automate FileNet P8 asset migration.....</b>	<b>6-1</b>
Why is this lesson important to you? .....	6-2
Unit objectives .....	6-3
FileNet Deployment Manager command line interface .....	6-4
Deployment Operation command line syntax .....	6-5
Deployment operations .....	6-6
How to create a deployment operation file .....	6-7
Sample files .....	6-8
Guidelines .....	6-9
Unit summary .....	6-10
Exercise: Automate deployment operations with FileNet Deployment Manager command line. ....	6-11
Exercise introduction .....	6-12

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# Course description

## IBM FileNet Content Manager 5.2.1: Migrate Applications

**Duration: 1 day**

### Purpose

The development and testing of your FileNet Content Manager application is complete. You need to migrate and deploy the application to other environments. For example, from Development to User Acceptance Test, and eventually to Production. This course teaches you: The process of application migration; How to use FileNet Deployment Manager to migrate and deploy the FileNet P8 assets; How to migrate and deploy IBM Content Navigator desktops.

### Audience

This course is intended for system administrators and solution builders.

### Prerequisites

- F270 – IBM Content Navigator 2.0.3.6: Introduction, or equivalent knowledge
- F280 - IBM FileNet Content Manager 5.2.1: Introduction, or equivalent knowledge
- F282 - IBM FileNet Content Manager 5.2.1: Work with object metadata, or equivalent knowledge
- F283 - IBM FileNet Content Manager 5.2.1: Security, or equivalent knowledge
- P8 terminology, including: Content Platform Engine, IBM Content Navigator, object stores, objects, Content Services, Process Services.
- Using IBM Content Navigator to work with content.
- Configuring desktops in IBM Content Navigator.

### Objectives

- Describe the process of moving FileNet P8 applications between environments.
- Plan and prepare for application migration.
- Export the application assets.
- Convert the assets for import.
- Analyze the impact of the import to the destination environment.
- Import the application assets into the destination environment.
- Automate FileNet P8 asset migration using the FileNet Deployment Manager command line interface.

## Contents

- Application migration overview
- Plan and prepare for application migration
- Export the application assets
- Convert and analyze the FileNet P8 assets
- Import the application assets
- Automate FileNet P8 asset migration

## Curriculum relationship

To learn about related courses, visit the IBM authorized training website:

<http://www-304.ibm.com/jct03001c/services/learning/ites.wss/us/en?pageType=page&c=Y678448H04759K32>

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# Agenda

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## Note

The following unit and exercise durations are estimates, and might not reflect every class experience.

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## Day 1

- (00:15) Course introduction
- (00:35) Unit 1. Application migration overview
- (00:30) Unit 2. Plan and prepare for application migration
  - (00:40) Exercise 2. Plan and prepare for application migration
- (00:30) Unit 3. Export the application assets
  - (00:35) Exercise 3. Export the application assets
- (00:30) Unit 4. Convert and analyze the FileNet P8 assets
  - (00:20) Exercise 4. Convert and analyze the FileNet P8 assets
- (00:30) Unit 5. Import the application assets
  - (00:25) Exercise 5. Import the application assets into the destination environment.
- (00:20) Unit 6. Automate FileNet P8 asset migration
  - (00:30) Exercise 6. Automate deployment operations with FileNet Deployment Manager command line.

# Unit 1. Application migration overview

## Estimated time

00:35

## Overview

In this unit, you learn the steps to migrate and deploy a FileNet Content Manager application between environments.

## How you will check your progress

Successfully complete the review questions

## References

FileNet P8 Platform 5.2.1 Knowledge Center

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8toc.doc/welcome\\_p8.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8toc.doc/welcome_p8.htm)

## Why is this lesson important to you?

- A FileNet Content Manager application is developed and tested. The next step is to move the application to the User Acceptance Test (UAT) environment and eventually to Production.
- You need to describe the migration and deployment process to move an application between environments.

Application migration overview

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Figure 1-1. Why is this lesson important to you?

## Unit objectives

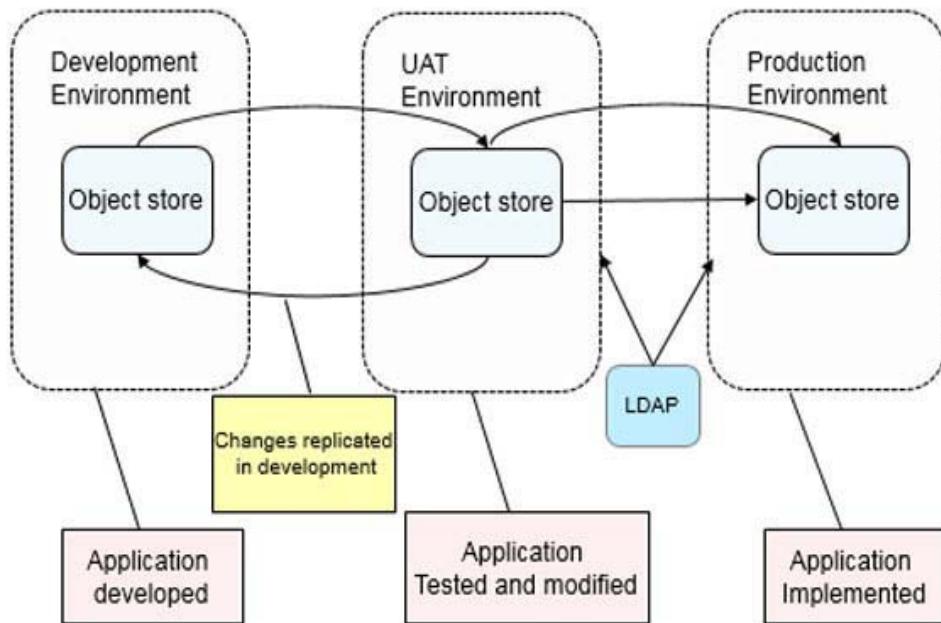
- Describe the process of moving FileNet Content Manager applications between environments.
- Identify the FileNet Content Manager application elements.
- Order and describe the migration and deployment phases.
- List the tools used for application migration and deployment.

Application migration overview

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*Figure 1-2. Unit objectives*

## Application lifecycle



Application migration overview

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Figure 1-3. Application lifecycle

The diagram shows three environments, Development, User Acceptance Test (UAT), and Production. Typical projects split their infrastructure into at least these three environments. An application moves in stages through the various environments during its lifecycle.

The application is developed in a development environment. When the application is ready for user acceptance testing, it is migrated and deployed to a UAT environment. In the UAT environment, you do production level testing and apply and test the security that is used in production. After user acceptance testing is completed, the application is migrated and deployed from UAT to Production.

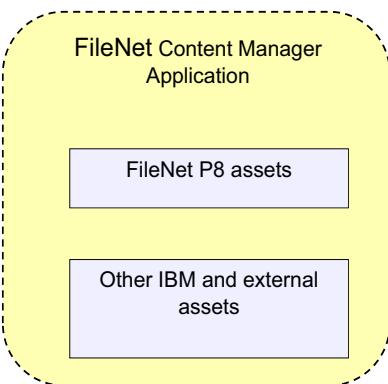
During acceptance test, if any changes are made to the application, those changes need to be replicated in development to ensure that the application is still in sync for future updates.

The lifecycle of an application includes two important stages:

- Initial deployment of an application from a source environment, such as a development environment, to a destination environment, such as a UAT environment.
- Propagation of incremental sets of changes from a source environment, such as a development environment, to a subset of the existing objects in a destination environment, such as a UAT environment.

## FileNet Content Manager application elements

- A FileNet application usually includes two types of elements
  - FileNet P8 assets
  - Other IBM and external assets



Application migration overview

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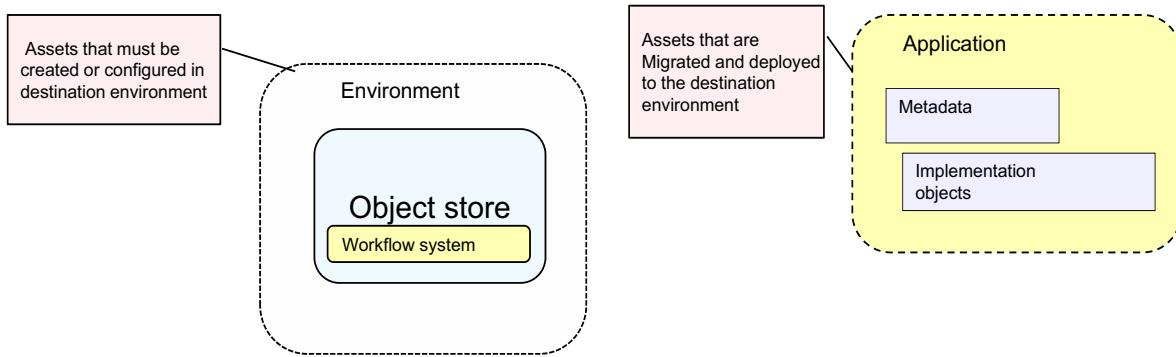
Figure 1-4. FileNet Content Manager application elements

A FileNet Content Manager application generally includes two categories of elements:

- a. FileNet P8 assets
- b. Other IBM and external assets

## FileNet P8 asset types

- FileNet P8 assets in a FileNet Content Manager application fall into two types:
  - Assets that you create or configure in the destination environment, for example:
    - Data Containers – object stores and workflow systems
    - Connections to external services
  - Assets that you migrate and deploy to the destination environment.
    - For example:
    - Metadata
    - Implementation objects



Application migration overview

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Figure 1-5. FileNet P8 asset types

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Migration and deployment overview

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/overview\\_intro.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/overview_intro.htm)

FileNet Content Manager applications have two types of assets:

1. Assets that need to be created or configured in the destination environment, for example:
  - Containers such as object stores and workflow systems.
  - Connections to external services such as an External data service or a web service.
2. Assets that are migrated and deployed, for example:
  - Metadata such as class definitions, property templates, choice lists.
  - Implementation objects such as folders, documents, custom objects, event actions, and event subscriptions.
  - User interfaces such as IBM Content Navigator desktops.



## Other IBM and external assets

- IBM Content Navigator desktops
- External services
  - Web services
  - Database services
- Custom code

The screenshot shows the 'IBM Content Navigator Sample Desktop' interface. At the top, there's a navigation bar with buttons for 'Add Document', 'Add Document Using Entry Template', 'New Folder', and 'New Folder Using Entry Template'. On the right side of the nav bar are user info ('P8Admin'), a menu icon, a help icon, and the 'IBM' logo. Below the nav bar is a toolbar with icons for Home, Refresh, Add Document, New Folder, Actions, and three document preview icons.

The main area has a sidebar on the left containing icons for Home, Search, Folders, Media, and Settings. The 'Sales' folder is selected in the sidebar, and its contents are listed in a tree view: Customers, Manuals, Marketing, Orders, Products, TestBulkMove, and Workflows.

To the right of the sidebar is a table titled 'Sales' with columns for Name, Modified By, and Modified On. The data in the table is as follows:

	Name	Modified By	Modified On
	Customers	P8Admin	5/6/2013, 7:52 PM
	Manuals	P8Admin	5/6/2013, 7:52 PM
	Marketing	P8Admin	5/6/2013, 7:52 PM
	Orders	P8Admin	5/6/2013, 7:52 PM
	Products	P8Admin	5/6/2013, 7:52 PM
	TestBulkMove	P8Admin	6/19/2013, 2:11 PM
	Workflows	P8Admin	5/6/2013, 7:52 PM

Application migration overview

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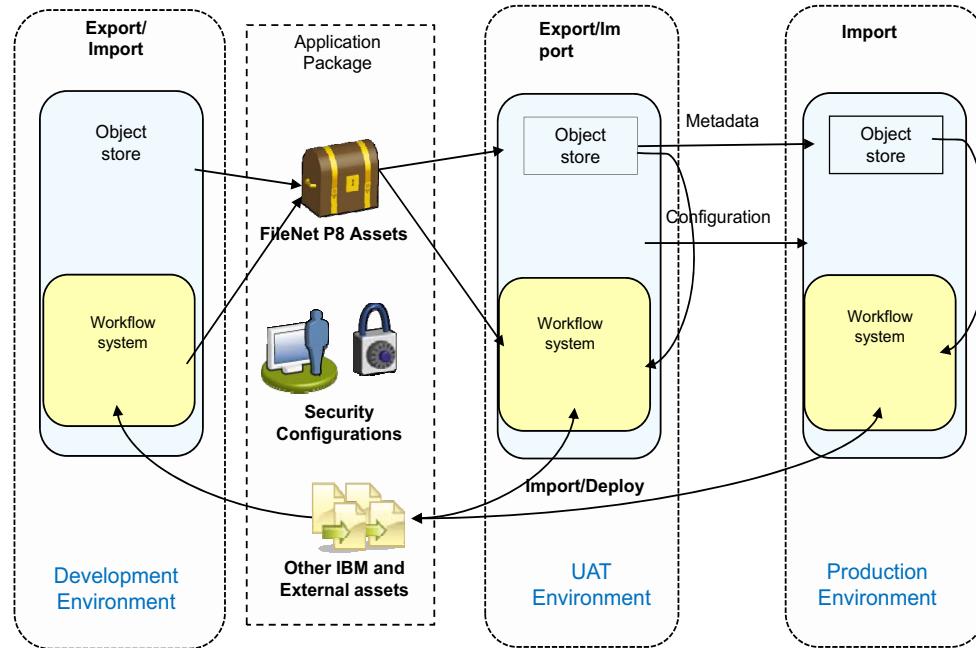
Figure 1-6. Other IBM and external assets

A FileNet Content Manager application often includes other IBM and external assets.

Such as:

- IBM Content Navigator desktops to provide custom user interfaces.
- External services like, web services and database services.
- Custom code

## Migration and deployment process



Application migration overview

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Figure 1-7. Migration and deployment process

This diagram outlines the migration/deployment process for a FileNet Content Manager application, with FileNet P8 assets and other IBM and external assets. An Application Package, is a way to package the FileNet Content Manager application, created by the development team. When the application is packaged, it can be put under change control and handed over to the FileNet P8 administrators to migrate and deploy to other environments.

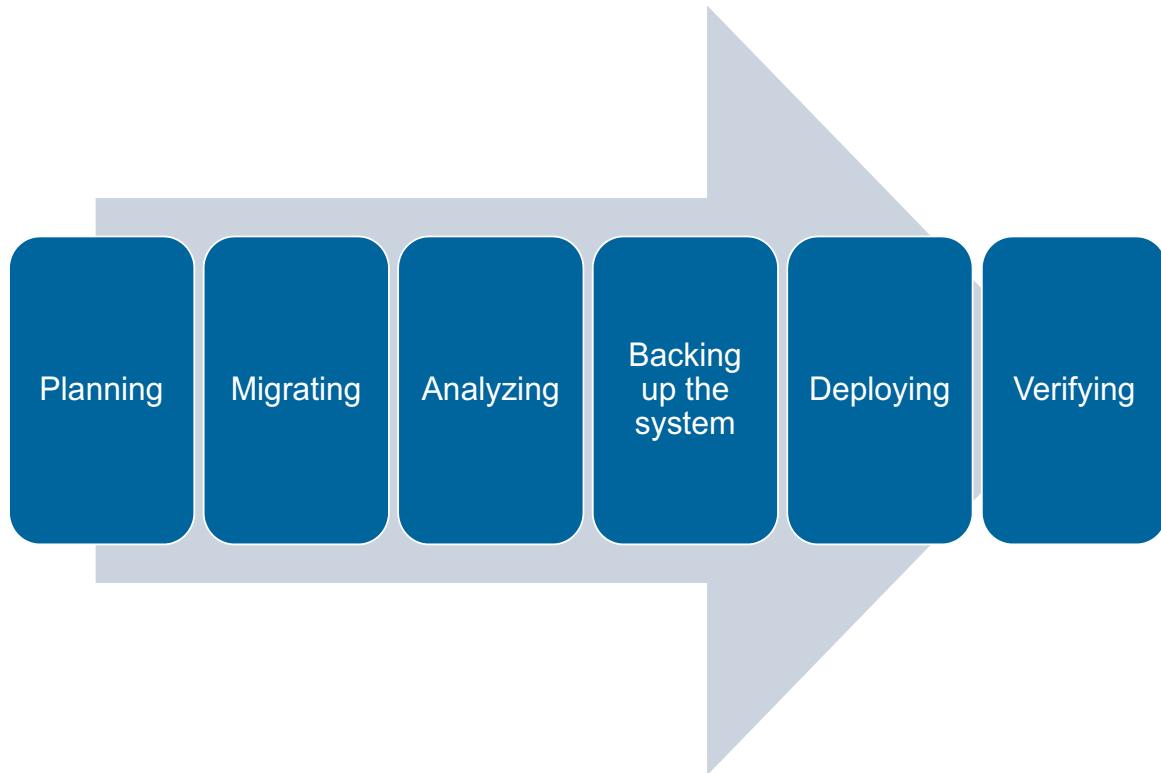
### Migration/deployment process for FileNet P8 assets

- Initial design occurs in the development environment, modifications might be made in preproduction environments, such as UAT.
- The migration/deployment moves from Dev > UAT > PROD.
  - Most organizations have a FileNet P8 domain for each environment. You migrate and deploy the FileNet P8 assets with FileNet Deployment Manager. Security usually differs between environments.

### Deployment process for other IBM and External assets

- You use application-specific tools to deploy other IBM and external assets.

## Migration and deployment phases



[Application migration overview](#)

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Figure 1-8. Migration and deployment phases

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Migration and deployment overview>Migration and deployment phases

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/p8\\_pdb024.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/p8_pdb024.htm)

### ***Migration and deployment phases***

The migration and deployment process can be divided into five major phases: planning, migrating, analyzing, backing up the system, deploying and verifying.

#### ***Planning***

During the planning phase, you review information such as assets, objects, hardware and software requirements, system and asset configuration, and other aspects of the source and destination environments. As you complete this review, you document this information. You also begin creating migration/deployment instructions that are refined over time.

#### ***Migrating***

During the migrating phase, you use information from the planning phase to prepare an application package for deployment. To ensure that a consistent version of the application is packaged, stop all

development activities for the application that will migrate/deploy while the assets are exported. Ideally, the documentation that you develop during the planning phase includes both information about communicating the work stoppage to the correct teams and the steps for implementing it.

The responsibility for the migrating phase is shared between the solution builders and the administrators. In the development environment, the solution builders are responsible for exporting the application assets, packaging them and writing the migration/deployment instructions. The solution builders need to collaborate with the administrators, regarding the security in place in the destination environments. The administrators are responsible for migrating and deploying the application to the non-development environments.

### ***Analyzing***

During the analyzing phase, you analyze the impact of the migration/deployment on the destination environment. This analysis enables identification and mediation of issues that might cause errors. In some tools, this analysis is known as a change impact analysis report. If this report is generated, it can be archived and used for review or audit activities. The archived reports can be used iteratively to improve the migration deployment process.

### ***Backing up the system***

During the backing up the system phase, you suspend activity on the system for the destination environment and create a backup for that system. Before any system modification, it is always prudent to back up the portions of the system that are affected by the changes. This practice allows a consistent snapshot of all related data to be captured.

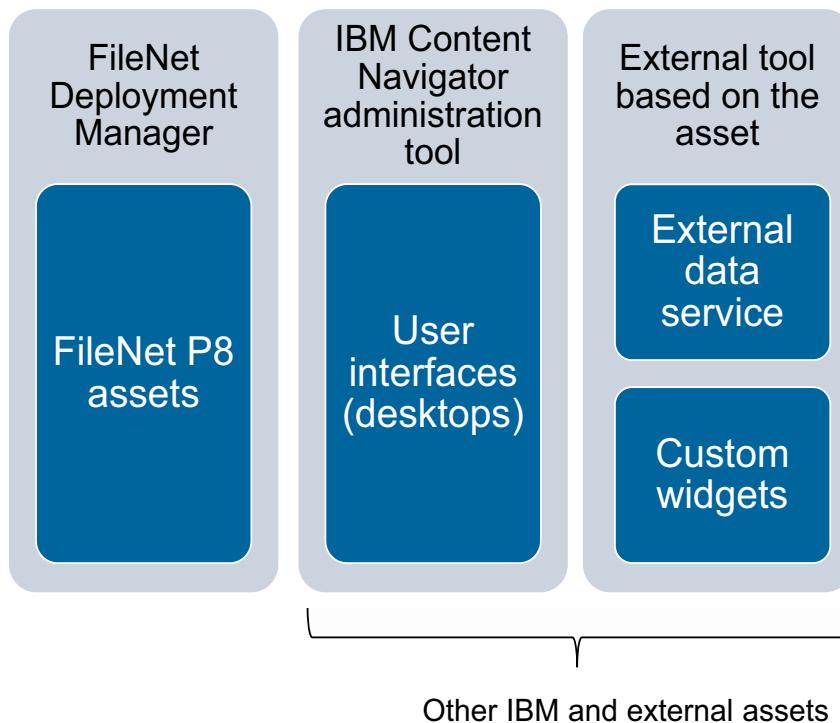
### ***Deploying***

During the deploying phase, you follow the steps outlined in the migration deployment instructions to import the application into the destination environment. The needs of your organization, the architecture of your system, and requirements of the application itself all determine the number and order of these tasks.

### ***Verifying***

During the verifying phase, test the migrated application in the destination environment to verify that all of its components are working correctly. The tests that you need to complete vary according to the features and expected behaviors of the migrated application. The migration/deployment instructions should include a plan for verifying the migration, with specific tests to probe areas of change.

## Migration and deployment tools



Application migration overview

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Figure 1-9. Migration and deployment tools

### Help paths

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager

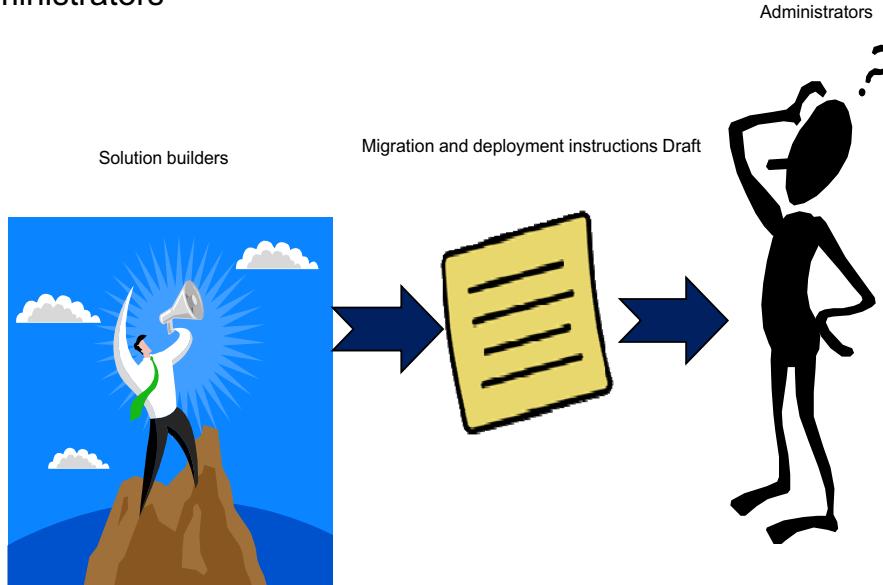
FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets based on Content Platform Engine

FileNet Deployment Manager is the tool that you use to migrate and deploy FileNet P8 assets. For example, classes, properties, and content-based objects such as forms, search templates, and entry templates.

For other IBM and External assets, the tool you use depends on the asset. The slide lists examples of assets that are often used in FileNet Content Manager applications.

## Who is responsible for application migration?

- Shared Responsibility:
  - Solution builders
  - Administrators



Application migration overview

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Figure 1-10. Who is responsible for application migration?

The migration and deployment of a FileNet Content Manager application from one environment to another, is not the sole responsibility of the administrators. Moving applications between environments requires collaboration of various people:

- Solution builders and developers
- Administrators
  - FileNet P8 administrators
  - Security administrators



## Coordinating application migration

Migration deployment phase	Solution builder responsibilities	Developer responsibilities	Administrator responsibilities
<b>Planning</b>	Identify and document the application assets	Identify and document custom code assets, widgets, and so on.	Assist with security considerations.
	Write migration and deployment instructions, including how to test		
<b>Migrating</b>	Export assets from development environment, package the assets	Export custom code assets, widgets, and so on..	Prepare destination environment (one-time configuration setup tasks).
	Create FDM development environment		Create FDM destination environments
<b>Analyzing</b>	Assist the administrator if necessary		Run impact analysis on destination environment.
<b>Backing up the system</b>	Development environment: Collaborate with administrator		Non-Dev environments: Back up the destination system.
<b>Deploying</b>	Assist administrator	Assist administrator	Import the application to the destination environment.
			Update migration and deployment instructions if necessary.
<b>Verifying</b>	Assist administrator	Assist administrator	Use the deployment instructions to test the application on the destination environment.
			Update deployment instructions if necessary

Application migration overview

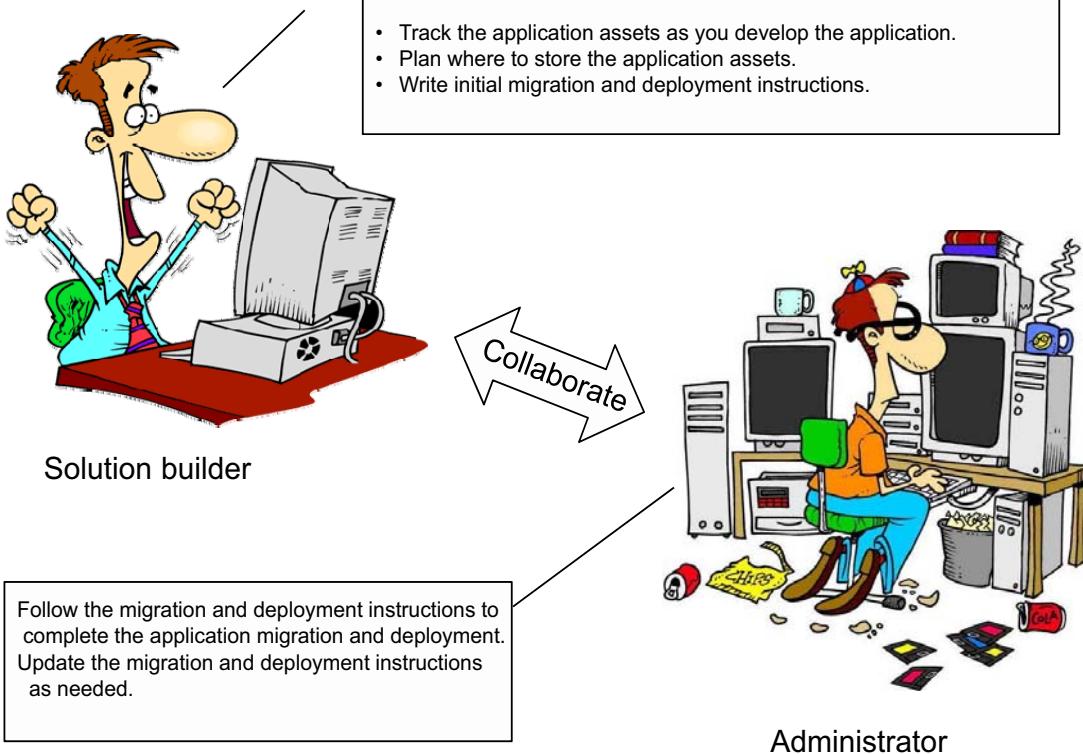
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Figure 1-11. Coordinating application migration

This table identifies the migration and deployment phases, the high-level tasks associated with each phase, and who is responsible.

The solution builder might test migrating and deploying the application in development as part of writing the deployment instructions. They should work with the administrator to plan how security is handled in the various environments.

## Guidelines



[Application migration overview](#)

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Figure 1-12. Guidelines

The solution builder needs to:

- Track the application assets during design and development of the application. Adopting this practice saves time and increases the speed and success of the migration and deployment process.
- Plan where to store the application assets, for example a file system folder that can be compressed. The compressed file can serve as an application package, which can be checked into your company's change control system.
- Write the initial migration and deployment instructions to hand off to the administrator.

The solution builder and the administrator need to collaborate and carefully plan security.

- Security is generally different in development environments than it is in pre-production environments.
- It is a good idea to define a security mapping table, listing how the security users/groups map between the different environments.

The administrator needs to:

- Follow the migration and deployment instructions to complete the application migration.
- Update the migration and deployment instructions as needed for the different environments.

Goal:

The migration and deployment instructions are tested. By the time the administrator needs to migrate the application into Production, the migration and deployment instructions should outline a reproducible migration process.

## Unit summary

- Describe the process of moving FileNet P8 applications between environments.
- Identify the FileNet P8 application elements.
- Order and describe the migration and deployment phases.
- List the tools used to for FileNet P8 application migration and deployment.

Application migration overview

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Figure 1-13. Unit summary

## Review questions

1. An IBM FileNet Content Manager application generally includes two types of elements. What are the two types of elements?
  - A. FileNet P8 assets and other IBM and external assets.
  - B. IBM assets and external assets.
  - C. FileNet P8 assets and FileNet Deployment Manager half maps.
  - D. FileNet P8 assets and external assets.
  
2. What is the second phase of the Migration and deployment phases?
  - A. Analyzing
  - B. Migrating
  - C. Deploying
  - D. Planning



Application migration overview

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Figure 1-14. Review questions

Write your answers here:

- 1.
- 2.

## Review questions

3. The migration and deployment process for FileNet Content Manager applications is a multi-step process. Choose the answer that completes the following statement correctly.
- > *Initial design of the application occurs in the development environment. You create an Application Package in the development environment that you can put into change control. You migrate and deploy the Application Package to the other environments required.*
- A. For example: DEV > QA > Production. Modifications to security might be made in pre-production environments. All changes must be duplicated in development.
  - B. If changes are required in other environments, you make the changes in development and repeat the migration/deployment.
  - C. You make changes as you go in all pre-production environments, and update the migration and deployment instructions. You never revert to the development environment.
  - D. Modifications might be made in any environment, even Production.



Application migration overview

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Figure 1-15. Review questions

Write your answers here:

3.

## Review questions

4. Backing up the system is one of the Migration and deployment phases. Which phase does Backing up the system precede?
  - A. Verifying Phase
  - B. Migrating Phase
  - C. Deploying Phase
  - D. Analyzing
5. What tool is used to migrate and deploy FileNet P8 assets?
  - A. IBM Content Navigator administration tool
  - B. Administration Console for Content Platform Engine
  - C. FileNet Enterprise Manager
  - D. FileNet Deployment Manager
6. True or False: External assets are migrated and deployed with an external tool, based on the asset.
7. True or False: The migration and deployment of a FileNet Content Manager application from one environment to another is the sole responsibility of the administrators.

Application migration overview

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Figure 1-16. Review questions

Write your answers here:

- 4.
- 5.
- 6.
- 7.



## Review answers

1. An IBM FileNet Content Manager application generally includes two types of elements. What are the two types of elements?

- A. FileNet P8 assets and other IBM and external assets.
- B. IBM assets and external assets.
- C. FileNet P8 assets and FileNet Deployment Manager half maps.
- D. FileNet P8 assets and external assets.

The answer is A.

2. What is the second phase of the Migration and deployment phases?

- A. Analyzing
- B. Migrating
- C. Deploying
- D. Planning

3.

The answer is: B.

Application migration overview

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Figure 1-17. Review answers



## Review answers

3. The migration and deployment process for FileNet Content Manager applications is a multi-step process. Choose the answer that completes the following statement correctly.
- > *Initial design of the application occurs in the development environment. You create an Application Package in the development environment that you can put into change control. You migrate and deploy the Application Package to the other environments required.*
- For example: DEV > QA > Production. Modifications to security might be made in pre-production environments. All changes must be duplicated in development.
  - If changes are required in other environments, you make the changes in development and repeat the migration/deployment.
  - You make changes as you go in all pre-production environments, and update the migration and deployment instructions. You never revert to the development environment.
  - Modifications might be made in any environment, even Production.



The answer is A.

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*Figure 1-18. Review answers*

## Review answers

4. Backing up the system is one of the Migration and deployment phases. Which phase does Backing up the system precede?

- A. Verifying Phase
- B. Migrating Phase
- C. Deploying Phase
- D. Analyzing

The answer is C.



5. What tool is used to migrate and deploy FileNet P8 assets?

- A. IBM Content Navigator administration tool
- B. Administration Console for Content Platform Engine
- C. FileNet Enterprise Manager
- D. FileNet Deployment Manager

The answer is D.

## Review answers

6. True or False: External assets are migrated and deployed with an external tool, based on the asset.  
The answer is True.



7. True or False: The migration and deployment of a FileNet Content Manager application from one environment to another is the sole responsibility of the administrators  
The answer is False.

---

# Unit 2. Plan and prepare for application migration

## Estimated time

00:30

## Overview

In this unit, you learn how to plan and prepare for a FileNet P8 application migration.

## How you will check your progress

Successfully complete the unit exercises.

## References

FileNet P8 Platform 5.2.1 Knowledge Center:

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8toc.doc/welcome\\_p8.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8toc.doc/welcome_p8.htm)

IBM Case Manager 5.2 Solution Deployment Guide, Part 2:

[https://www.ibm.com/developerworks/community/blogs/e8206aad-10e2-4c49-b00c-fee572815374/entry/ibm\\_case\\_manager\\_5\\_2\\_solution\\_deployment\\_guide](https://www.ibm.com/developerworks/community/blogs/e8206aad-10e2-4c49-b00c-fee572815374/entry/ibm_case_manager_5_2_solution_deployment_guide)

Chapter: Source and destination environment compatibility

## Why is this lesson important to you?

- You need to migrate and deploy a FileNet Content Manager application from one FileNet P8 environment to another. For example, from development to User Acceptance Test.
- You need to complete planning and preparation steps before you can start migrating and deploying the application.

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Figure 2-1. Why is this lesson important to you?

## Unit objectives

- Plan and prepare for application migration.
- Identify the application assets.
- Verify source and destination environment compatibility.
- Configure the environments in FileNet Deployment Manager.

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*Figure 2-2. Unit objectives*

## Planning for application migration

- Planning your application deployment is:
  - The first phase of application migration and deployment.
  - Key to a successful migration and deployment.
- Assemble Migration and deployment instructions
  - Comprehensive set of tailored instructions that document the process for migrating deploying an application.
- Identify and document application assets
  - Include roles and LDAP users or groups required.
  - Include a description of the application components and the tool used to develop them.
- Review source and destination environment compatibility
  - Review the equipment available
  - Acquire the appropriate access rights
  - Ensure compatibility of the object stores

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*Figure 2-3. Planning for application migration*

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Migration and deployment overview>Deployment planning

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/overview\\_planning.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/overview_planning.htm)

Planning your application deployment is the first phase of application migration and deployment. Planning is key to a successful application migration.

### ***Assemble Migration and deployment instructions***

You need to assemble a comprehensive set of tailored instructions that document the process for migrating and deploying an application from the development environment to other environments, such as User Acceptance Test.

### ***Identify and document all the application assets***

Document all the assets of the application as you design the application. Include:

- The roles and the LDAP users and groups required to associate with the roles.
- A description of the major components of the application with the tools used to create them.

***Review source and destination environment compatibility.***

Review the assets that you plan to move in both the source and destination environment.  
Understand any dependencies that might exist.

## Plan the migration and deployment strategy

- Things to consider:
  - What environments do you need to migrate/deploy to?
    - Test, QA, Production
  - How is Change Control implemented?
  - Different assets of the application might need to be modified at different times.
  - What security changes are needed when you migrate/deploy to Test, QA, or Production.
  - Who is exporting the assets from development and creating the application package?
  - What is the expected lifecycle of the application?
    - How to handle updates.

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*Figure 2-4. Plan the migration and deployment strategy*

It is important to plan the migration and deployment strategy for the application. Although the Administrator has primary responsibility for migrating and deploying the application to the non-development environments, the migration and deployment strategy should be coordinated between the Solution Builder/Developer, the Security Administrator, and the Administrator.

Things to consider when planning the application migration and deployment strategy:

- What environments do you need to migrate and deploy the application to?
- How is change control for the application maintained?
- Different application assets might need to be modified at different times.
- What security changes are needed on Test, QA, or Production environments.
- Who runs the export of the application assets in the development environment? Ideally the Solution Builder/Developer.
- What is the expected lifecycle of the application?
  - In what environment are updates made before migrating/deploying to Production?

## Assemble migration/deployment instructions

### Migration and Deployment instructions

- ▲ Application Package description:
  - ▲ Prerequisites
    - Destination environment required configuration
  - ▲ Migration and Deployment
    - Migrate and deploy FileNet P8 Assets:
    - Migrate and deploy other IBM Assets
  - ▲ Application Verification:
    - Application overview
    - How to test

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*Figure 2-5. Assemble migration/deployment instructions*

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Migration and deployment overview>Deployment planning>Assembling migration and deployment instructions

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/p8\\_pdb006.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/p8_pdb006.htm)

The migration/deployment instructions should include:

- A description of the contents of the Application Package.
- All the required steps, and their order of execution to migrate and deploy the application successfully.

Create this document during the development phase of your application to make the process more efficient. The Migration and Deployment instructions will need refining as the migration/deployment process begins.

The slide shows a sample of the headings that might be included in the Migration and Deployment Instructions.

Application Package description.

- A detailed description of the Application Package - lists all the components and a brief description, included in the Application Package zip file.

- Prerequisites

- Prerequisite system configuration steps that are needed before the use of FileNet Deployment Manager, such as:
    - Ensuring the necessary object store exists in the destination environment, with all the necessary Addons installed.
    - Ensuring that the two Document Approval workflows are configured and deployed in the destination environment.

- Migration and Deployment

- Detail steps on how to:
    - Migrate and deploy FileNet P8 assets.
    - Migrate and deploy other IBM assets.
    - Migrate and deploy external assets.
  - Post-requisite steps that are needed after the migration/deployment of the application. For example, the setup of printers that are expected to be available as a part of the user operating environment.
  - Security configuration details.

- Application Verification

- Describe the purpose of the application and the roles involved. If it makes sense include a diagram that outlines the flow of the application.
  - Include steps for testing the application in the destination environment, to verify that the application is operational.

## Identify application assets

- Track the application assets as you develop the application.
- Asset tracking spreadsheet
  - Prepared by the Solution Builder/Developer
  - Should include:
    - Name and type of the asset
    - Source security
    - Dependencies between assets
    - Location of assets

Application Assets Tracking Spreadsheet						
Name	Category	Description	Dependencies	Location	Source Security	Destination Security
Orders	FileNet P8 Asset	Folder that contains: Orders, product orders and service orders. Tif files and pdfs (total of 22 objects).	Document classes: Orders - Product Orders - Service Orders	Object Store: Sales	Owner: P8Admin, P8Admins Reader: P8Users	
Customers	FileNet P8 Asset	Folder that contains: 2 custom objects (A131, OC3213)	Document classes: Customer	Object Store: Sales	Owner: P8Admin, P8Admins Reader: P8Users	
Sales desktop	Other IBM Asset	IBM Content Navigator desktop for Sales application	Requires IBM Administration Console for Content Platform Engine	Sales Application\Other IBM assets\SalesDesktopExport.properties	Access not limited to specific users. Uses Object store authentication	

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Figure 2-6. Identify application assets

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Migration and deployment overview>Deployment planning>Identifying application artifacts and assets

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/p8\\_pdb004.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/p8_pdb004.htm)

The Solution Builder/Developer needs to use some method of tracking the assets of an application during development.

The information can be provided as a spreadsheet or document that should include:

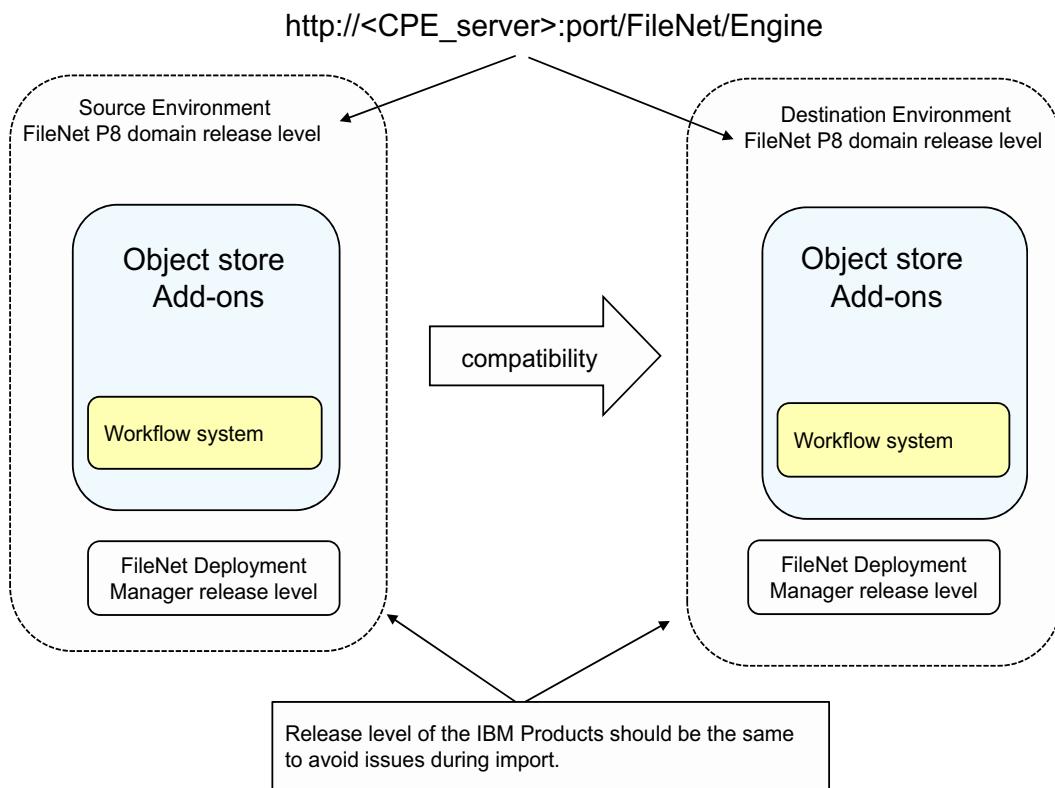
- The name of the asset.
- The type of the asset.
- Description of the asset.
- Any dependencies between assets.
- The location of the asset.
- Source Security.

The destination environment security is something that should also be included. However, the Solution Builder/Developer needs to collaborate with the FileNet P8 Administrator and the Security Administrator to define the destination environment security.

Optional comments might also be included to add special instructions.

The screen capture shows an example of an application assets tracking spreadsheet.

## Source and destination environment compatibility



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Figure 2-7. Source and destination environment compatibility

### Reference

**IBM Case Manager 5.2 Solution Deployment Guide, Part 2: Advanced Solution Migration and Deployment**

[https://www.ibm.com/developerworks/community/blogs/e8206aad-10e2-4c49-b00c-fee572815374/entry/ibm\\_case\\_manager\\_5\\_2\\_solution\\_deployment\\_guide](https://www.ibm.com/developerworks/community/blogs/e8206aad-10e2-4c49-b00c-fee572815374/entry/ibm_case_manager_5_2_solution_deployment_guide)

Chapter: Source and destination environment compatibility

Before application deployment, you need to ensure that the source and destination environments are compatible.

- Object store Add-ons must be the same in the source and destination object stores.
- The release level of the deployment tool, FileNet Deployment Manager should match the server that they are connecting to.
  - You do not need to worry about the fix pack level.
- The release level of the IBM Products should be the same in the source and destination environments to avoid issues during import.

To determine the release level for:

- A FileNet P8 domain, in a browser window, type, `http://<CPE_server>:port/FileNet/Engine`.
- FileNet Deployment Manager, open the FileNet Deployment Manager tool and select Help>about.

## Perform one-time configuration setup tasks

- Create FileNet Deployment Tree
  - Decide where to create the FileNet Deployment Tree.
    - Use default path or create a custom path?
  - Should you run FileNet Deployment Manager (FDM) Connected or Disconnected?
    - Connected - You must have internet access to both the source and destination environment.
    - Disconnected - The running FDM can connect only to one environment at a time.
- Create FileNet Deployment Environments:
  - Source Environment
  - Destination Environment

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*Figure 2-8. Perform one-time configuration setup tasks*

### Help paths

FileNet P8 Platform 5.2.1>Migrating and deploying applications>The FileNet Deployment Manager tool>Working with the interface>Creating or selecting a deployment tree

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/deploy\\_mgr\\_howto\\_deploy\\_tree.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/deploy_mgr_howto_deploy_tree.htm)

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>Defining the deployment environment

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/definethedeploymentenvironment.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/definethedeploymentenvironment.htm)

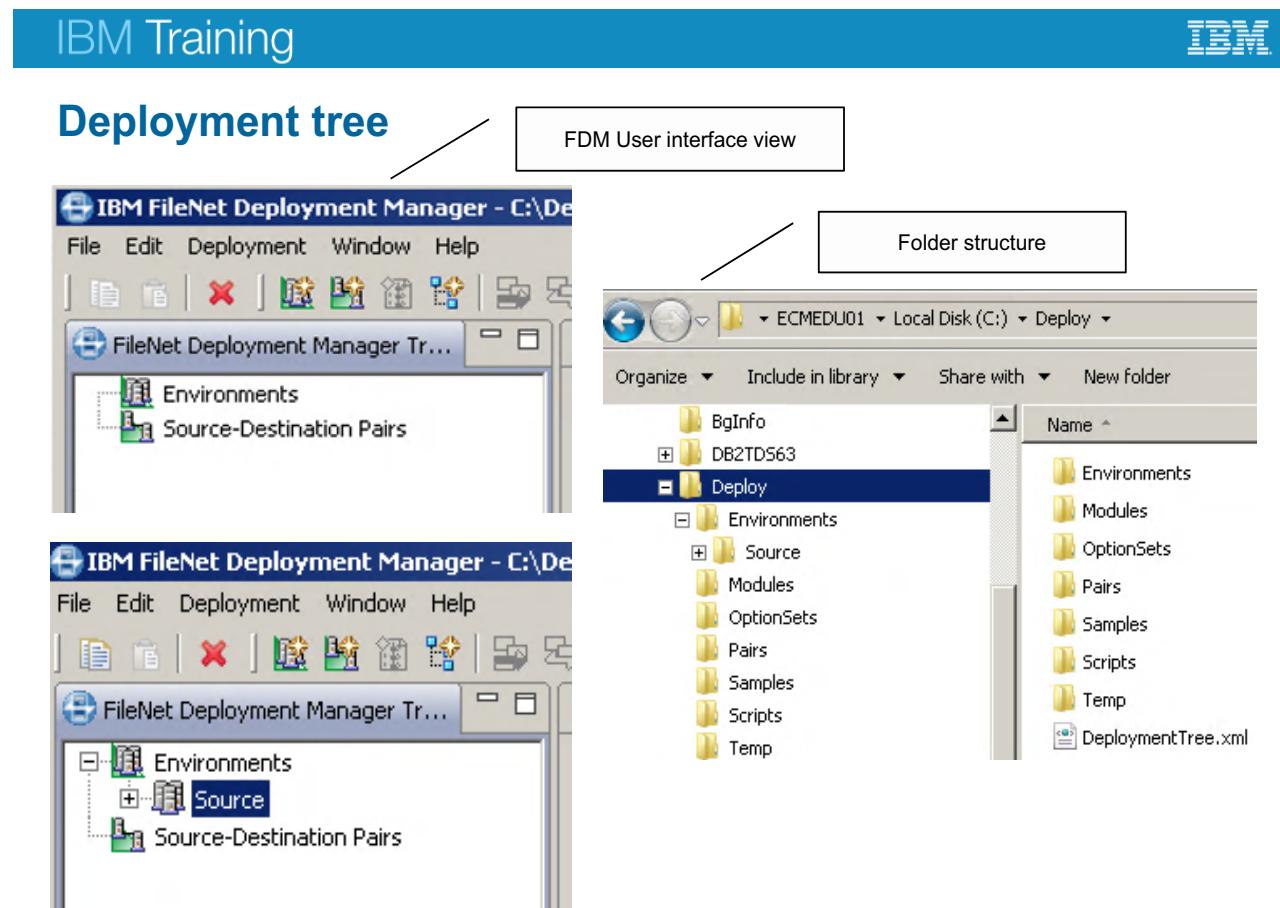
The last step in planning and preparing for application deployment is to run one-time configuration and setup tasks.

A few steps must be run only one time per source/destination environment pair.

- Create the FileNet Deployment Tree.
- Create the FileNet Deployment Environments.

When you create the FileNet Deployment tree, you need to make a couple of decisions:

- Where to create the FileNet Deployment tree? By default the system creates the deployment tree under <CPE\_install\_path>\tools\deploy\P8DeploymentData. You can accept the default path or choose a custom path.
- To run FileNet Deployment Manager connected or disconnected mode.
  - Connected mode: Do you have internet access to both the source and destination environments?
  - Disconnected mode: The running FDM instance can connect only to one environment at a time.
  - You could have two distinct instances of FDM running. One connected to the source environment and the other connected to the destination environment. The two instances must be running on different systems.
  - Do you have a shared drive that can be accessed from all environments?
- Create the FileNet Deployment Environments. At a minimum, you need to create one source. If you are running in connected mode, you can create destination environments for all environments that you can connect to. For example, you can create environments for:
  - Development environment
  - Test environment
  - UAT environment



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Figure 2-9. Deployment tree

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>The FileNet Deployment Manager tool>Deployment trees

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/deploy\\_mgr\\_concepts\\_deploy\\_trees.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/deploy_mgr_concepts_deploy_trees.htm)

FileNet Deployment Manager requires that you work within a predefined folder structure that is called the deployment tree.

When you first start FileNet Deployment Manager and create the deployment tree, two folders are created under the deployment tree:

- Environments
- Source-Destination Pairs

The screen capture on the upper left shows the navigation pane of FileNet Deployment Manager (FDM) after the creation of a new deployment tree.

When you create a source or destination environment, FileNet Deployment Manager creates a subfolder within the Environments folder for each environment.

The screen capture on the lower left, shows the FDM navigation pane after the creation of the environment, Source.

The screen capture on the right, shows the folder structure of the deployment tree, C:\Deploy.

**Note**

You can create the deployment tree anywhere you want.

Characteristics of deployment trees:

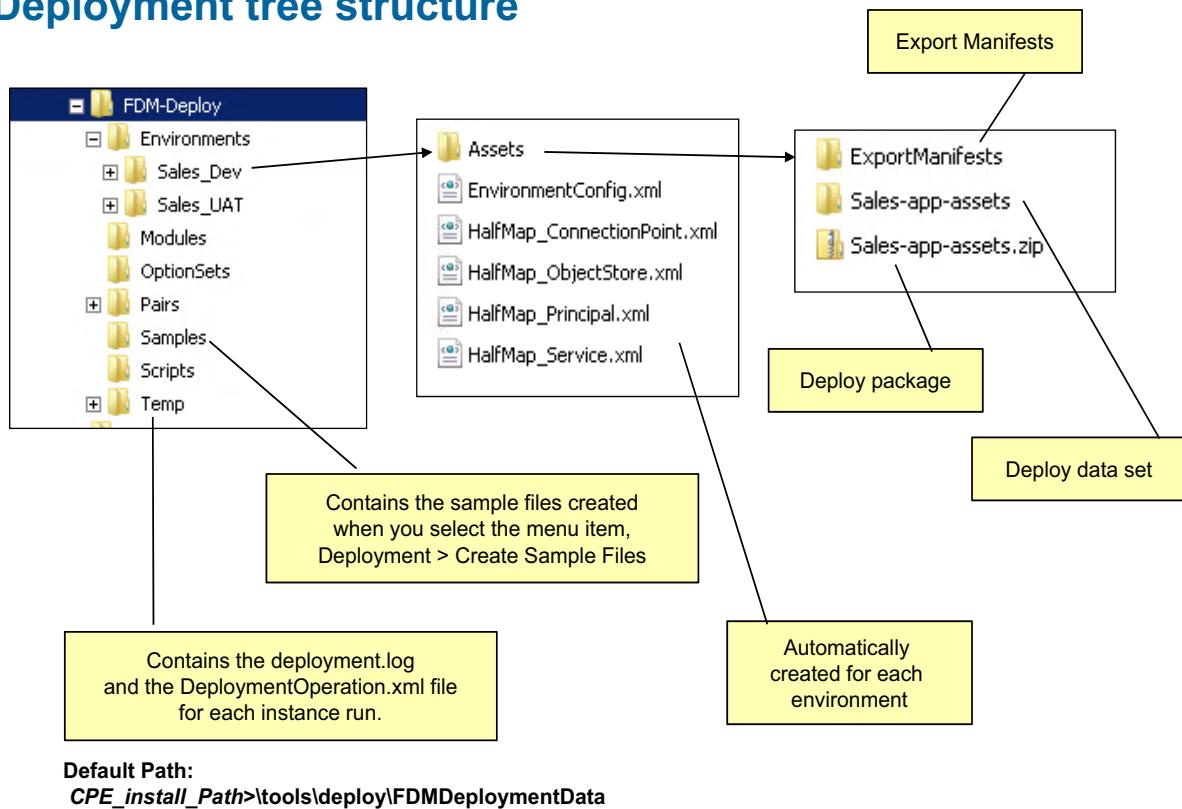
You can create an unlimited number of deployment trees.

You can move or copy an entire deployment tree structure; however, do not rename the individual folders or configuration files.

You can copy environments and pairs from one tree to another, provided you keep associated environments and pairs together.

You can delete a tree if the data is no longer needed.

## Deployment tree structure



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Figure 2-10. Deployment tree structure

The left screen capture shows a deployment tree that is created at C:\Deploy.

- Two environments are created, DeployApp\_QA and Dev\_Source.
  - When an environment is created, IBM FileNet Deployment Manager (FDM) automatically creates the folder structure that is shown, in the center screen capture.
  - The right screen capture shows the contents of the Assets folder:
    - The first two files are deploy data set folders.
    - The ExportManifests folder, contains all the export manifests created by FDM for the environment.
- The Samples folder contains the sample files. FDM provides a set of sample files that can be used as models to create the xml files that are needed to use with the command line interface (CLI). To create the sample files, select **Create Sample Files** from the **Deployment** menu.
- The temp folder contains a `Run.<timestamp>` folder for each time a deployment operation is run in FDM. The folder contains the deployment operation file, DeploymentOperation.xml run, and the deployment.log.
  - The DeploymentOperation.xml file can be used in the command-line interface.
  - The deployment.log is useful for troubleshooting.

- If running multiple instances of FileNet Deployment Manager
  - You can compress the entire folder structure or part of the folder structure and move it to another client with an instance of FDM, to easily reproduce the deployment tree or perhaps an environment.

FDM uses the default path show for the deployment tree. You can change the path, the next time you run FDM; it will remember the path that is most recently used.

## Environment half maps

- What is a half map?
  - A deployment file that contains a list of environment-specific information associated with the application.
  - Four files per environment
    - Object store half map
    - Security principle half map
    - Service half map
    - Connection point half map.

Half Maps		
Action	Type	Status
<a href="#">Retrieve Data...</a>	Object Store	no entries, no labels, updated Aug 10, 2015 at 10:42:47 AM
<a href="#">Retrieve Data...</a>	Storage Policy	no entries, no labels, updated Aug 10, 2015 at 10:42:47 AM
<a href="#">Retrieve Data...</a>	Storage Area	no entries, no labels, updated Aug 10, 2015 at 10:42:47 AM
<a href="#">Retrieve Data...</a>	Security Principal	no entries, no labels, updated Aug 10, 2015 at 10:42:47 AM
<a href="#">Retrieve Data...</a>	Service	no entries, no labels, updated Aug 10, 2015 at 10:42:47 AM
<a href="#">Retrieve Data...</a>	Connection Point	no entries, no labels, updated Aug 10, 2015 at 10:42:47 AM

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Figure 2-11. Environment half maps

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>The FileNet Deployment Manager tool>Deployment files

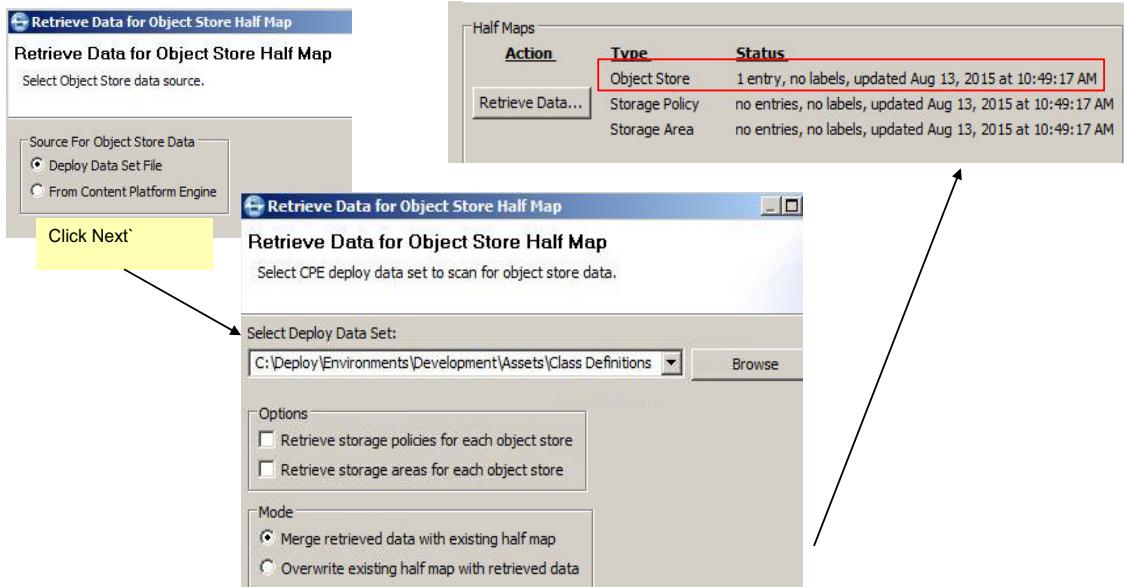
[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/deploy\\_mgr\\_concepts\\_deployment\\_files.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/deploy_mgr_concepts_deployment_files.htm)

FileNet Deployment Manager uses four files called half maps to contain environment-specific information. Each environment has its own set of half maps.

When you click Retrieve Data, for each of the half maps, you get two options to select what data source to use. The default selection for all of the half maps is to retrieve the data from a deploy data set. (Usually the preferred selection).

## Extract a source environment object store half map

- The object store half map contains a list of the object stores extracted from an environment.
  - File: HalfMap\_ObjectStore.xml



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Figure 2-12. Extract a source environment object store half map

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>Prepare data for deployment>Preparing the source environment>Extracting the source environment half maps>Extracting an object store half map

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/deploy\\_mgr\\_howto\\_object\\_store\\_half\\_maps.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/deploy_mgr_howto_object_store_half_maps.htm)

The object store half map contains the object stores of a specific environment. If you select to retrieve the object stores from a deploy data set, then the file contains only the object stores referenced in the exported deploy data set assets.

FileNet Deployment Manager stores the object store half map information in the file: <**deployment tree**>\Environments\<**environment\_name**>\HalfMap\_ObjectStore.xml.

When you click Retrieve Data, on the overview tab, you get a window that prompts you to select the object store data source (screen capture on the upper left).

- If you select **Deploy Data Set File**, all the object stores referenced by the assets, exported into the deploy data set, are added to the Object Store half map. (Usually the best selection).

- If you select **From Content Platform Engine**, all the object stores that are defined in the Content Platform Engine are added to the half map.

When you click Next, the screen capture on the bottom displays. If you selected to use a Deploy Data Set, then you need to specify the deploy data set. The remaining selections are displayed regardless of which option you select on the first window:

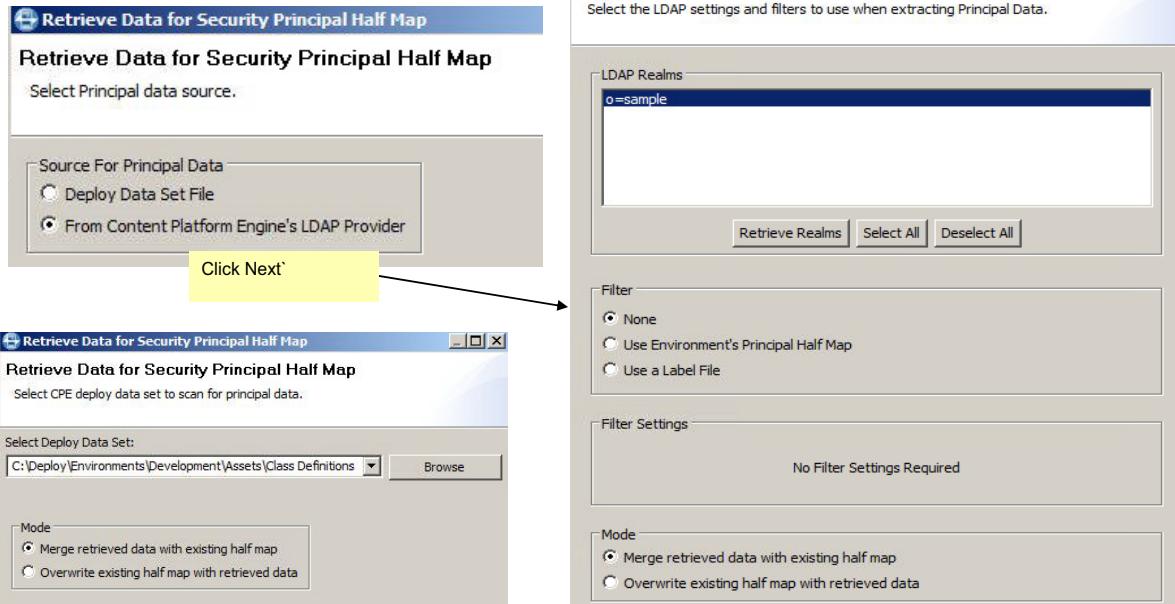
- **Options:**
  - **Retrieve the storage policies for each object store.**
  - **Retrieve storage areas for each object store.**
  - Select one or both of these options if your application requires them.
- **Mode**
  - **Merge retrieved data with an existing half map.**
  - **Overwrite existing half map with retrieved data.**

When you click Finish, the overview tab displays the number of object stores retrieved (screen capture on the upper right). In this example, one entry is retrieved.

If you have more than one deploy data set for your application, repeat the Retrieve Data steps, for each deploy dataset, and make sure that the **Mode** is set to **Merge retrieved data with existing half map.**

## Extract a source environment security principal half map

- The security principal half map contains a list of the security principals extracted from an environment.
  - File: HalfMap\_Principal.xml



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Figure 2-13. Extract a source environment security principal half map

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>Prepare data for deployment>Preparing the source environment>Extracting the source environment half maps>Extracting a security principal half map

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/deploy\\_mgr\\_howto\\_security\\_principal\\_half\\_map.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/deploy_mgr_howto_security_principal_half_map.htm)

The security principal half map contains a list of the security principals extracted from an environment.

FileNet Deployment Manager stores the principal half map information in the file: <**deployment tree**>\Environments\<**environment\_name**>\HalfMap\_Principal.xml.

When you click Retrieve Data, on the overview tab, you get a window that prompts for the security principal data source.

- If you select **Deploy Data Set File**, all the users and groups associated with the assets, exported into the deploy data set, are added to the security principal half map (selection used most often). The windows that are displayed are similar to the windows on the previous slide, except that you get the Mode selection on the second screen only (screen capture on the lower left).

- If you select **From Content Platform Engine's LDAP Provider**, the **Select LDAP settings and filters to use when extracting Principal data** window opens (the screen capture on the right). You can retrieve LDAP realms. The screen capture shows the LDAP realm, o=sample. You have three options for filtering:
  - **None** – Retrieve data for all the users and groups in the LDAP realm specified.
  - **Use Environment's Principal Half Map** – Retrieve data only for the users and groups, from the LDAP realm, that match the specified environment's principal half map.
  - **Use a Label File** – Retrieve data only for the users and groups, from the LDAP realm, that are identified in the specified file.

If you have more than one deploy data set for your application, repeat the Retrieve Data steps, for each deploy dataset, and make sure that the **Mode** is set to **Merge retrieved data with existing half map**.

## Service and Connection Point half maps

Half Maps		
Action	Type	Status
Retrieve Data...	Object Store	no entries, no labels, updated Aug 10, 2015 at 10:42:47 AM
Retrieve Data...	Storage Policy	no entries, no labels, updated Aug 10, 2015 at 10:42:47 AM
Retrieve Data...	Storage Area	no entries, no labels, updated Aug 10, 2015 at 10:42:47 AM
Retrieve Data...	Security Principal	no entries, no labels, updated Aug 10, 2015 at 10:42:47 AM
Retrieve Data...	Service	no entries, no labels, updated Aug 10, 2015 at 10:42:47 AM
Retrieve Data...	Connection Point	no entries, no labels, updated Aug 10, 2015 at 10:42:47 AM

FileNet Content Manager applications might have Service data.  
To find out whether you have service data, extract the service data from the deploy data set.

No Connection Point data for FileNet Content Manager applications

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Figure 2-14. Service and Connection Point half maps

### Help paths

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>Prepare data for deployment>Preparing the source environment>Extracting the source environment half maps>Extracting a service half map

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/extract\\_servicedata\\_halfmap.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/extract_servicedata_halfmap.htm)

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>Prepare data for deployment>Preparing the source environment>Extracting the source environment half maps>Extracting a connection point half map

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/extract\\_connection\\_point\\_halfmap.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/extract_connection_point_halfmap.htm)

### Service half map

In a few situations you might have service data for a FileNet Content Manager application. You always extract the service data from the deploy data set, if no entries are retrieved you know that you do not have service data.

FileNet Deployment Manager stores the service half map information in the file:

**<deployment tree>\Environments\<environment\_name>\HalfMap\_Service.xml.**

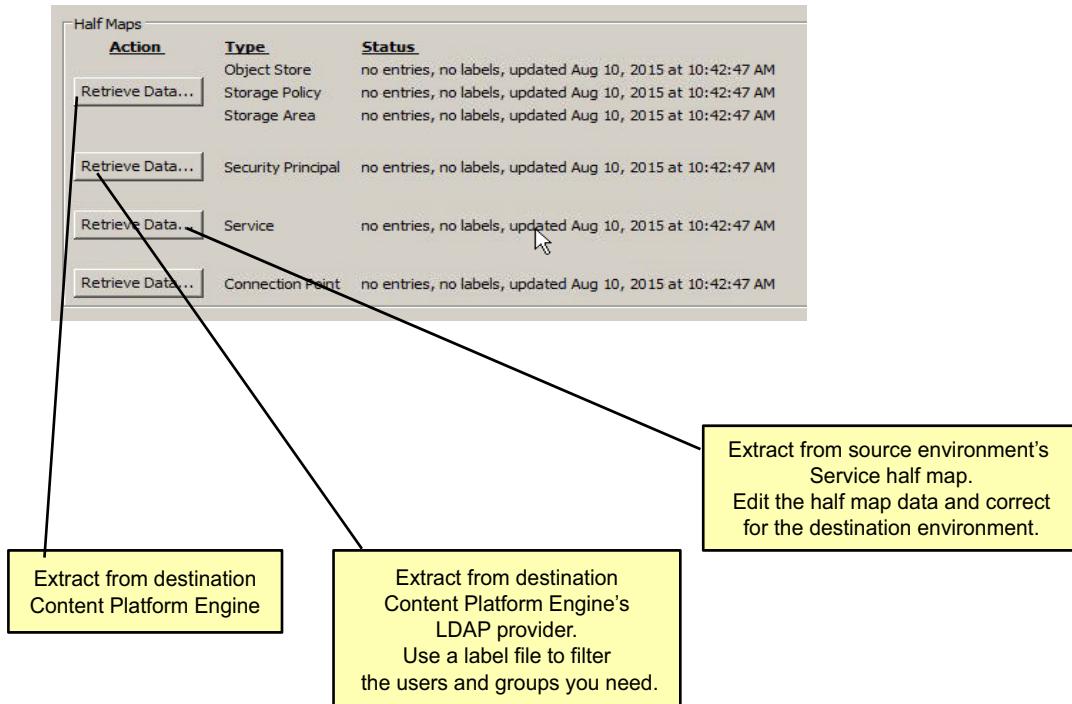
#### **Connection point half map**

The connection point half map contains the workflow system connection points of a specific environment. FileNet Content Manager applications do not have connection point data. Connection point data applies to IBM Case Foundation applications that contain custom workflows.

FileNet Deployment Manager stores the connection point half map information in the file:

**<deployment tree>\Environments\<environment\_name>\HalfMap\_ConnectionPoint.xml.**

## Destination environment half maps



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Figure 2-15. Destination environment half maps

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>Prepare data for deployment>Prepare the destination environment>Extracting the destination environment half maps

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/p8\\_pdb026.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/p8_pdb026.htm)

A destination environment half map is identical to a source environment half map, except it contains data for the destination environment. You typically retrieve the data for a destination environment half map from the destination environment, not a deploy data set.

#### Destination object store half map:

- Extract the object store data from the destination Content Platform Engine.

#### Destination security principal half map:

- Extract the security principal data from the destination Content Platform Engine's LDAP provider.
- Use a label file to filter the users and groups you need.

#### Destination service half map:

- Extract the service data from source environment's Service half map, if it exists.
- Edit the destination service half map data and make the necessary corrections for the destination environment.

**Destination Connection Point half map:**

- FileNet Content Manager applications do not contain connection point data.
- Connection Point data only applies to IBM Case Foundation applications that contain custom workflows.

## Instructor demonstration

- Getting started with FileNet Deployment Manager.



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Figure 2-16. Instructor demonstration

1. Start FileNet Deployment Manager.
2. Create a Deployment Tree. For example, C:\Deploy.
3. Create an environment. For example, Sales\_Test.
  - a. Configure the connection to the Content Platform Engine.
4. Explore the FileNet Deployment Manager menus and tool bar icons.
5. Expand the deploy package and create a source environment.
6. Examine the source environment half maps.

## Unit summary

- Plan and prepare for application migration.
- Identify the application assets.
- Verify source and destination environment compatibility.
- Configure the environments in FileNet Deployment Manager.

Plan and prepare for application migration

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*Figure 2-17. Unit summary*

## Exercise: Plan and prepare for application migration

Plan and prepare for application migration

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*Figure 2-18. Exercise: Plan and prepare for application migration*

## Exercise introduction

- Explore the Sales Application package
- Verify object store Add-ons
- Create a deployment tree.
- Create a source environment.
- Create a destination environment.
- Extract the destination environment half maps.



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Figure 2-19. Exercise introduction

In this exercise, you:

- Explore the Sales Application package that the Solution Builder provided.
- Complete one-time configuration setup tasks to prepare the Sales application for migration and deployment to the destination environment.

---

# Unit 3. Export the application assets

## Estimated time

00:30

## Overview

In this unit, you export the FileNet P8 application assets and create an application package for application migration.

## How you will check your progress

Successfully complete the unit exercises.

## References

FileNet P8 Platform 5.2.1 Knowledge Center:

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8toc.doc/welcome\\_p8.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8toc.doc/welcome_p8.htm)

## Why is this lesson important to you?

- You need to migrate and deploy an IBM FileNet Content Manager application from one FileNet P8 environment to another, for example development to User Acceptance Test.
- You need to export the application assets so that they can be imported into another environment.

Export the application assets

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Figure 3-1. Why is this lesson important to you?

## Unit objectives

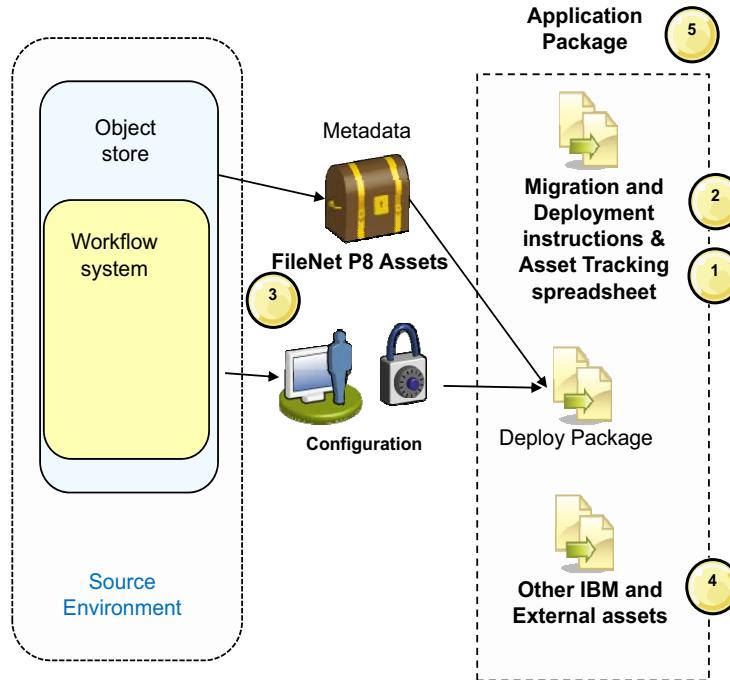
- Export the application assets.

Export the application assets

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*Figure 3-2. Unit objectives*

## Export the application assets



Export the application assets

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Figure 3-3. Export the application assets

Exporting the application assets is part of the Migrating Phase.

The diagram outlines the process that one goes through when exporting the application assets for the first time from a source environment.

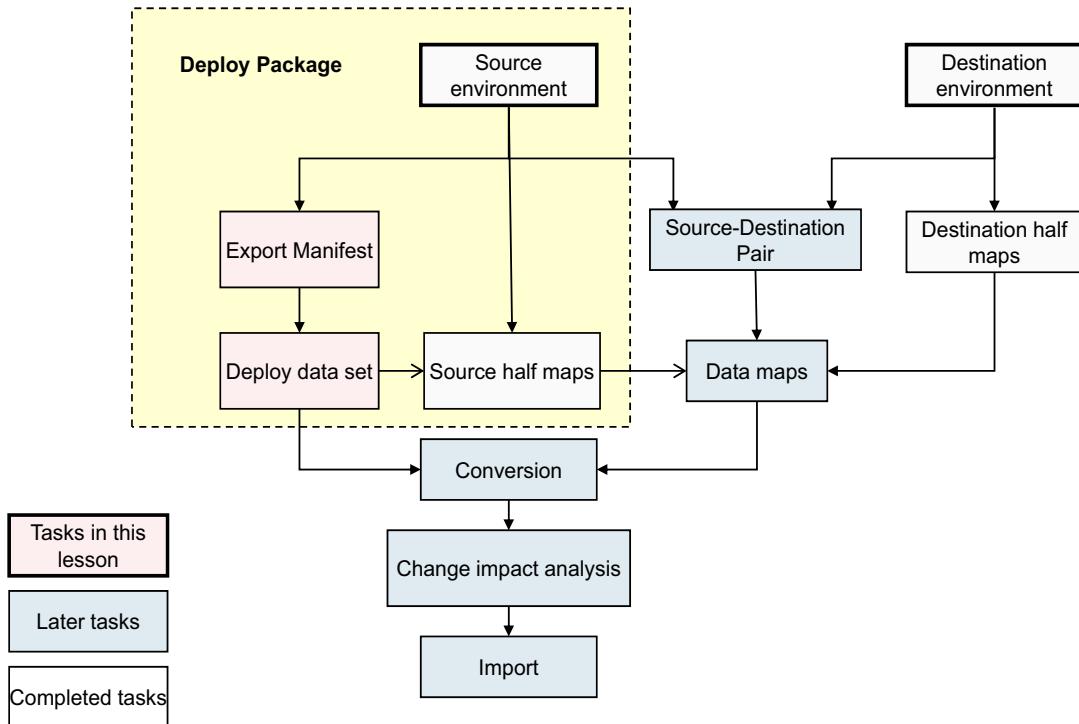
The Solution Builder/Developer, during application development:

1. Keeps track of all the assets of the application in the Asset Tracking spreadsheet.
2. Assembles the initial draft of the Migration and deployment instructions.

When the application is ready to deploy to another environment, you:

3. Export the FileNet P8 assets and any security configuration required and creates one or more Deploy Packages.
4. Export other IBM assets and external assets.
5. Create an Application Package.

## FileNet Deployment Manager – export tasks



Export the application assets

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Figure 3-4. FileNet Deployment Manager – export tasks

The diagram shows the FileNet Deployment Manager tasks that must be completed to migrate and deploy FileNet P8 assets. The order of tasks is flexible and based on object dependencies. The arrows indicate dependencies.

- The yellow box, labeled Deploy Package, which is outlined in dashes, shows the tasks that are completed to export the FileNet P8 assets and create a Deploy Package.

In the previous lesson, you created the source and destination environments and their respective half maps. If you have a deploy package, it means that someone else completed the export tasks:

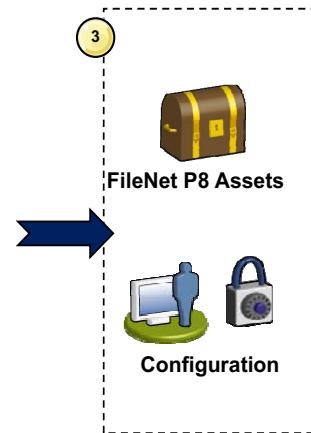
- Create the Export Manifest.
- Perform the export to create Deploy Datasets.
- Extract Source environment half maps.

In the next few slides you cover the tasks in light red:

- Export Manifest
- Deploy Dataset

## Export the FileNet P8 assets

- Create export manifests.
  - Might need to create more than one to handle asset dependencies.
- Add assets to the export manifests.
  - Include workflow definition and related workflow subscription in same export manifest.
- Define export include options.
  - Narrowly focus the export and avoid implicit inclusion of unwanted objects.
- Export to create a deploy data set.
  - Each export manifest creates a deploy data set.



[Export the application assets](#)

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Figure 3-5. Export the FileNet P8 assets

The primary type of assets that are included in an IBM FileNet Content Manager application are FileNet P8 assets.

Commonly used FileNet P8 assets:

- Classes, properties, and content-based objects like forms, search templates, and form templates.

Several steps are involved in exporting FileNet P8 assets with FileNet Deployment Manager (FDM).

- a. Create export manifests – lists the assets to export.
  - Starting with FDM version 5.2, if you include assets that have dependencies in a single export manifest, FDM will attempt to resolve the asset dependencies during the import.
  - In rare occasions, you might need to create multiple export manifests to handle the situations that FDM cannot handle.
- b. Add assets to the export manifests.



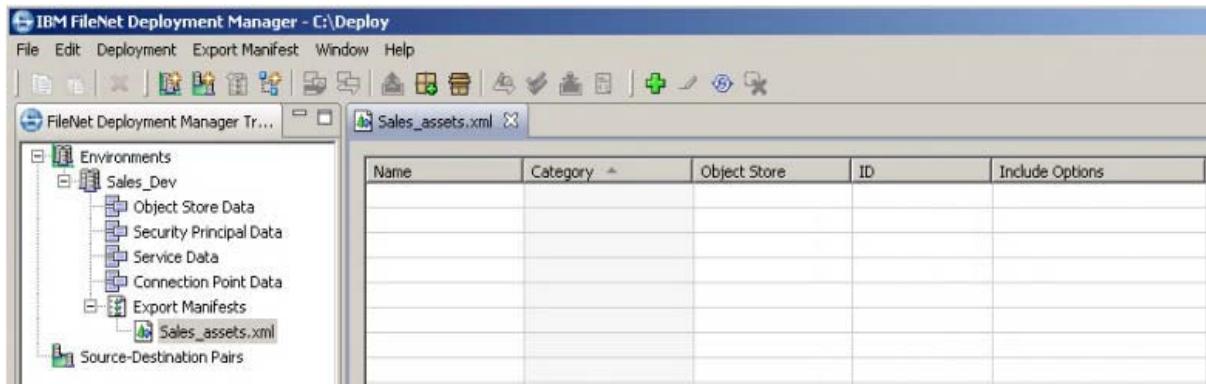
## Information

A new feature was added to FileNet Deployment Manager version 5.2, that provides the option to transfer a workflow definition after import.

- To link any related workflow subscriptions automatically, both assets must be included in the same export manifest.
  - This only works for the current version of the workflow, so make sure that the subscription is linked to the current version of the workflow definition.
  - If your workflow subscription is linked to say version 01 of the workflow definition, but the most recent workflow definition is version 02 and that is what is exported. Then, the import fails with a Java stack trace and an error of E\_REQUIRED\_VALUE\_ABSENT. This features applies to IBM Case Foundation applications.
- 
- c. Define export include options.
    - For a solution application deployment, the include options should narrowly focus the export and avoid implicit inclusion of unwanted objects.
  - d. Export the assets and create deploy datasets.
    - Each export manifest creates a deploy dataset.

## What is an export manifest?

- A file that lists the assets you want to export
  - FileNet Deployment Manager creates the export manifest file under an environment node.
    - Created with a user-defined name, such as Sales\_assets.xml
  - Each export manifest can contain only assets from a single object store.



[Export the application assets](#)

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Figure 3-6. What is an export manifest?

### Help path

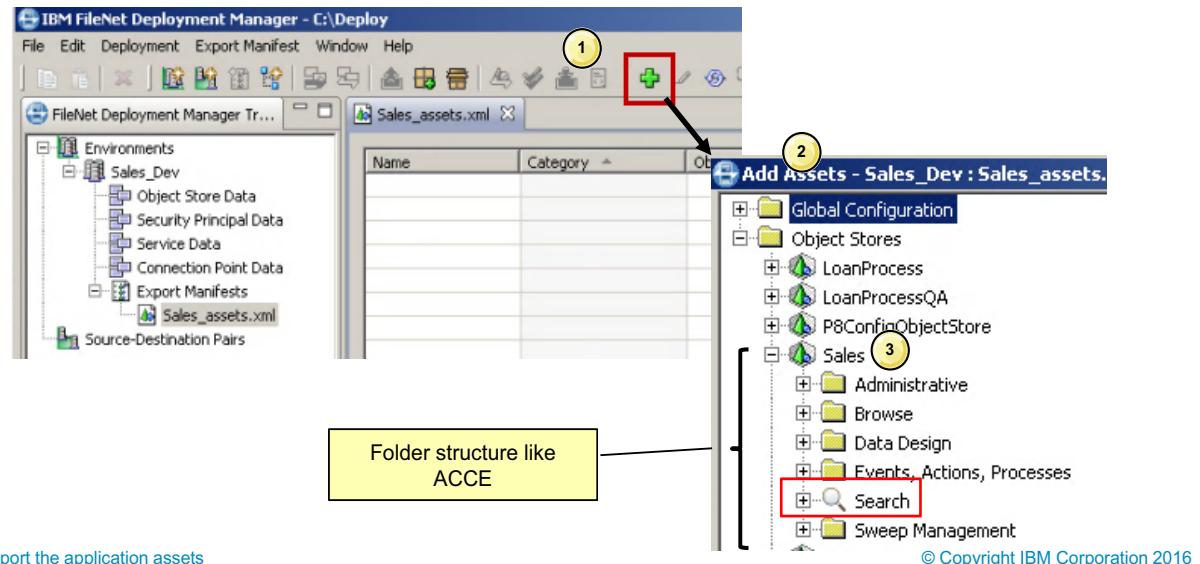
FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>Prepare data for deployment>Preparing the source environment>Creating or updating an export manifest

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/prepare\\_data\\_ce\\_export\\_manifest.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/prepare_data_ce_export_manifest.htm)

An export manifest lists the assets that you want to export from the object store of an environment. After you create an export manifest, you can add assets to it and specify which referenced objects to include with each asset by specifying the appropriate include options. You can also refresh an export manifest to remove assets that are deleted or update asset names that changed. Each export manifest can contain assets from a single object store only. After you create an export manifest, you can use it to export the assets and create a deploy dataset.

## Add assets to the export manifests

- With the export manifest open, click the green cross to open the Add Assets window.
- In the *Add Assets* window, expand the source object store.
  - The folder structure is identical to the folder structure in the Administration Console for Content Platform Engine.



Export the application assets

Figure 3-7. Add assets to the export manifests

### Help paths

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>Prepare data for deployment>Preparing the source environment>Creating or updating an export manifest>Adding assets to an export manifest by browsing

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/prepare\\_data\\_ce\\_add\\_assets.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/prepare_data_ce_add_assets.htm)

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>Prepare data for deployment>Preparing the source environment>Creating or updating an export manifest>Adding assets to an export manifest by using an SQL search

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/p8pdb031.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/p8pdb031.htm)

To add assets to an export manifest:

- Click the green cross in the toolbar.
- The Add Assets window opens.

- c. Open the object store that you want to add assets from. To make it easy for you to find the assets you want, the folder structure that is displayed is identical to the folder structure in the Administration Console for Content Platform Engine (ACCE).

The search node can be used to enter a SQL Search to retrieve a list of objects from which you can select items to include in the export manifest.

Any searches that are created in ACCE, show up as child nodes underneath the Search node and can be selected to load in the associated SQL Search query.

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## Edit the export manifest

Name	Category	Object Store	ID	Include Options
Customers	Folder	Sales	{13B65E7C-AFAD-40F7-9A77-94102F9E36FE}	custom
Orders	Folder	Sales	{CB2B7966-DA8C-4FA4-818B-47B906175BA6}	custom

- Export manifest editor
  - Contents are populated from the *Add Assets* operation.
  - Double-click the export manifest to open it.
  - Export *Include Options* can be set for each asset
    - Default, All, or Custom
    - Workflow system assets do not have include options

[Export the application assets](#)

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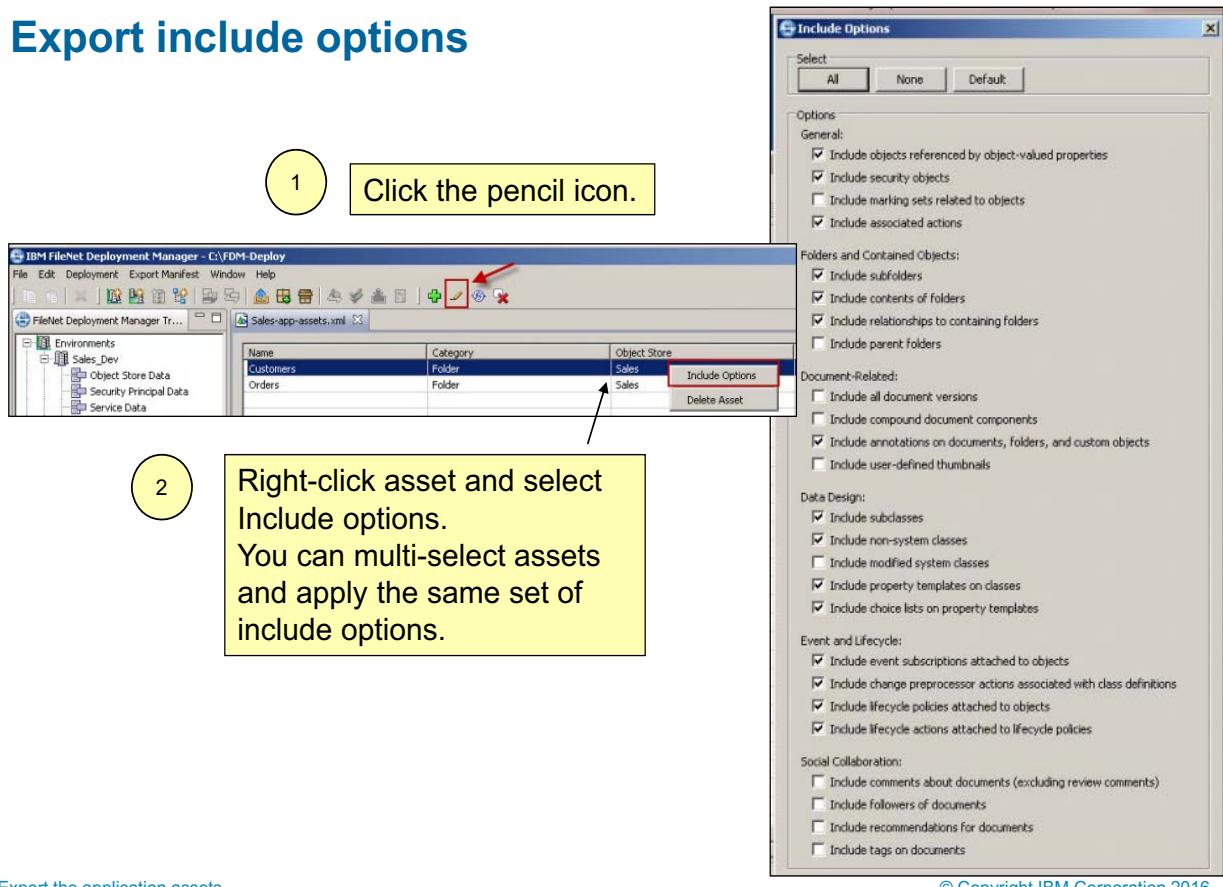
Figure 3-8. Edit the export manifest

Each asset that you select is added to the export manifest and is immediately visible in the export manifest editor. If you try to add an asset that exists in the export manifest, the operation is ignored.

Export ***Include Options*** can be set for each asset, except workflow system assets. When you add an asset, default export include options are set, based on the type of asset. You can edit the include options to customize the export include options.



## Export include options



Export the application assets

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Figure 3-9. Export include options

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>Prepare data for deployment>Preparing the source environment>Creating or updating an export manifest>Adding assets to an export manifest by browsing>Specifying the include options of an asset

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/prepare\\_data\\_ce\\_include\\_options.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/prepare_data_ce_include_options.htm)

Within the export manifest, the export include options control export activities on individual assets or objects. This control includes what referenced objects for an asset, such as metadata or folders, are added to the deployment data set. For example, an export manifest includes a folder. If the Folders and Contained Objects option to Include contents of folders, is selected, then all the documents contained in the folder are included in the export.

In addition, the include options that are specified for an asset propagate to any referenced objects that are added as a result of the include options.

To add include options, you can either:

- Select one or more assets in the export manifest and click the pencil icon in the menu. Option 1 in the diagram.

- Select one or more assets in the export manifest, right-click and select Include Options from the menu.

The Include Options window is displayed, screen capture on the right.

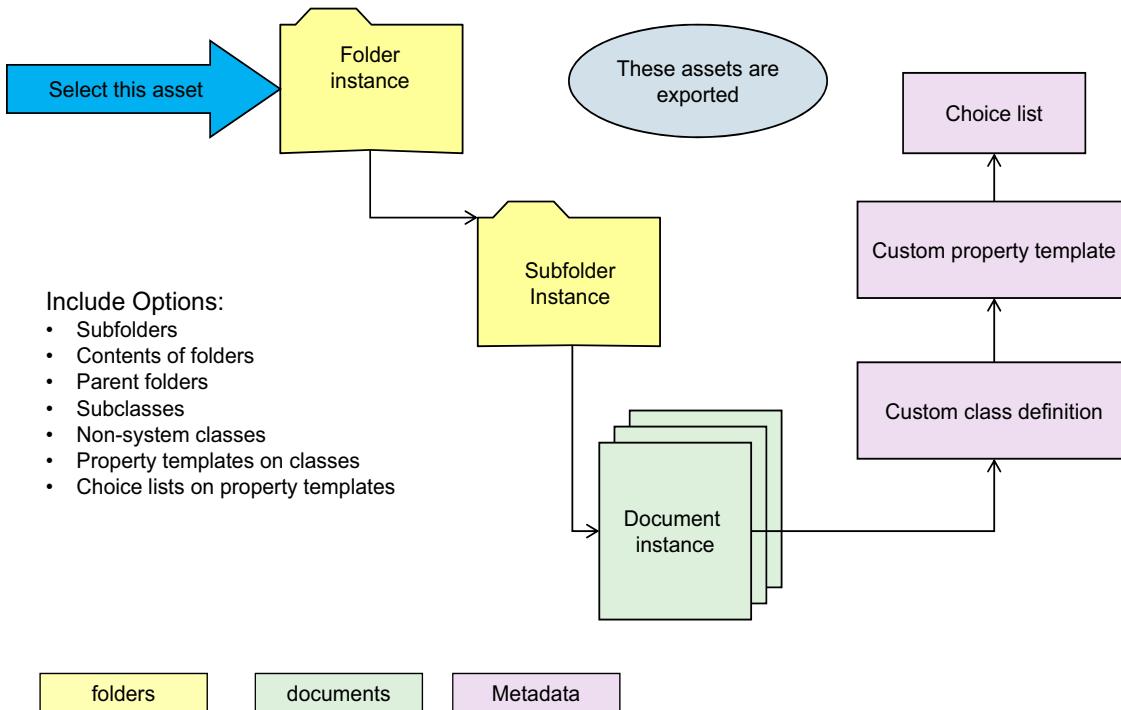
The Include Options window organizes the include options by object types.

Including too many objects in the export due to include options that add referenced objects can negatively affect the performance of both the export and import actions. For export, the number of referenced objects that result from the selected include options can increase the processing time associated with the export action. When you import the exported data, FileNet Deployment Manager must search the deploy data set for metadata and then arrange the import actions to ensure that the assets are imported in the correct order.

To avoid potential negative impacts:

- Only export the assets that are required.

## Asset Include Option propagation example



Export the application assets

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Figure 3-10. Asset Include Option propagation example

You can simplify the export process by using the Include Options propagation feature. For example, you can specify a folder and, by selecting the appropriate Include Options, export the documents, document classes, property templates, and choice lists, however, be careful that you are only exporting the objects you need.

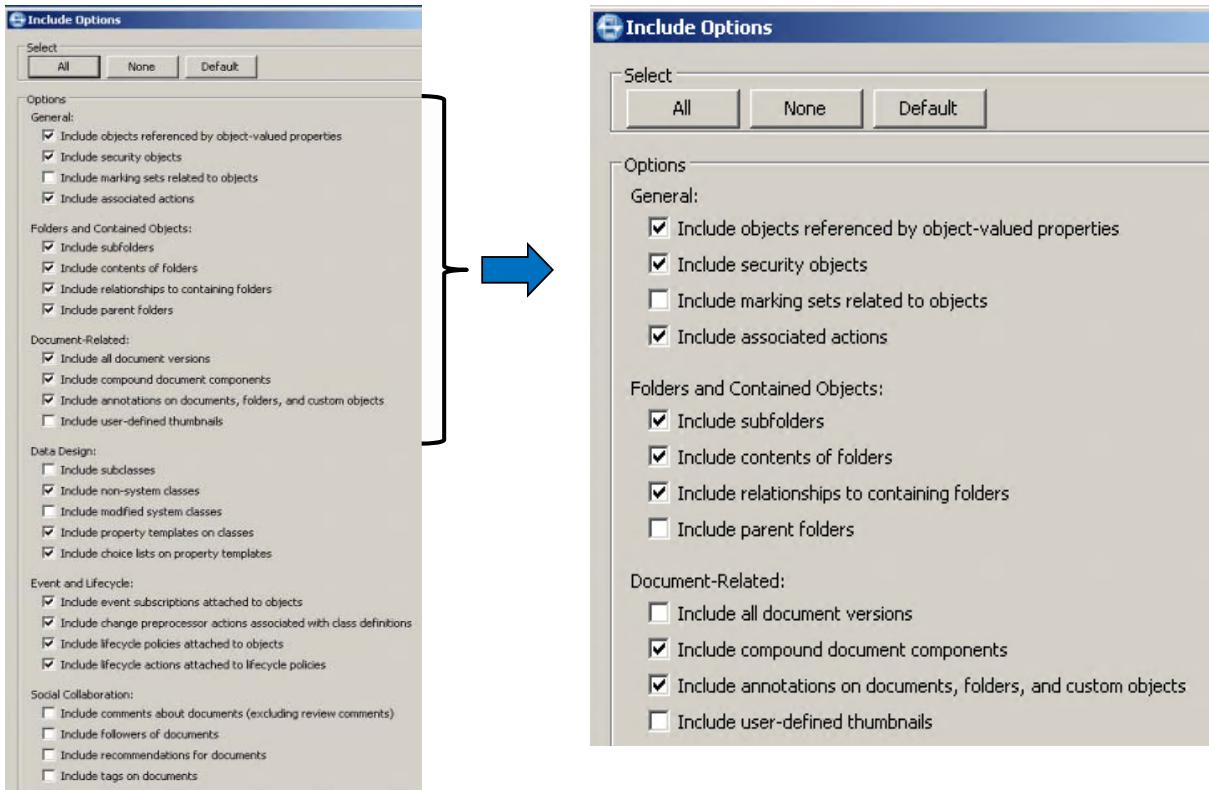
The diagram shows that by selecting a single folder and specifying the appropriate Include Options, you can export many other referenced objects without explicitly adding them to the Export Manifest.

The cascading action, from one asset or object, to its referenced objects, and then to more referenced objects, can result in a large number of objects added to the deployment data set that are not explicitly listed in the export manifest.

Verify the number of assets exported and make sure it is the number you expect.



## Export include options - guidelines



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Figure 3-11. Export include options - guidelines

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Migrating data with FileNet Deployment Manager>Data migration: Recommendations for export include options

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/p8\\_pdb041.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/p8_pdb041.htm)

The screen capture on the left, shows the default include options for a folder. A different set of include options are set depending on the asset that you add to the export manifest.

You generally start with the default include options. To export only the assets you need, clear certain options, depending on the type of asset you are exporting. You might have to run several iterations of the export until you find the include options that export only the assets that you need.

The screen capture on the right, shows the first 3 types of assets and the include options commonly selected for a folder asset:

- General
  - Keep the default options
- Folders and Contained Objects

- Deselect include parent folders – It is best to explicitly add the parent folder. Many times the parent folder is a system folder, which you never want to include.
  - Document-Related
    - Deselect include all document versions – If you need to move all the document versions, then check this option.
- 



### Important

If you export only the most current version of a document, when a document is revised you need to edit the export manifest, delete the older document version, and add the most current document version to the export manifest.

---



## Export include options – guidelines (2)

**Include Options**

Select: All | None | Default

Options:

- General:
  - Include objects referenced by object-valued properties
  - Include security objects
  - Include marking sets related to objects
  - Include associated actions
- Folders and Contained Objects:
  - Include subfolders
  - Include contents of folders
  - Include relationships to containing folders
  - Include parent folders
- Document-Related:
  - Include all document versions
  - Include compound document components
  - Include annotations on documents, folders, and custom objects
  - Include user-defined thumbnails
- Data Design:
  - Include subclasses
  - Include non-system classes
  - Include modified system classes
  - Include property templates on classes
  - Include choice lists on property templates
- Event and Lifecycle:
  - Include event subscriptions attached to objects
  - Include change preprocessor actions associated with class definitions
  - Include lifecycle policies attached to objects
  - Include lifecycle actions attached to lifecycle policies
- Social Collaboration:
  - Include comments about documents (excluding review comments)
  - Include followers of documents
  - Include recommendations for documents
  - Include tags on documents

Export the application assets

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Figure 3-12. Export include options – guidelines (2)

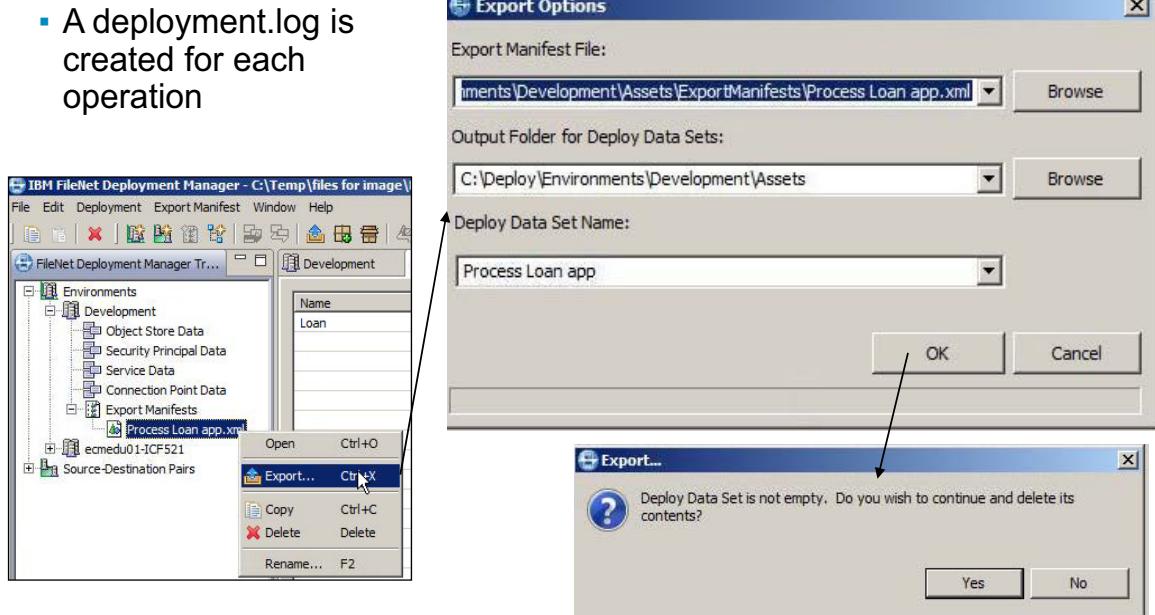
The screen capture on the left, shows the default include options for an asset of type folder.

The screen capture on the right, shows the last 3 types of include options and the options commonly selected:

- Data Design
  - Keep the defaults
- Event and Lifecycle
  - Keep the defaults
- Social Collaboration
  - Keep the defaults – if your source environment has IBM Connections configured and the application requires social collaboration information, then select the options you need.

## Export assets to a deploy data set

- In the FileNet Deployment Manager tree pane
  - Right-click the export manifest under the environment
  - Select Export
  - A deployment.log is created for each operation



Export the application assets

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Figure 3-13. Export assets to a deploy data set

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>Prepare data for deployment>Preparing the source environment>Exporting assets to a deployment data set

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/prep\\_data\\_ce\\_create\\_export\\_dataset.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/prep_data_ce_create_export_dataset.htm)

When you create the necessary export manifests and add the assets to them, the next step is to export the assets and create a deploy data set.

You right-click the export manifest that you want to export and select Export from the menu (screen capture on the left).

The Export Options window opens (screen capture on the upper right). FileNet Deployment Manager creates an Assets folder under the environment and uses the name of the export manifest for the **Deploy Data Set Name**. You can change the name if you want.

If the deploy data set exists, you get a prompt to confirm if you want to delete the existing deploy data set and re-create it (screen capture on the lower right).

During the export operation, a status window displays and shows the increasing count of items that are exported, when the operation is complete, the window shows the total number of items processed.

If the export results in more objects than you expect, open the file:

**<deployment\_tree>\Temp\Run.yyyy.mm.dd.hh.min.ss\deployment.log**, with a text editor and search for **Exported**. The deployment log lists how many items of each type were exported.

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## Deployment.log

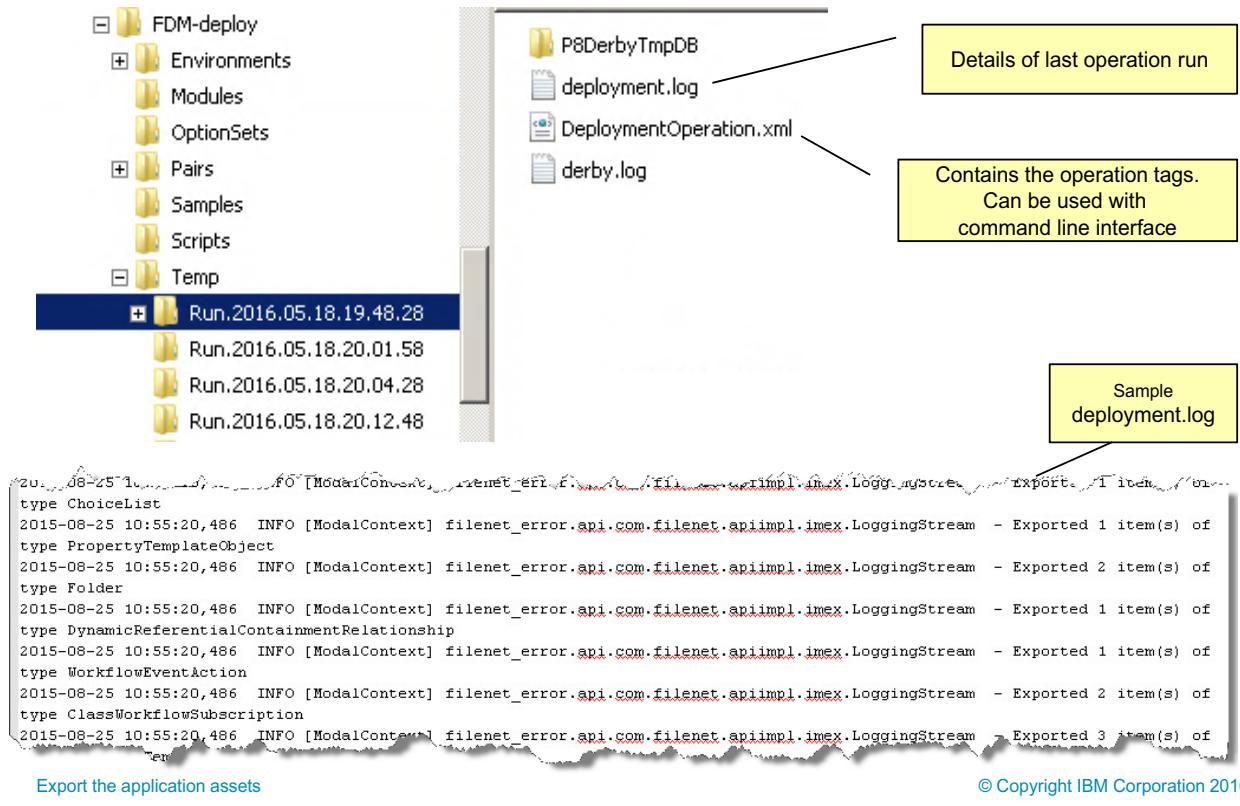


Figure 3-14. Deployment.log

Every time that you run any operation in FileNet Deployment Manager (FDM), a new Run.<timestamp> folder is created which contains

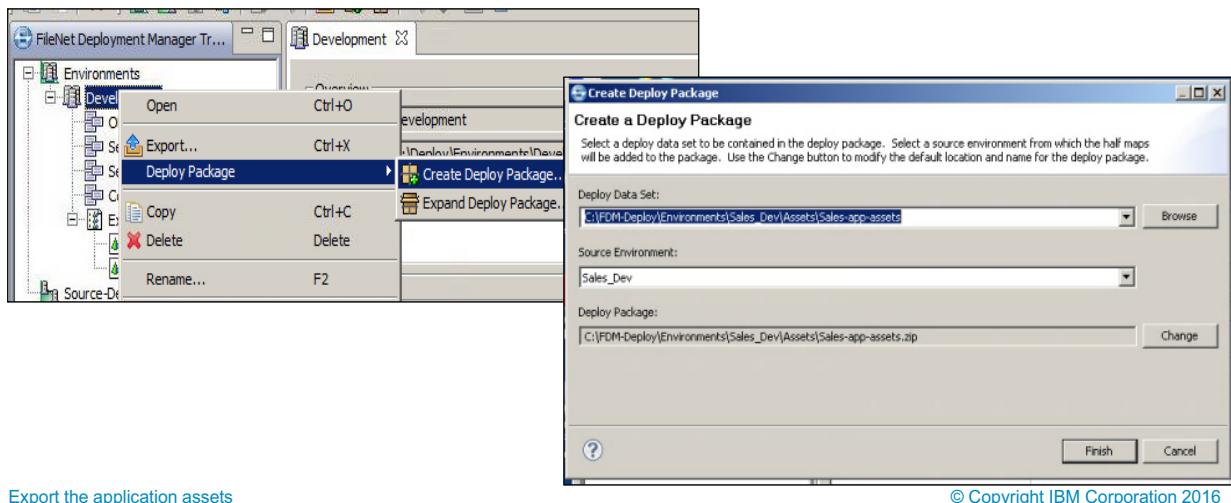
- deployment.log
  - Details of the operation run
  - Valuable for troubleshooting
- DeploymentOperation.xml
  - Script that is executed for the operation
  - Can be used with the command line interface.

FDM also keeps a running log in the <FDM\_install\_path>\deployment.log. This deployment.log is continually appended.

- On the student system, the path is: C:\Program Files\IBM\FileNet\ContentEngine\tools\deploy\deployment.log

## Create a deploy package

- What is a deploy package
  - A compressed file of deployable content that can be put under change control.
  - Includes the exported data and the half maps of an environment.
    - Does not include the export manifests
  - Facilitates use of FileNet Deployment Manager in disconnected mode.
- One deploy package per deploy data set.



Export the application assets

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Figure 3-15. Create a deploy package

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>Prepare data for deployment>Preparing the source environment>Creating a deployment package by using the FileNet Deployment Manager graphical user interface

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/roadmap\\_deploy\\_packages\\_01.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/roadmap_deploy_packages_01.htm)

You can create a deploy package for each deploy data set.

A deploy package is a compressed file of FileNet P8 deployable content that can be put under change control. A deploy package includes the exported data in a deploy dataset and the half maps of an environment. A deploy package facilitates the use of FileNet Deployment Manager in disconnected mode.

When you run FDM on a destination environment, that has no direct connection to the source environment, you can use a deploy package to extract the deploy data set and the source environment half maps.

A deploy package does not include the export manifest used to create the deploy dataset.

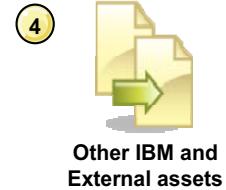
To create a deploy package, you right-click the environment and select **Deploy Package > Create Deploy Package**, the screen capture on the left.

The Create a Deploy Package window opens (screen capture on the right). You browse to the deploy data set that you want, and select the environment to use as the source environment. FileNet Deployment Manager displays the default path where it creates the deploy package, using the deploy dataset name for the deploy package file name with a .zip extension. You can change the name if you choose, but it must be a .zip file.

If you have more than one deploy data set, you can create multiple deploy packages.

## Export other IBM and external assets

- Examples:
  - IBM Content Navigator desktops
    - Use IBM Content Navigator administration tool to export
  - Custom widgets
- Use appropriate tool to export the asset.
- Solution Builder/Developer provides:
  - Exported asset
  - Deployment instructions



Other IBM and  
External assets

[Export the application assets](#)

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Figure 3-16. Export other IBM and external assets

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets based on Content Platform Engine

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/p8\\_pdb010.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/p8_pdb010.htm)

Export any application assets that are not FileNet P8 assets. For example:

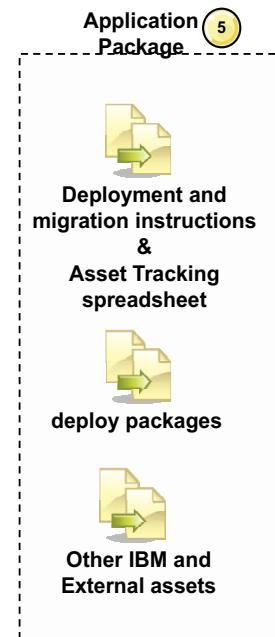
- IBM Content Navigator desktops – use the IBM Content Navigator administration tool to export.
  - Custom widgets

Use the appropriate tool to export the asset.

It is the responsibility of the Solution Builder or Developer to provide the exported asset and the instructions for how to migrate and deploy the asset to the destination environment.

## Assemble the application package

- Collect all the exported pieces of the application.
  - All the deploy packages for the FileNet P8 assets
  - All the exported other IBM and external assets
  - Asset tracking documentation
  - Deployment instructions
- Assemble into an application package
  - Compressed file
  - Change Control container
  - Any method that keeps all the pieces together
- Keep in mind that the individual components can require updates at different times.



[Export the application assets](#)

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Figure 3-17. Assemble the application package

You exported all the components of the IBM FileNet Content Manager application. You now need to assemble all the pieces into an application package that can be:

- Delivered to an administrator to deploy the application in other environments.
- Placed under a change control system.

An application package must include:

- All the deploy packages for the FileNet P8 assets.
  - It is also a good idea to include the export manifests used to create the deploy data sets.
- All the exported other IBM and external assets
- Asset tracking documentation
- Deployment and migration instructions

Decide how to assemble the application package. You can assemble the application package into:

- A compressed file
- A container that can be placed under change control
- Any method that facilitates keeping all the pieces together

When deciding how to assemble the application package, keep in mind that the individual components can require updates at different times.

## Instructor demonstration

- Export FileNet P8 assets with FileNet Deployment Manager



[Export the application assets](#)

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*Figure 3-18. Instructor demonstration*

Export FileNet P8 assets with FileNet Deployment Manager.

- Open the Application Assets Tracking spreadsheet. Use the spreadsheet as a guide to create the export manifest.
- Use FDM to extract a few of the assets
- Set the include options
- Export the assets and create a deploy dataset

## Unit summary

- Export the application assets.

Export the application assets

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*Figure 3-19. Unit summary*

## Exercise: Export the application assets

Export the application assets

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*Figure 3-20. Exercise: Export the application assets*

## Exercise introduction

- Export the FileNet P8 application assets.
- Extract the service data half map
- Create a deploy package
- Export an IBM Content Navigator desktop.



Export the application assets

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*Figure 3-21. Exercise introduction*

---

# Unit 4. Convert and analyze the FileNet P8 assets

## Estimated time

00:30

## Overview

In this unit you, convert the FileNet P8 assets of the application and run a change impact analysis to analyze the impact of the import on the destination environment.

## How you will check your progress

Successfully complete the unit exercises.

## References

FileNet P8 Platform 5.2.1 Knowledge Center:

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8toc.doc/welcome\\_p8.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8toc.doc/welcome_p8.htm)

## Why is this lesson important to you?

- You need to migrate and deploy an IBM FileNet Content Manager application from one FileNet P8 environment to another, for example development to User Acceptance Test.
- You must convert the assets and analyze the impact of the import on the destination environment.

Convert and analyze the FileNet P8 assets

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Figure 4-1. Why is this lesson important to you?

## Unit objectives

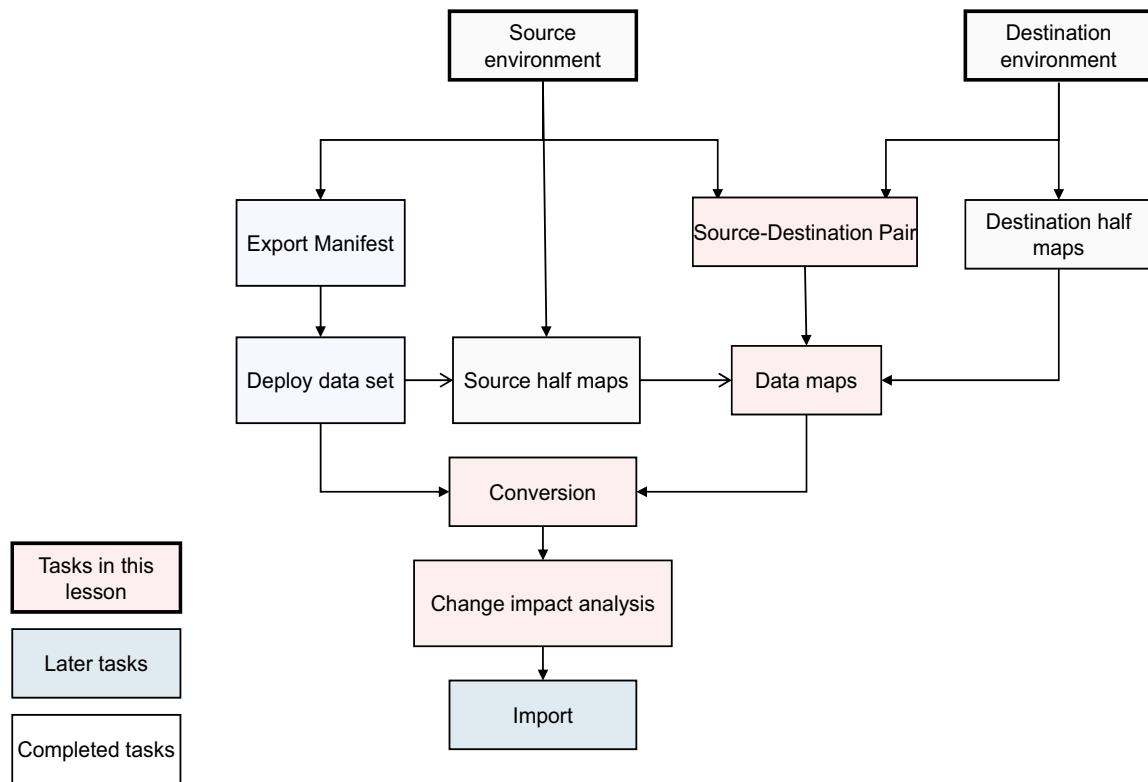
- Convert the FileNet P8 assets.
- Analyze the impact of the import on the destination environment.

Convert and analyze the FileNet P8 assets

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*Figure 4-2. Unit objectives*

## Migrating and analyzing phases



Convert and analyze the FileNet P8 assets

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Figure 4-3. Migrating and analyzing phases

The diagram shows the FileNet Deployment Manager tasks that must be completed to migrate and deploy FileNet P8 assets. This lesson focuses on tasks identified with light red squares.

You complete two of the Migration and deployment phases:

- Migrating phase
  - Create Source-Destination pair.
  - Create data maps, from the source and destination half maps.
  - Convert the FileNet P8 Assets.
- Analyzing phase
  - Perform a change impact analysis operation.

## Prepare the FileNet P8 destination environment

- Ensure that all content to be migrated and deployed is checked in.
- Ensure that only users who run essential activities are logged in to the destination environment.
- Ensure that any object store add-ons, required by the application, are installed and configured on the destination object stores.

Convert and analyze the FileNet P8 assets

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Figure 4-4. Prepare the FileNet P8 destination environment

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>Prepare data for deployment>Prepare the destination environment

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/deploy\\_data\\_checklist\\_destination\\_env.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/deploy_data_checklist_destination_env.htm)

Before you begin importing data, complete the following steps to prepare the destination environment.

- Ensure that all content to be deployed is checked in.
- Ensure that only users who run essential activities are logged in to the system.
  - To reduce the load on the system and minimizes the risk of introducing unexpected changes.
- Ensure that any object store Add-ons, required by the application, are installed and configured on the destination object stores.
- Extract the destination environment half maps. This step can also be done during the plan and prepare phase, if the destination environment is ready.

## Prepare for asset conversion

- Create a source-destination pair.
- Create the source-destination pair data maps.

Convert and analyze the FileNet P8 assets

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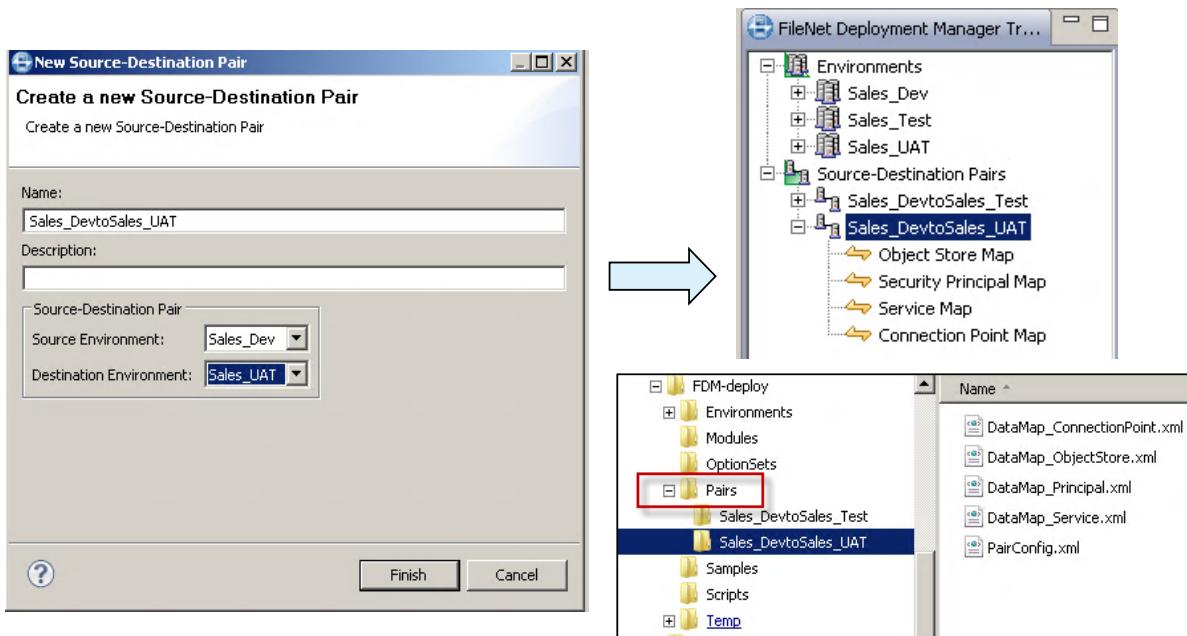
*Figure 4-5. Prepare for asset conversion*

To prepare for asset conversion, you must:

- Create a source-destination pair.
- Create the source-destination pair data maps.

## Create a source-destination pair

- What is a source-destination pair?
  - Connects a source environment to a destination environment.
  - A subfolder of the FDM deployment tree, one folder per pair.



Convert and analyze the FileNet P8 assets

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Figure 4-6. Create a source-destination pair

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>Prepare data for deployment>Creating a source-destination pair definition

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/deploy\\_mgr\\_checklist\\_pair\\_def.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/deploy_mgr_checklist_pair_def.htm)

A source-destination pair connects a source environment to a destination environment and provides a mechanism for FileNet Deployment Manager to create data maps.

The data maps are created from the half maps that are associated with the source and destination environments. The object store, security principal, and service half maps for the source and destination environments are mapped to create object store, security principal, and service data maps.

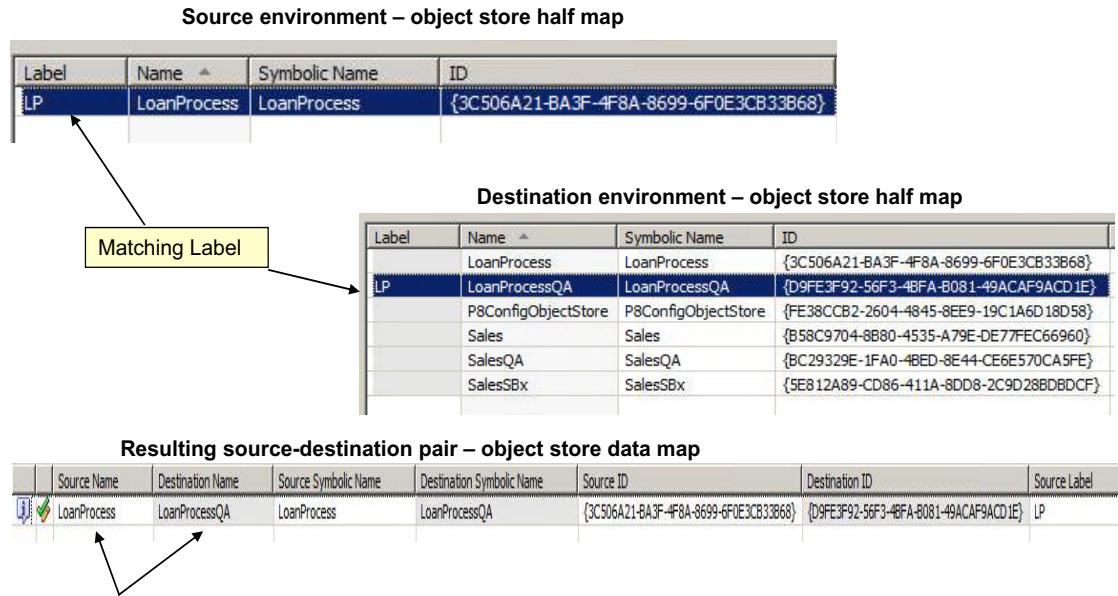
To create a source-destination pair, you right-click the Source-Destination Pairs node, in FileNet Deployment Manager, and select New > Source-Destination Pair. The Create a new Source-Destination Pair window displays (screen capture on the left). You type a name for the source-destination pair then select the source and destination environments.

The screen capture on the upper right, shows the source-destination pair expanded. The four data maps are listed.

The screen capture on the lower right, shows the deployment tree folder structure. The new source-destination pair is a subfolder under the folder, Pairs.

## How do labels affect data maps?

- Labels facilitate mapping half map entries to create data maps.
  - Add a matching label to a half map entry in the source and destination environments.



Convert and analyze the FileNet P8 assets

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Figure 4-7. How do labels affect data maps?

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>Prepare data for deployment>Preparing the source environment>Extracting the source environment half maps>Editing labels in a half map

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/deploy\\_mgr\\_howto\\_resolve\\_unmapped\\_entries.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/deploy_mgr_howto_resolve_unmapped_entries.htm)

Labels make it easy for FileNet Deployment Manager (FDM) to map source half map entries to destination half map entries to create the source-destination pair data maps.

If entries in a source and destination half map, for example an object store half map, have a matching label, then FileNet Deployment Manager maps the two entries in the resulting data map.

When you map data for a source-destination pair, FDM will:

- Search for entries, in the source and destination half maps, with matching labels and map those entries in the new data map.
- Search for entries, without labels, where the symbolic names are identical, in the source and destination half maps, and map those entries in the new map.

- c. Entries that exist in the source half map, but not in the destination half map, are added to the new data map. The Destination information in the map has three # symbols, indicating that the destination entry is unmapped. You can leave entries unmapped that are not required by the application.

The screen capture on the upper left, shows an object store half map for a source environment, with the Label, “LP” added to the entry.

The screen capture in the center, shows an object store half map for a destination environment, with the Label, “LP” added to the entry.

The bottom screen capture, shows the resulting source-destination pair object store data map. Notice how the object store Loan Process is mapped to LoanProcessQA because the half maps have matching labels.

## Create the source-destination pair data maps

- Combine the source and destination half maps to create source-destination pair data maps.

**Overview**

Name: Dev\_to\_QA  
File Path: C:\Deploy\Pairs\Dev\_to\_QA\PairConfig.xml  
Description:

**Source-Destination Pair**

Source Environment: Development  
Destination Environment: QA

**Data Maps**

Action	Type	Status	Use when converting assets
Map Data	Object Store	1 entry, all mapped, updated Aug 14, 2015 at 7:00:43 PM	<input checked="" type="checkbox"/>
Map Data	Storage Policy	no entries, all mapped, updated Aug 14, 2015 at 7:00:43 PM	<input type="checkbox"/>
Map Data	Storage Area	no entries, all mapped, updated Aug 14, 2015 at 7:00:43 PM	<input type="checkbox"/>
Map Data	Security Principal	no entries, all mapped, updated Aug 14, 2015 at 7:00:27 PM	<input checked="" type="checkbox"/>
Map Data	Service	no entries, all mapped, updated Aug 14, 2015 at 7:00:27 PM	<input checked="" type="checkbox"/>
Map Data	Connection Point	no entries, all mapped, updated Aug 14, 2015 at 7:00:27 PM	<input checked="" type="checkbox"/>

Convert and analyze the FileNet P8 assets

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Figure 4-8. Create the source-destination pair data maps

When you open a Source-Destination pair, the Overview window is displayed (screen capture shown). When you click Map Data, FileNet Deployment Manager combines the source and destination half maps to create the source-destination data maps.

## What options are available for Data Maps?

- Used when converting assets
  - You choose whether to apply the data mappings during the conversion operation.

Overview

Name: Dev\_to\_QA

File Path: C:\Deploy\Pairs\Dev\_to\_QA\PairConfig.xml

Description:

Source-Destination Pair

Source Environment: Development

Destination Environment: QA

Action	Type	Status	Use when converting assets
Map Data	Object Store	1 entry, all mapped, updated Aug 14, 2015 at 7:00:43 PM	<input checked="" type="checkbox"/>
Map Data	Storage Policy	no entries, all mapped, updated Aug 14, 2015 at 7:00:43 PM	<input type="checkbox"/>
Map Data	Storage Area	no entries, all mapped, updated Aug 14, 2015 at 7:00:43 PM	<input type="checkbox"/>
Map Data	Security Principal	no entries, all mapped, updated Aug 14, 2015 at 7:00:27 PM	<input checked="" type="checkbox"/>
Map Data	Service	no entries, all mapped, updated Aug 14, 2015 at 7:00:27 PM	<input checked="" type="checkbox"/>
Map Data	Connection Point	no entries, all mapped, updated Aug 14, 2015 at 7:00:27 PM	<input checked="" type="checkbox"/>

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Figure 4-9. What options are available for Data Maps?

Notice the default settings for the option **Use when converting assets**.

- For the object store and service data maps, it is not an option as those mappings must be applied.
- The option is not set for storage policy and storage area by default, you can choose to enable this, but many times the destination environment has its own Storage Areas already defined.
- Although the option to not apply the security principal mappings does exist, typically those mappings are important. They can be ignored only if you are sure that all referenced principals have the same names and SIDs in both environments.
- The Connection Point data map applies only to IBM Case Foundation applications, or IBM Case Manager solutions that have FileNet P8 workflows.

## View a data map

- Each row in a data map contains the information of the combined source and destination half maps for that data map type.
- The first two columns are the same for all four data map types

	Source Short Name	Destination Short Name	Source Display Name	Destination Display Name
Manual	loan officers	###	Loan Officers	###
Manual	loan operations	###	Loan Operations	###
Manual	loan underwriters	###	Loan Underwriters	###
Automatic	loan system administrators	finance admins	Loan System Administrators	Finance Admins
Automatic	loan business users	finance clerks	Loan Business Users	Finance Clerks
Automatic	loan processors	finance clerks	Loan Processors	Finance Clerks
Automatic	loan business analysts	finance managers	Loan Business Analysts	Finance Managers
Automatic	loan managers	finance managers	Loan Managers	Finance Managers
Automatic	loan guests	clerks	Loan Guests	Clerks
Automatic	ceadmins	ceadmins	CEadmins	CEadmins
Automatic	p8admin	p8admin	P8Admin	P8Admin
Automatic	p8admins	p8admins	P8Admins	P8Admins

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Figure 4-10. View a data map

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>Prepare data for deployment>Creating a source-destination pair definition>Viewing or updating a data map

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/deploy\\_mgr\\_howto\\_view\\_data\\_map.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/deploy_mgr_howto_view_data_map.htm)

After you combine the half maps of a source and destination environment for object stores, security principals, or services, the data map editor is opened automatically. The screen capture shows the data map editor for a security principal data map.

The first two columns are identical for all four data map types.

- The first column is the information column. If you hover your mouse over the icon, a snapshot of the entire contents of the row is displayed.
- The second column is the mapping status column.
  - A green check mark indicates a successful mapping of a source and destination half map item.

- If the mapping was created manually, either by a matched user-entered label pair in the source and destination half map items, or by selecting from a list in the data map, a pencil symbol is included.
- If the mapping is the result of an automatic pairing of a source and a destination half map item that is based on matching column field values, a gear symbol is included in the icon.
- A red question mark icon indicates an unmapped source half map item. In a row that contains an unmapped item, the value of each destination field is set to the unmatched state ("###", red rectangle).

## Update a data map

- Data map editor makes it easy to update the data map.
  - Click a destination cell to display a choice list of valid values.

The screenshot shows a data map editor with two tables. The left table (Source) has columns: Source Short Name, Destination Short Name, and Source Display Name. The right table (Destination) has columns: Destination Short Name, Source Display Name, and Destination Display Name. A callout box points to the 'Destination Short Name' column in the right table with the text 'Click cell to get choice list to select from'. Another callout box at the top right is labeled 'Many to one' with arrows pointing to the right table's columns. A dropdown menu is open over the 'Destination Short Name' cell for the row 'loan operations', listing options like 'ceadmins', 'clerks', 'finance admins', etc., with 'p8admins' selected.

	Source Short Name	Destination Short Name	Source Display Name	Destination Display Name
	loan officers	###	Loan Officers	###
	loan operations	###	Loan Operations	###
	loan underwriters		Loan Underwriters	###
	loan system administrators		Loan System Administrators	Finance Admins
	loan business users		Loan Business Users	Finance Clerks
	loan processors		Loan Processors	Finance Clerks
	loan business analysts		Loan Business Analysts	Finance Managers
	loan managers		Loan Managers	Finance Managers
	loan guests		Loan Guests	Clerks
	ceadmins	p8admins	CEadmins	CEadmins
	p8admin	p8admin	P8Admin	P8Admin
	p8admins	p8admins	P8Admins	P8Admins

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Figure 4-11. Update a data map

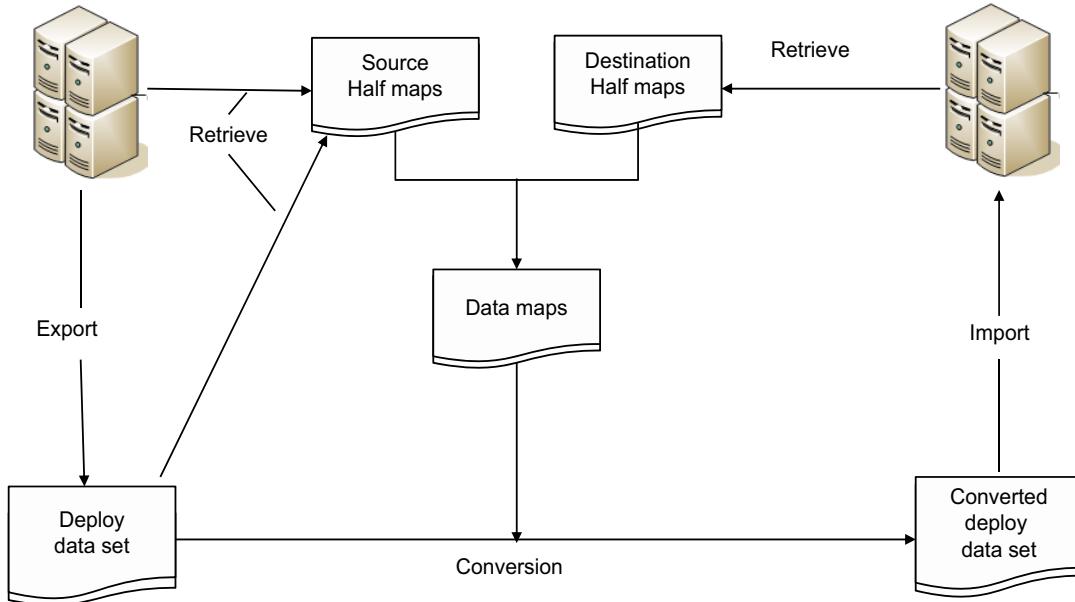
The screen capture shows the data map editor with a security principal data map.

When you click a destination cell, the data map editor displays a choice list that you can use to select the value you want. You map only rows that contain information that is referenced by the exported application assets. If you used a deploy data set to create the source half map, then all the destination cells must be successfully mapped.

For security principals, FileNet deployment Manager allows Many-to-one security principal mappings. In the screen capture, notice how the last column shows Finance Clerks as the destination display name for Loan Business Users and Loan Processors.

## Convert the FileNet P8 application assets

- Use FileNet Deployment Manager to convert the assets in the deploy data set.
- Right-click the source-destination pair > Convert Assets.



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Figure 4-12. Convert the FileNet P8 application assets

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>Prepare data for deployment>Converting objects for import

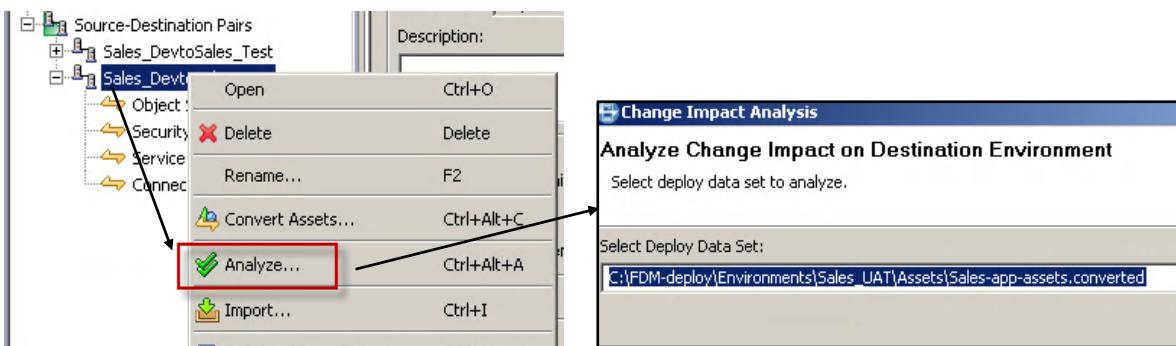
[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/prepare\\_data\\_ce\\_convert\\_objects.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/prepare_data_ce_convert_objects.htm)

FileNet Deployment Manager (FDM) uses the deploy data set and the mapping that is defined in the data maps to convert the source environment objects and create a converted deploy data set. The converted deploy data set contains mapped objects that can be imported into the destination environment.

To start the conversion process, right-click the source-destination pair and select Convert Assets.

## Run a pre-import analysis

- The change impact analysis operation is central to preparing data for deployment.
- The change impact analysis operation:
  - Validates the converted deploy data set file with the destination environment.
  - Generates a change impact analysis report.
    - Potential import errors in the destination environment.
    - Change impact on the destination environment.
  - Is an information only operation.
  - Does not modify the destination environment.



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Figure 4-13. Run a pre-import analysis

### Help paths

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>Prepare data for deployment>Analyzing objects for import

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/prepare\\_data\\_ce\\_analyze.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/prepare_data_ce_analyze.htm)

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>Prepare data for deployment>Analyzing objects for import>Change impact analysis

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/prepare\\_data\\_ce\\_analyze\\_concepts.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/prepare_data_ce_analyze_concepts.htm)

The change impact analysis operation is central to preparing data for deployment. The operation reports on the potential import errors in the destination environment and the change impact on the destination environment.

The change impact analysis operation validates the converted deploy data set with the destination environment. This operation provides information only; it does not actually import data, or modify the destination environment in any way.

To start the change impact analysis operation, in FileNet Deployment Manager, you right-click a source-destination pair and select Analyze (screen capture on the left). The Change Impact Analysis wizard displays (screen capture on the right). From the wizard, select the converted deploy data set to analyze. If you accept the default paths and names that FileNet Deployment Manager generates, then you can usually accept the path for the converted deploy data set.

## Change impact analysis report

- One or more XML files.
- HTML-formatted viewing from a web browser.

### Change Impact Analysis Report

#### Table of Contents

##### Summary

[Statistics by Class](#)

[Estimated Size Information by Class](#)

[Estimated Size Information by Data Type](#)

##### Details

[Assets that Passed Analysis with Warnings](#) ← 

[Assets that Passed Analysis](#)

[Detailed Information for Assets that have Passed Analysis](#)

#### Summary

Report Generated On:	2016-06-02 17:29:04 EDT
Report Location:	C:\FDM-deploy\Environments\Sales_UAT\Assets\Sales-app-assets.converted\ChangeImpactReport.xml
Passed Assets Report Directory:	C:\FDM-deploy\Environments\Sales_UAT\Assets\Sales-app-assets.converted\ChangeImpactReport

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Figure 4-14. Change impact analysis report

#### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>Prepare data for deployment>Analyzing objects for import>Change impact analysis

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/prep\\_data\\_ce\\_analyze\\_concepts.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/prep_data_ce_analyze_concepts.htm)

The change impact analysis report consists of one or more XML files, transformed to an HTML-formatted main report for viewing from a web browser.



#### Note

Occasionally the change impact analysis report opens in notepad instead of a web browser. If that occurs, use Windows Explorer to locate the file, then select to open with a web browser.

The screen capture shows the top section of a Change Impact Analysis Report. You need to investigate assets that fail or pass with warnings.

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## Resolving failures

Assets that Passed Analysis with Warnings (First 20 only - See detail report for more warnings.)							
Name	Class	ID	Analysis Status	Import Operation	Estimated Size		Comments
Order Basic 200	Order	{278A72C7-FFE5-447A-A856-7A569824288C}	Warning	Update	0.40 KB		<p>Object being imported: Name='Order Basic 200', ID={...}, Class=Order</p> <p>Object to be imported references a storage object that does not exist at the destination. Import will fail if using storage policy or area from the exported object. Object being imported: Name='Order Basic 200', ID={278A72C7-FFE5-447A-A856-7A569824288C}, Class=Order.</p> <p>Related object: ID={000A8C36-3AF9-4167-AD23-EAC939A005CD}, Class=StorageArea</p>

ID of object being imported     
 Related object:  
ID={...}, Class=StorageArea

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Figure 4-15. Resolving failures

If you click the link, **Assets that Passed Analysis with Warnings**, on the previous slide, information similar to what is shown in this screen capture.

Notice the red rectangles in the Comments column.

The upper red rectangle describes the object to be imported; Object name, Order Basic 200, with the ID shown, and of class type, Order.

The lower rectangle identifies the related object. The ID is provided and the class type, StorageArea.

If you need to preserve the storage policy in the destination environment, use the Administration Console for Content Platform Engine (ACCE) to search for the ID, within the class, StorageArea. Find the storage area that you are missing in the destination environment and create it. If you plan to use a different storage area in the destination environment, then you can ignore the warning.

## Instructor demonstration

- Convert FileNet P8 assets with FileNet Deployment Manager
- Perform a change impact analysis with FileNet Deployment Manager



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Figure 4-16. Instructor demonstration

### Demonstration notes

Convert FileNet P8 assets with FileNet Deployment Manager

1. Explain how the conversion works. You need a source and destination environment that is created and the half maps ready.
  - a. Add labels to a half map.
2. Create a source-destination pair.
3. Show how to start the convert operation.

Perform a change impact analysis with FileNet Deployment Manager

1. Right-click the source-destination pair and select Analyze.
  - a. Select the converted deploy data set to analyze.
2. Examine the report.
  - a. Explore the Assets that passed with warnings.

## Unit summary

- Convert the FileNet P8 assets.
- Analyze the impact of the import on the destination environment.

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*Figure 4-17. Unit summary*

## Exercise: Convert and analyze the FileNet P8 assets

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*Figure 4-18. Exercise: Convert and analyze the FileNet P8 assets*

## Exercise introduction

- Convert the FileNet P8 assets
- Run a pre-import analysis on the destination environment.



Convert and analyze the FileNet P8 assets

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Figure 4-19. Exercise introduction

In this exercise, you complete two activities:

- Use FileNet Deployment Manager to convert the FileNet P8 assets. The procedures that you complete are:
  - Define a source-destination pair to connect Sales\_Dev to Sales\_UAT.
  - Create the object store and security principal data maps for the source-destination pair that you create.
  - Convert the exported assets using the data maps you create.
- Run a pre-import analysis. The procedures that you complete are:
  - Run a change impact analysis on the destination environment, Sales\_UAT.
  - Analyze the change impact analysis report and learn how to use the report to resolve issues.

# Unit 5. Import the application assets

## Estimated time

00:30

## Overview

In this unit you, import the application assets into the destination environment.

## How you will check your progress

Successfully complete the unit exercises.

## References

FileNet P8 Platform 5.2.1 Knowledge Center:

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8toc.doc/welcome\\_p8.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8toc.doc/welcome_p8.htm)

## Why is this lesson important to you?

- You need to migrate and deploy an IBM FileNet Content Manager application from one FileNet P8 environment to another, for example development to User Acceptance Test. You converted the assets and completed the impact analysis on the destination environment.
- You need to import the application assets into the destination environment and verify the migrated application.

Import the application assets

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Figure 5-1. Why is this lesson important to you?

## Unit objectives

- Import the application assets into the destination environment.

Import the application assets

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*Figure 5-2. Unit objectives*

## Steps to complete the application migration

- Backing up the system phase:
  - Suspend activity on the system (destination environment).
  - Create a backup of the system.
- Deploying phase
  - Import the FileNet P8 application assets.
  - Import other IBM and external application assets.
- Verifying phase
  - Test the workflow application in the destination environment.

[Import the application assets](#)

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*Figure 5-3. Steps to complete the application migration*

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>FileNet P8 asset deployment

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/deployfilenetcplatformassets.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/deployfilenetcplatformassets.htm)

You are now at the final 3 phases of migration and deployment:

### Backing up the system phase

Before you start deploying any assets into the destination environment;

- Suspend system activities on the destination environment.
- Back up the portions of the system affected.

### Deploying phase

Two major tasks must be completed to complete the application deployment:

- Import the FileNet P8 application assets.
- Import other IBM and external application assets.

**Note**

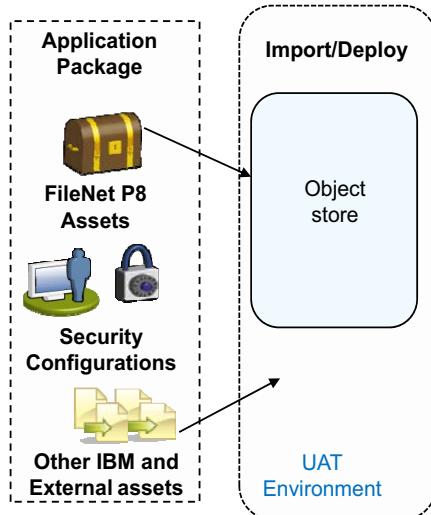
The sequence of individual tasks that are required to migrate and deploy an application into the destination environment can vary widely. The needs of your organization, the architecture of your system, and requirements of the application itself all determine the number and order of the tasks. The specific plan and procedures for the migration and deployment that is documented in the Migration and deployment instructions.

**Verifying phase**

Follow the instructions in the Migration and deployment instructions to test the migrated application and ensure that it is operational.

This lesson does not cover the Backing up your system phase. Consult the IBM FileNet P8 5.2.1 Knowledge Center for information on suspending activity and creating a backup of the system.

## Import the assets into the destination environment



Import the application assets

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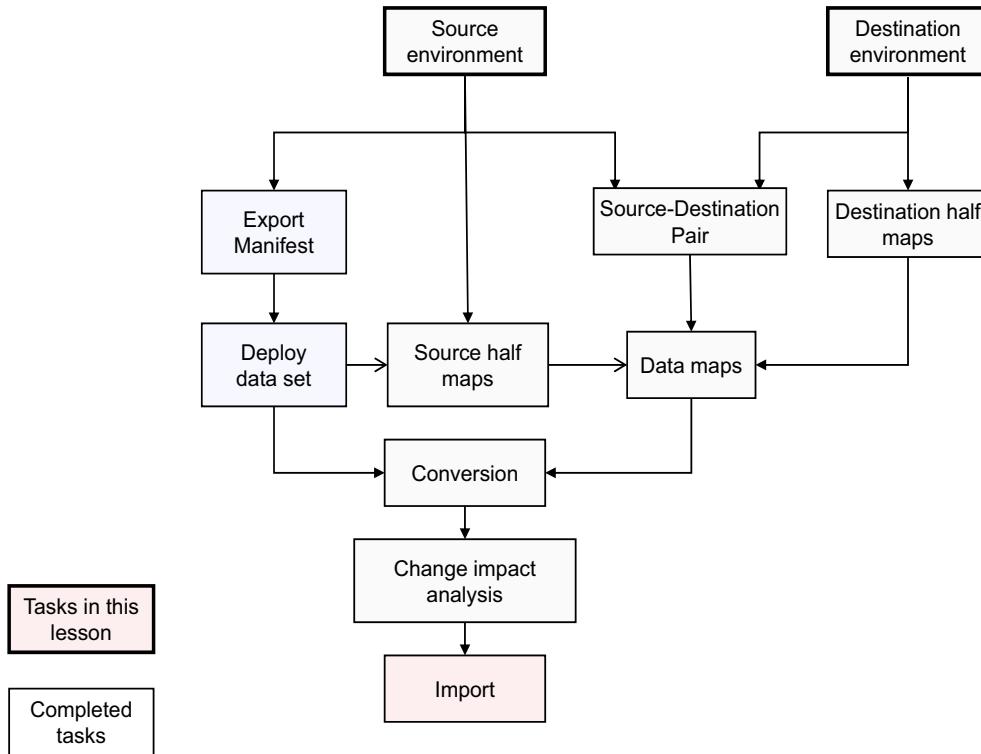
Figure 5-4. Import the assets into the destination environment

In this lesson, you complete final import task. The diagram shows the part of the migration and deployment process that focuses on the import of the assets from the Application Package into the destination environment.

There can be several import tasks to complete:

- Import the FileNet P8 assets.
- Import other IBM assets.
- Import External assets.

## FileNet Deployment Manager – import task



Import the application assets

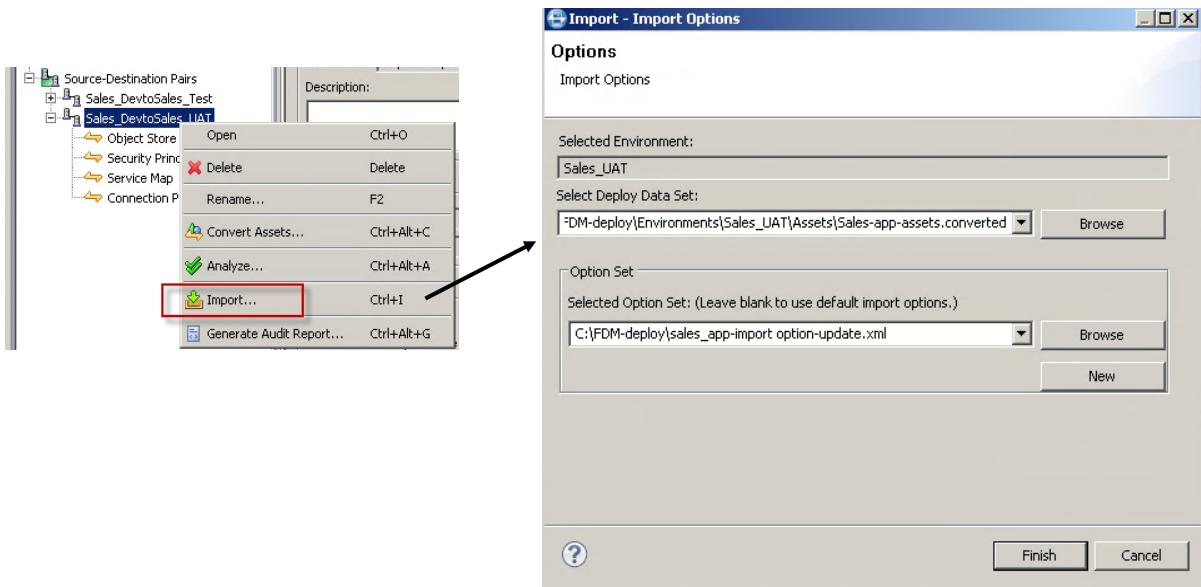
© Copyright IBM Corporation 2016

Figure 5-5. FileNet Deployment Manager – import task

The diagram shows the FileNet Deployment Manager tasks that must be completed to migrate and deploy FileNet P8 assets. This lesson focuses on the import task.

## Import the FileNet P8 application assets

- Use FileNet Deployment Manager.
  - Import the converted deploy data sets.
    - Follow the order specified in the Migration and deployment instructions.
  - Create option set file (optional)



Import the application assets

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Figure 5-6. Import the FileNet P8 application assets

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>FileNet P8 asset deployment>Importing converted objects

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/deploy\\_ce\\_import\\_objects.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/deploy_ce_import_objects.htm)

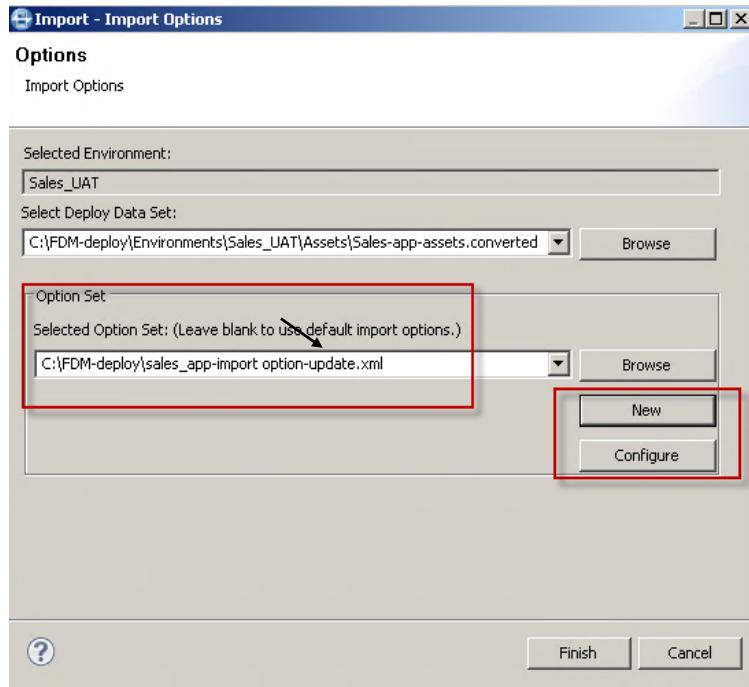
You use FileNet Deployment Manager to import the FileNet P8 application assets. You import all the converted deploy data sets, in the order specified in the Migration and deployment instructions, into the destination environment. Some objects can have dependencies and cannot be imported before the dependent object.

To start the import, right-click the source-destination pair and select Import, shown in the screen capture on the left. The import window is displayed, screen capture on the right. You select the converted deploy data set that you want to import and the option set file to use. The ability to specify an option set file was introduced in FileNet Deployment Manager 5.2.0. If you create an option set file, you can save it and include it with the application package, making your import operation reproducible and reducing errors. The import wizard provides four options for the option set:

- Browse: Browse to an existing option set file.

- New: Create an option set file.
- Configure: Configure import options manually. This option displays the import options, on the option set file, and lets you modify and save the modified import options (this option is only available if you select an options set file).
- Leave the Option set blank: The import uses the default import options.

## Import option set file



[Import the application assets](#)

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Figure 5-7. Import option set file

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>FileNet P8 asset deployment>Import options

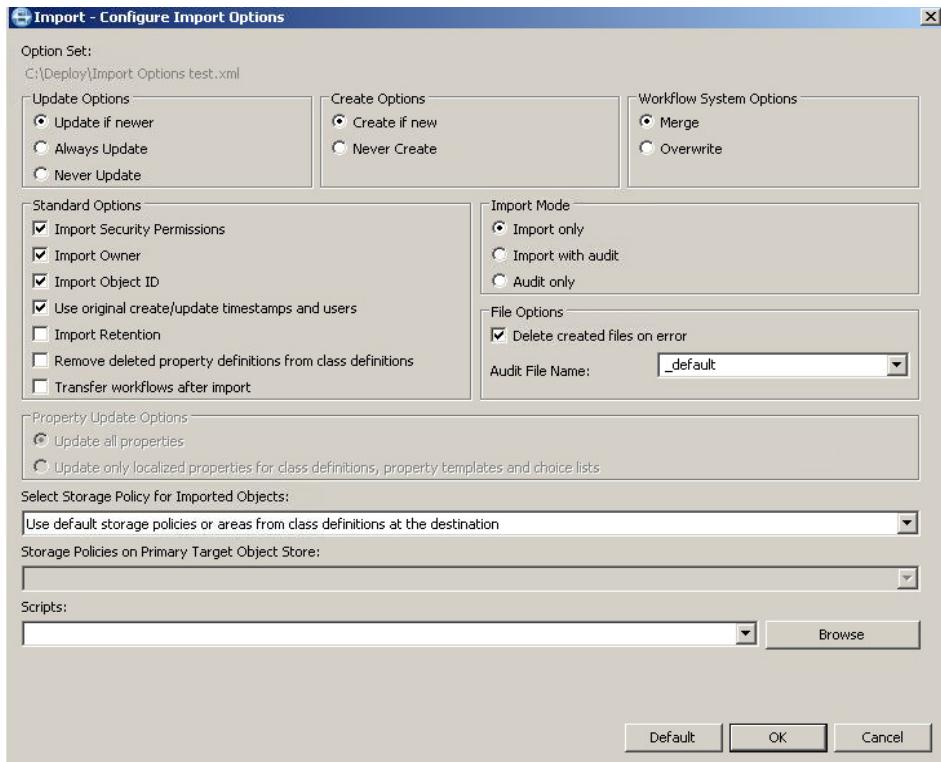
[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/import\\_options.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/import_options.htm)

Import options control how the converted objects are imported into the destination environment.

To set the import options you create or configure an option set file. The screen capture shows, an option set file and the options, New and Configure.

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## Import options - defaults



Import the application assets

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Figure 5-8. Import options - defaults

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>FileNet P8 asset deployment>Import options

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/import\\_options.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/import_options.htm)

The screen capture shows all the import options that you can configure. The default import options are selected.

### Update Options and Create Options

- Selects the behavior you want to occur when the object to be imported exists in the destination object store.
- The Update Options work with the Create Options to determine how objects are handled.

### Workflow System Options

- Applies only to IBM Case Foundation applications or IBM Case Manager solutions that have custom workflows.

### Standard Options

- Import security permissions – retains object permissions from the source environment.
- Import Owner – retains the object owner information from the source environment.
- Import Object ID – If this option is not selected, the import process generates new object IDs in the destination environment. The option is generally selected, to ensure that object relationships are preserved.
- Use Original Create/Update Timestamps and Users – retains the source system property settings for the Creator, DateCreated, DateLastModified and LastModifier properties.
  - Requires the Modify certain system properties privilege on the destination object store.
  - Set by default.
  - If not set:
    - The date and time of the import operation are used for the DateCreated and DateLastModified properties.
    - The Creator and LastModifier properties are set to the user who is performing the import.
- Import Retention
  - If set, retain the retention date from the source object.
  - If not set, the FileNet P8 default setting for the retention date property is used.
- Remove deleted property definitions from class definitions
  - Select this option to remove property definitions from the updated class definitions in the destination environment that were deleted from the source environment class definitions.
- Transfer workflows after import
  - If set, a workflow definition, included in the objects to import, is automatically transferred in the destination environment after the import.
  - Referencing objects, such as workflow subscriptions, must be configured to use the current version of the workflow definition.
  - This option is used by IBM Case Foundation applications and IBM Case Manager solutions only.

## Import Mode

- Choose the type of import to run:
  - Import only – imports the objects into the destination environment and does not create an audit file.
  - Import with audit -- imports the objects into the destination environment and creates an audit file.
  - Audit only – simulates the import and creates an audit file. The destination environment is not modified.
- Select audit file options
  - Delete created files on error – if errors occur, the audit file is deleted.

- Audit File Name – specify an audit file name (The audit file is created in the destination environment's Assets folder).

#### **Property Update Options** – update all properties or only localized properties.

- Option is only available if Create Option > Never Create is selected.

#### **Select Storage Policy for Imported Objects**

- Options used to control the storage policies and location for imported content.
  - Use default storage policies or areas from the class definitions at the destination object store.
  - Use storage policies or areas from the imported objects.
  - Select a specific storage policy from the destination object store. This option activates the next option.

#### **Storage Policies on Primary Target Object Store**

- Select a storage policy to use in the destination object store.

#### **Scripts**

- Specify the scripts to run during the import.
  - Specify the type of script and the order to run the script.

For more information about each of the options, see the IBM Knowledge Center topic.

## Import options - guidelines

- Ensure that the user ID that runs the operation has sufficient privileges.
  - User ID specified in the FDM connection for the destination environment.
    - Needs sufficient privileges on the destination object store to complete all necessary actions during the import.
    - Optimally, specify an object store administrator.
  - Import option, ***Use Original Create/Update Timestamps and Users*** requires extra system privileges:  
***Modify certain system properties***

Import the application assets

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Figure 5-9. Import options - guidelines

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Migrating data with FileNet Deployment Manager>Data migration: Recommendations for import options

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/p8\\_pdb042.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/p8_pdb042.htm)

Before you run the import operation, ensure that the user ID that runs the operation has sufficient privileges. The user ID that is specified in the FileNet Deployment Manager connection for the destination environment must have sufficient privileges on the destination object store to complete all necessary actions during the import. Optimally, specify an object store administrator as the user in the connection information for the destination environment.

If the import option, Use Original Create/Update Timestamps and Users is selected, then modifications to Content Platform Engine system properties might occur. To modify system properties, the FileNet Deployment Manager import user must have the Modify certain system properties privilege on the destination object store. If the user does not have this privilege, the import operation fails.

## Simulate and audit the import

- Audit-only mode supported.
  - Simulated import that captures the audit file.
  - The audit file captures differences between:
    - The assets to be imported in the destination environment
    - Saved to:  
...\\<dest\_env>\\Assets\\<deploy\_data\_set.converted>\\<audit\_file\_name>
  - Generates an audit report from the audit file, which includes:
    - Objects in the deployment data set whose import causes changes in the destination environment.
    - Values for all scalar properties with before and after values when different.
    - IDs of all object-valued properties.

[Import the application assets](#)

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Figure 5-10. Simulate and audit the import

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets with FileNet Deployment Manager>FileNet P8 asset deployment>Importing converted objects>Audit changes to imported objects

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/p8\\_pdb036.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/p8_pdb036.htm)

The first time you run an import on the destination environment, it is a good idea to run a simulation of the import and capture the changes that will be made to the destination object store.

The FileNet Deployment Manager(FDM) import operation, supports an audit-only mode. In this mode, a simulated import is done, but no assets are created or updated and only the audit file is produced. The audit file is saved to the destination environment's converted deploy data set folder.

You can generate an audit report from the audit file.

**Note**

The audit changes to imported objects is a new feature introduced in FileNet Deployment Manager 5.2.1. Currently the audit report only captures information about Content Engine objects, not workflow system objects.

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## Sample audit report

### Audit Report

#### Summary

Host Used to Create Audit Report: ECMEDU01	Deployment data set used
Date Audit Report was Created: Tue Aug 25 18:44:25 EDT 2015	
Audit Option: Audit only	
Audit/Import Performed On: Tue Aug 25 18:43:26 EDT 2015	
Audit/Import Performed By: p8admin	
Elapsed Time to Perform Audit/Import: 1078 msec	
Report Location: C:\Deploy\Environments\DeployApp_QA\Assets\App_deploy_isolated_region_objects_converted\AuditReport.html	
Deployment Data Set Used (Date Created): C:\Deploy\Environments\DeployApp_QA\Assets\App_deploy.converted (Tue Aug 25 18:31:21 EDT 2015)	
Audit File Used (Date Created): C:\Deploy\Environments\DeployApp_QA\Assets\App_deploy.converted\import_audit_results.xau (Tue Aug 25 18:43:26 EDT 2015)	
Destination Content Platform Engine: http://ecmedu01:9080/wsi/FNCEWS40MTOM	
Destination Environment Audited: DeployApp_QA	

#### Details

Expand for more details	
Name : ClassId : ObjectId : ObjectStore	Access Allowed
+ CustomerName : PropertyTemplateString : {55747A69-2C3F-4965-91BB-6C8C1A93C885} : LoanProcessQA	995587
+ DownPayment : PropertyTemplateFloat64 : {F53E9796-DF6C-4035-AFE0-BAC6EA4DE201} : LoanProcessQA	995587
+ LoanAmount : PropertyTemplateFloat64 : {EDF1E950-ABB5-4677-BDCB-3B915B7517F0} : LoanProcessQA	995587
+ LoanDate : PropertyTemplateDateTime : {C1C712F4-D094-4ABD-A34F-BBE5F59165C0} : LoanProcessQA	995587
+ LoanNumber : PropertyTemplateString : {9B3A219D-1F5E-4E93-9764-E3BEE68F7473} : LoanProcessQA	995587
+ TermList : ChainList : {AD0CF55B-C291-4105-BB92-FA0AA56423F0} : LoanProcessQA	995587

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Figure 5-11. Sample audit report

The two screen captures show sections of a sample audit report. The upper section shows a summary, including:

- Outlined by upper left red rectangle
  - The host name of the client where the audit report was created.
  - The date the audit report was created.
  - The audit option: Audit only in this case.
  - When and by what user the audit was run.
  - The elapsed time during the import.
  - The deployment data set used (second red rectangle).
  - The destination Content Platform Engine URL (third red rectangle).
  - The destination environment name.
  - The import options selected.

The lower screen capture shows the **Details** section, which includes detailed information about every object that is imported or to be imported, depending on the import mode selected. Each plus sign can be expanded to see more details.

## Import other IBM and external assets

- Import other IBM assets and external assets required by the application.

Examples:

- IBM Content Navigator desktops
  - Use IBM Content Navigator administration tool to import
- Custom widgets
- Use appropriate tool to import the asset.



[Import the application assets](#)

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Figure 5-12. Import other IBM and external assets

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Deploying assets based on Content Platform Engine

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/p8\\_pdb010.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/p8_pdb010.htm)

Import any application assets that are not FileNet P8 assets. For example:

- IBM Content Navigator desktops – use the IBM Content Navigator administration tool to import and configure.



### Note

There is no option to map source to destination settings for IBM Content Navigator exports, depending on your environment, you might need to modify the configuration of the desktop after you import it in the destination environment

- Custom widgets

Use the appropriate tool to import the asset.

Follow the Migration and deployment instructions, provided by the Solution Builder, to import the asset into the destination environment.

## Complete additional system configuration tasks

- Complete any additional system configuration tasks required.
- Examples of server-level configuration tasks:
  - Setup of printers.
  - Creation of file system folders.
  - Installation of external web services used by the application.
  - Installation of additional software components integrated with the application.

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Figure 5-13. Complete additional system configuration tasks

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>Completing additional system configuration tasks

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/p8\\_pdb018.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/p8_pdb018.htm)

When an application is migrated and deployed for the first time, extra steps that are not part of the migration and deployment steps might be required to complete the configuration within the destination environment. Also, when an application is redeployed, system configuration data might be overwritten during the redeployment process. The system configuration data that is overwritten might need to be specified again.

Complete any additional system configuration tasks that are required by the application.

The additional configuration tasks should be included in the Migration and deployment instructions.

## Verifying phase

- Verify imported assets in the destination environment.
- Test the application in the destination environment.
  - Steps are specific to the IBM FileNet Content Manager application.
  - Follow the steps in the Migration and deployment instructions.
- A sample of tests that might be run:
  - Access the user interface for the application.
  - Add a document of a specific class type, verify the property definitions.
  - Add a document of a specific class type and start a Document Approval workflow.

Import the application assets

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Figure 5-14. Verifying phase

Before releasing the system for testers or users, the migrated application should be tested to verify that all of its components are working correctly. The tests are specific to the environment and the application. The Migration and deployment instructions should include a plan for verifying the migrated application.

Verification steps:

1. Verify a subset of the imported assets in the destination environment. These should be included in the Migration and deployment instructions.
2. Test the migrated application in the destination environment.

## Unit summary

- Import the application assets into the destination environment.

Import the application assets

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*Figure 5-15. Unit summary*

## Exercise: Import the application assets into the destination environment.

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*Figure 5-16. Exercise: Import the application assets into the destination environment.*

## Exercise introduction

- Import the FileNet P8 assets.
- Import the Sales desktop.



Import the application assets

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Figure 5-17. Exercise introduction

In this exercise, you complete two activities:

- Import FileNet P8 assets. The procedures that you complete are:
  - Import the FileNet P8 assets into Sals\_UAT.
  - Troubleshoot a failed import.
  - Generate an audit report from an audit file.
  - Verify the imported FileNet P8 assets.
- Import the Sales desktop. The procedures that you complete are:
  - Import the Sales desktop with the IBM Content Navigation administration tool.
  - Configure the Sales desktop to work with the destination environment.
  - Test the desktop and validate the Sales Application.

---

# Unit 6. Automate FileNet P8 asset migration

## Estimated time

00:20

## Overview

In this unit you, learn how to use the FileNet Deployment Manager command line interface to script the migration of the FileNet P8 assets in a FileNet Content Manager application.

## How you will check your progress

Successfully complete the unit exercises.

## References

FileNet P8 Platform 5.2.1 Knowledge Center:

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8toc.doc/welcome\\_p8.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8toc.doc/welcome_p8.htm)

## Why is this lesson important to you?

- You need to use the FileNet Deployment Manager command line interface to script the migration of your IBM FileNet Content Manager application.

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Figure 6-1. Why is this lesson important to you?

## Unit objectives

- Automate FileNet P8 asset migration with the FileNet Deployment Manager command line interface.

Automate FileNet P8 asset migration

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*Figure 6-2. Unit objectives*

## FileNet Deployment Manager command line interface

- Supports scripting the migration of FileNet P8 assets.
  - Single program supports both the GUI and the command line interface.
    - The arguments specified determine the interface.
    - If no arguments are specified, the GUI is started.
- Supports all the operations that the GUI supports.
- To get the usage:
  - Windows: <FDM\_install\_path>\DeploymentManager.exe --help > help.txt
  - Windows: <FDM\_install\_path>\DeploymentManagerCMD.bat --help
    - Displays output in command prompt window
  - Linux: <FDM\_install\_path>\DeploymentManager --help

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Figure 6-3. FileNet Deployment Manager command line interface

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>The FileNet Deployment Manager tool>Use the command-line utilities

FileNet Deployment Manager supports both a graphical user (GUI) interface and command line interface. With the command line interface you can script the migration and deployment of FileNet P8 assets.

- A single program supports the GUI and the command line interfaces.
  - The arguments that are specified with the command determine which interface is started.
  - If no arguments are specified, then the GUI is started.

Both interfaces support the same operations.

The --help argument, displays the usage. The slide shows the command for Windows and Linux. There are two options for Windows.

- a. DeploymentManager.exe – does not write the output to the window, so you must redirect the output if you want to see it.
- b. DeploymentManagerCMD.bat – writes the output to the command prompt window.

## Deployment Operation command line syntax

- <FDM\_install\_path>\DeploymentManagerCMD.bat --operation *custom\_DeploymentOperation.xml* [-p password]
- *custom\_DeploymentOperation.xml* file
  - Includes xml tags that drive the operation
  - Sample of ConvertDeployDataSet operation.

```
<DeploymentOperation deploymentTreeLocation="C:\FDM-deploy" version="5.2.1">
  <ConvertDeployDataSet deleteDestinationFilesOnError="true" useStorageAreaMap="false" useStoragePolicyMap="false">
    <Pair>Sales_DevtoSales_UAT</Pair>
    <SourceDeployDataSet>C:\FDM-deploy\Environments\Sales_Dev\Assets\Sales-app-assets</SourceDeployDataSet>
    <ConvertedDeployDataSet>C:\FDM-deploy\Environments\Sales_UAT\Assets\Sales-app-assets.converted
  </ConvertedDeployDataSet>
</ConvertDeployDataSet>
</DeploymentOperation>
```

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Figure 6-4. Deployment Operation command line syntax

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>The FileNet Deployment Manager tool>Use the command-line utilities>FileNet Deployment Manager command-line reference

[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/deploy\\_mgr\\_command\\_line\\_ref.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/deploy_mgr_command_line_ref.htm)

The Deployment Operation command line syntax is the same for all the deployment operations:

- DeploymentManagerCMD.bat –operation *custom\_DeploymentOperation.xml* [-p password]

The *custom\_DeploymentOperation.xml* file, also called deployment operation file, is an xml file that contains tags that dictate what deployment operation is run.

The screen capture shows an example of a *custom\_DeploymentOperation.xml* that runs the ConvertDeployDataSet operation.

You can specify the password to use when retrieving information from, or sending information to the Content Platform Engine , with the –p option. Refer to the IBM Knowledge Center for a list of the operations that require a password.

## Deployment operations

- AnalyzeDeployDataSet
- CloneService
- ConvertDeployDataSet
- CreateDeployPackage
- CreateEnvironment
- CreateObjectStoreDataMap
- CreatePrincipalDataMap
- CreateServiceDataMap
- ExpandDeployPackage
- ExportDeployDataSet
- GenerateAuditReport
- ImportDeployDataSet
- ReassignObjectStore
- RetrieveObjectStoreInfoFromDeployDataSet
- RetriveObjectStoreInfoFromDomain
- RetrievePrincipalInfoFromDeployDataSet

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*Figure 6-5. Deployment operations*

### Help path

FileNet P8 Platform 5.2.1>Migrating and deploying applications>The FileNet Deployment Manager tool>Use the command-line utilities>Deployment operation files

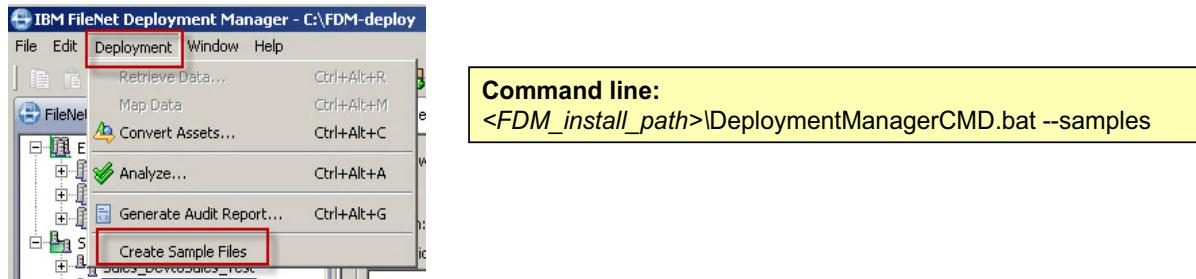
[http://www.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.1/com.ibm.p8.common.deploy.doc/deploy\\_operation\\_formats.htm](http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.common.deploy.doc/deploy_operation_formats.htm)

The slide lists most of the deployment operations available. Each of the operations is an xml tag that you add to the deployment operations file.

## How to create a deployment operation file

- Two methods available:
  - Use the FDM GUI to create the *DeploymentOperation.xml*
    - Run the operation with the GUI
    - Save the DeploymentOperation.xml file created.
  - Use FDM to create sample files that you can edit.
    - Create samples from the GUI: Deployment > Create Sample Files
    - Use the –s or --samples option from the command line  
`<FDM_install_path>\DeploymentManagerCMD.bat --samples`

Graphical user interface



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Figure 6-6. How to create a deployment operation file

FileNet Deployment Manager (FDM) provides two methods to create deployment operation files.

The easiest method is to run the deployment operation with the GUI interface.

When you are satisfied with the operation results, save the DeploymentOperation.xml file created. The file is located in a couple of locations:

- `<deployment tree>\Temp\Run.<Date&Time stamp> folder`
- `<deployment tree>\<environment>\Assets\<deploy_data_set>`
- `<deployment tree>\<destination environment>\Assets\<deploy_data_set.converted>`

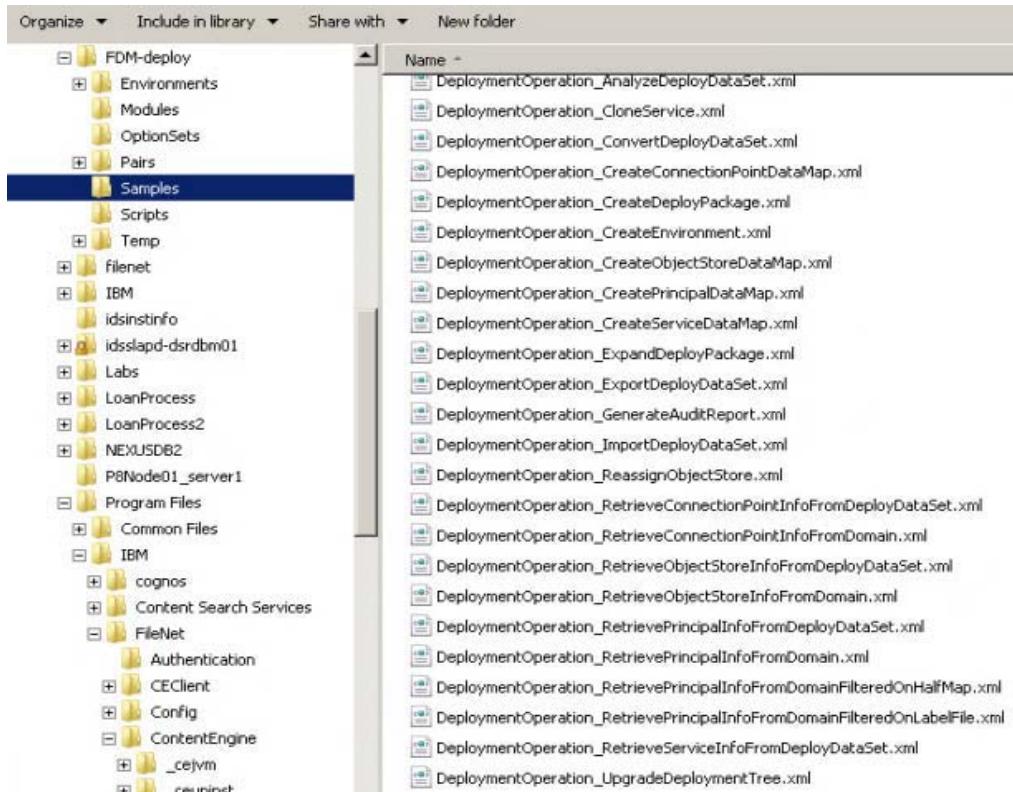
The other method is to have FDM create the sample files. A sample file for each operation is created. Copy and edit the file with configuration-specific information.

There are two ways to create the sample files:

1. Use the graphical user interface, Deployment > Create Sample Files (screen capture on the left).
2. Use the command line interface to create the sample files (text box on the right).

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## Sample files



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Figure 6-7. Sample files

The screen capture shows the sample deployment operation files created by FileNet Deployment Manager when you run the option to Create Sample Files.

## Guidelines

- Start by running the deployment operation with the GUI.
- When the deployment operation is running successfully:
  - Save the DeploymentOperation.xml file
  - Give it a name that identifies the deployment operation.
- Create a script that runs each deployment operation.

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*Figure 6-8. Guidelines*

## Unit summary

- Automate FileNet P8 asset migration with the FileNet Deployment Manager command line interface.

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*Figure 6-9. Unit summary*

## Exercise: Automate deployment operations with FileNet Deployment Manager command line.

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*Figure 6-10. Exercise: Automate deployment operations with FileNet Deployment Manager command line.*

## Exercise introduction

- Run a change impact analysis.
- Expand a deploy package to a new environment.



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Figure 6-11. Exercise introduction

In this exercise, you run two deployment operations with the FileNet Deployment Manager command line interface:

- Run a change impact analysis.
  - You search for the deployment operation file that you created when you ran the change impact analysis in exercise 4.2.
  - You run the operation from a command prompt window.
  - You verify that the operation ran successfully.
  - You compare the deployment operation file, that you used, with the sample deployment operation file created by FileNet Deployment Manager.
- Expand a deploy package to a new environment.
  - You start with a sample deployment operation file.
  - You edit the deployment operation file.
  - You run the operation.



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