Course Exercises Guide

IBM FileNet Content Manager 5.2.1: Administration

Course code F288 ERC 1.0

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Part 8. Auditing and Logging

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Exercises description

Student system

Exercises in this course require that you have access to a student system on which is installed the software that you are learning.

Your instructor can show you how to access your student system.

Conventions used in this course

These guidelines can help you complete the exercises faster.

- Most exercises include required sections which should always be completed. It might be necessary to complete these sections before you can start later exercises. Some exercises might also include optional sections that you might want to complete if you have sufficient time and want an extra challenge.
- `Code font` indicates information that you must type.
- *Italics* font indicates a variable. Substitute a literal value where indicated. <Angle brackets> can also indicate a variable.
- As you progress through the materials, the lesson instructions become less verbose. You can refer back to earlier examples of procedures if you forget the steps.
- Data tables are used throughout this course. After you learn to perform the steps of a procedure, you can complete the exercise by using the data they provide.
- If a value is not specified in a data table, then the value is already correctly configured by default. Do not change it.

Most exercises include required sections, which should always be completed. It might be necessary to complete these sections before you can start later exercises. If you have sufficient time and want an extra challenge, some exercises also include optional sections that you can complete.

Part 1. Introduction

Exercise 1. Place holder

Estimated time

00:00

Overview

No hands on lab for this lesson.

Objectives

None

Exercise 2. Explore the IBM FileNet Content Manager applications

Estimated time

00:20

Overview

Use the WebSphere Integrated Solutions console to explore the core applications that comprise IBM FileNet Content Manager.

Objectives

After completing this exercise, you should be able to:

- Examine the applications that comprise IBM FileNet Content Manager.
- Explore the interdependencies between IBM Content Navigator and Content Platform Engine.

Exercise Introduction

Introduction

In this exercise, you:

- Examine the applications that must be running for IBM FileNet Content Manager to run.
- You stop the core Content Platform Engine (CPE) application and try to open an IBM Content Navigator desktop to see the interdependencies between IBM Content Navigator and CPE.

Activities

- "Explore the IBM FileNet Content Manager applications" on page 2-3

Before you begin

Follow the instructions in Procedure 1 and 2 of Appendix A to start the system components."Start and Stop System Components" on page A-1

User accounts

Type	User ID	Password
OS administrator	administrator	passw0rd
Administrator	p8admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

2.1. Explore the IBM FileNet Content Manager applications

Introduction

In this activity, you use the WebSphere Integrated Solutions Console to explore the applications that comprise IBM FileNet Content Manager.

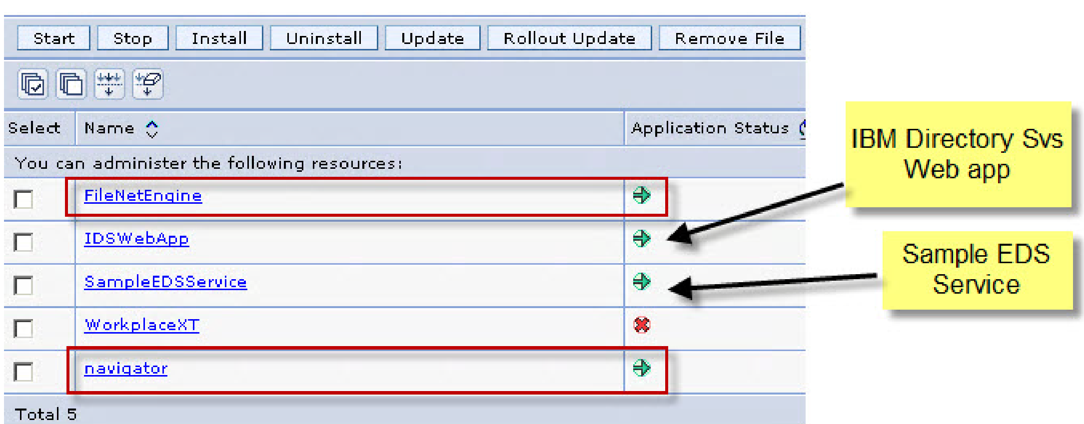
Procedures

Procedure 1, "Examine the applications that comprise IBM FileNet Content Manager," on page 2-3

Procedure 2, "Explore the interdependencies between IBM Content Navigator and Content Platform Engine," on page 2-4

Procedure 1: Examine the applications that comprise IBM FileNet Content Manager

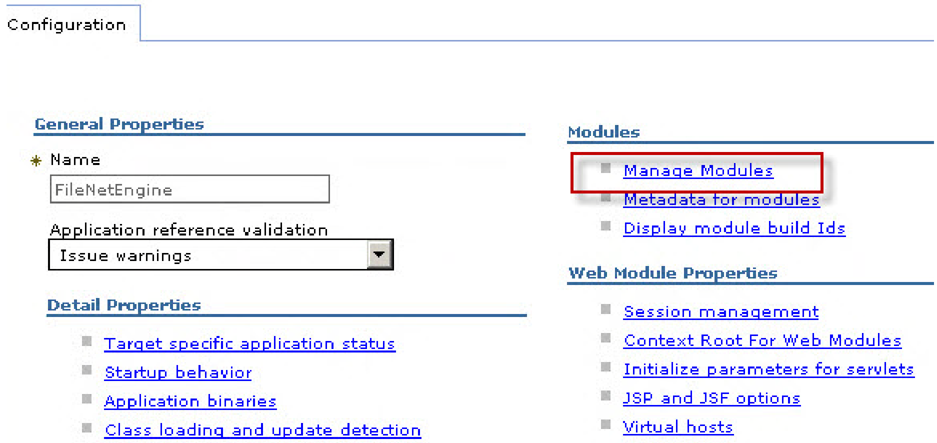
1. If your student system is not started, follow the steps in the section, Before you begin at "Exercise Introduction" on page 2-2
2. Open the WebSphere Integrated Solutions Console.
   a. Go to the folder, WebSphere Admin folder, on the desktop.
   b. Double-click **Administrative console server1**.
   c. Accept the username and password and click **Log in**. (It can take several seconds to log in).
3. Examine the applications that compose IBM FileNet Content Manager.
   a. On the left, expand Applications > Application Types.
   b. Click WebSphere enterprise applications.
   c. The applications with a green arrow are running. The two key applications that are required for IBM FileNet Content Manager to run are:
      - FileNetEngine (Content Platform Engine)
      - Navigator (IBM Content Navigator)



4. Explore the FileNetEngine application.

   a. Click FileNetEngine to open it.

   b. Click Manage Modules.



   c. You see the modules that make up the FileNetEngine application.

      - The application acce is the Administration Console for Content Platform Engine.

Select	Module	URI	Module Type
☐	Engine-ejb-ws.jar	Engine-ejb-ws.jar,META-INF/ejb-jar.xml	EJB Module
☐	peengine-ejb.jar	peengine-ejb.jar,META-INF/ejb-jar.xml	EJB Module
☐	Engine-init.war	Engine-init.war,WEB-INF/web.xml	Web Module
☐	client-download.war	client-download.war,WEB-INF/web.xml	Web Module
☐	engine-health	Engine-health.war,WEB-INF/web.xml	Web Module
☐	IBM FileNet P8 CEWS	cews.war,WEB-INF/web.xml	Web Module
☐	acce	acce_navigator.war,WEB-INF/web.xml	Web Module
☐	IBM FileNet BPM PEWSI	pewsAxis2-ws.war,WEB-INF/web.xml	Web Module
☐	IBM Content Case Engine	peengine.war,WEB-INF/web.xml	Web Module
☐	IBM Content Case Engine WS-Broker	ccepowsbroker.war,WEB-INF/web.xml	Web Module
☐	FileNet P8 Connector	engine.rar,META-INF/ra.xml	Connector Module

Procedure 2: Explore the interdependencies between IBM Content Navigator and Content Platform Engine

In this procedure, you stop the CPE application, FileNetEngine, and attempt to open an IBM Content Navigator desktop.

1. Stop FileNetEngine.

   a. On the left, click the node, WebSphere enterprise applications.

b. On the right, select the box next to FileNetEngine and click Stop.

c. Wait until you see a red X to the right of FileNetEngine.

2. Test opening the Sample desktop.

a. Open another browser tab.

b. Open the Sample desktop, `http://ecmedu01:9080/navigator`.

c. You get the error, **The repository is not available**.

d. Close the message after you are done reading. You see that Content Navigator attempts to load the desktop. It can't load the desktop because FileNetEngine is not running.

e. Close the browser tab that you opened.

Information

The Content Platform Engine is stopped, IBM Content Navigator cannot connect to the repository, so the desktop cannot open.

---

3. Start FileNetEngine.

a. Go back to the WebSphere Integrated Solutions Console tab.

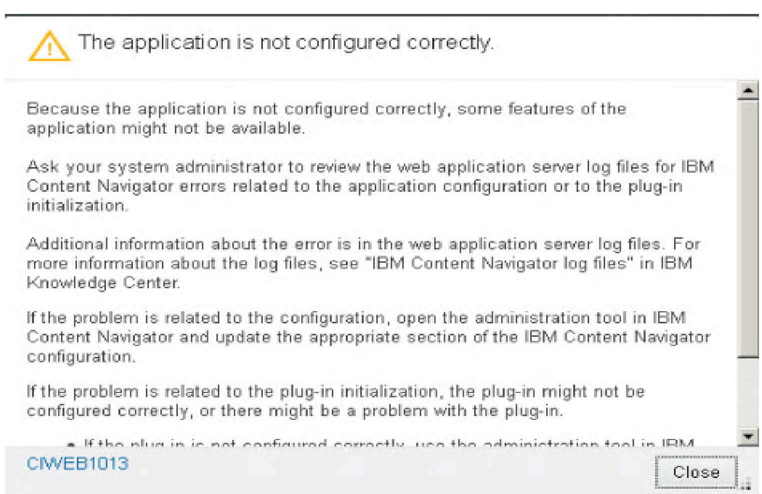
b. Select the box next to FileNetEngine and click Start.

c. Wait until you see a green check mark to the right of FileNetEngine.

4. In a new browser tab, open the Sample desktop, `http://ecmedu01:9080/navigator`.

a. The desktop opens and automatically logs in as p8admin because of the WebSphere Integrated Solutions Console logged on session.

You might get the following message, when you open the Sample Desktop. It is OK to proceed. Close the window.



5. Logout and close all the browser tabs.

Exercise 3. Explore Administration Console for Content Platform Engine

Estimated time

00:30

Overview

Use the Administration Console for Content Platform Engine (ACCE) to locate FileNet P8 Domain objects.

Objectives

After completing this exercise, you should be able to:

- Explore the domain level properties.
- Locate the Global Configuration folder structure.
- Locate the Object Stores folder structure.
- Challenge: Find specific objects in a FileNet P8 Domain.

Exercise Introduction

Introduction

In this exercise, you explore the Administration Console for Content Platform Engine (ACCE).

Activities

- Use Administration Console for Content Platform Engine to locate FileNet P8 Domain objects, on page 3-3
- Challenge - Find objects in the domain, on page 3-10

User accounts

Type	User ID	Password
Administrator	p8admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

3.1. Use Administration Console for Content Platform Engine to locate FileNet P8 Domain objects

Procedures

Procedure 1: Explore the domain level properties

In this procedure, you use the Administration Console for Content Platform Engine (ACCE) to explore the domain level properties.

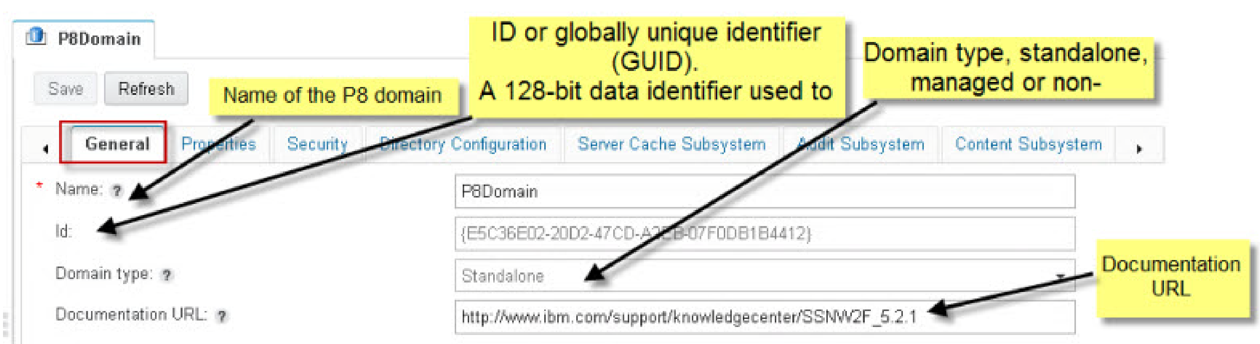
1. Start Administration Console for Content Platform Engine (ACCE).
   a. Open a Mozilla Firefox window.
   b. Go to the URL, `http://ecmedu01:9080/acce`.

Hint

A bookmark, ACCE is created for your convenience.

---

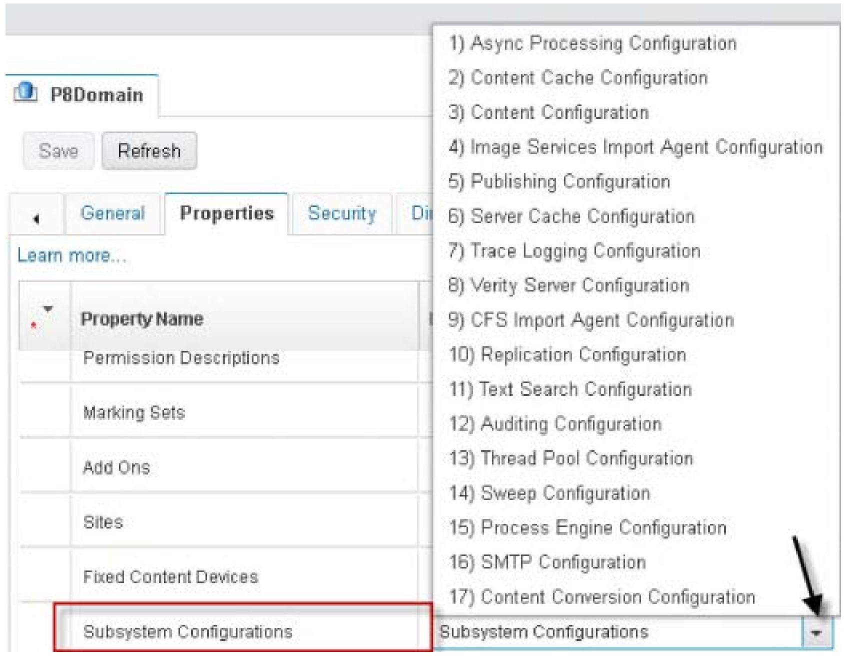
   c. Log in with an account that has administrative rights on the FileNet P8 Domain:
      - Username: `p8admin`
      - Password: `IBMFileNetP8`
2. On the right, you see a series of tabs, with the General tab selected. Four general properties are listed:



3. Explore the Properties tab.
   a. Click the Properties tab.
   b. Review the properties listed.

c. Scroll down until you see Subsystem Configurations, and click the down arrow to the right.

- You see a list of different subsystem configurations that you can select.



- Close any subsystem tabs that you opened.

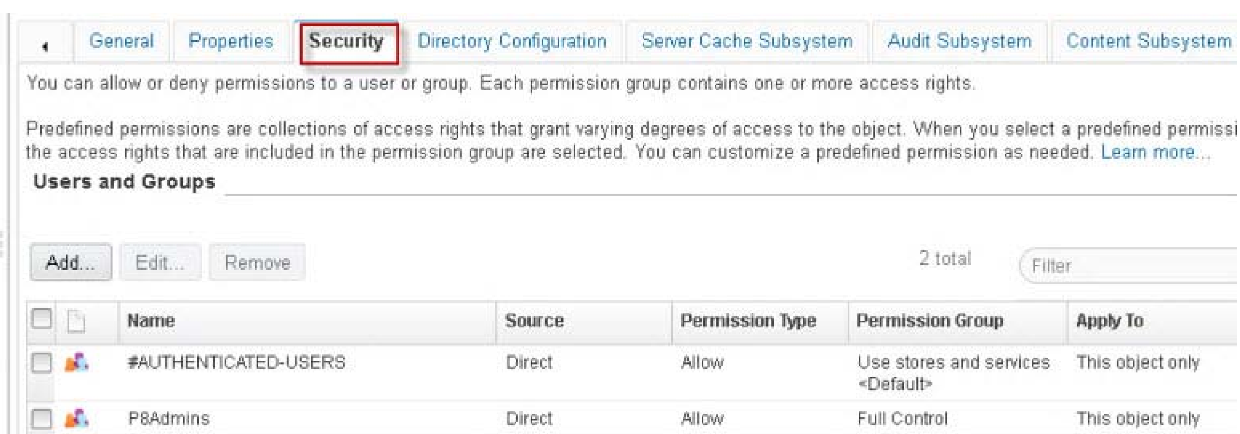
Note

Depending on the property, you might be able to select options or values.

4. Explore the Security tab.

a. Back in the P8Domain tab, click the Security tab.

b. The Security tab is where you grant access to the entire domain.



Note

In this FileNet P8 Domain, P8Admins has full control on the domain. The default group, #AUTHENTICATED-USERS has default access to use stores and services.

5. Explore the Directory Configuration tab.
    a. Click the Directory Configuration tab.
        - A FileNet P8 Domain can be configured to use multiple directory configurations.
    b. Click P8_TDS and examine the properties displayed.
    c. Close the P8_TDS tab.

Information

The directory configuration is generally configured with the FileNet Configuration Manager. ACCE can be used to update the settings or just to view them.

6. Explore the remaining tabs.
    a. Click the Server Cache Subsystem tab.
    b. Review the properties.
    c. Click each of the subsequent tabs and review the properties (you might need to click the right arrow to see all the tabs). Stop when you get to the SMTP Subsystem tab.
7. Explore the SMTP Subsystem tab.
    a. Click the SMTP Subsystem tab.
    b. In this tab, you configure an SMTP mail server to set up email notifications.
        - Mail services are not enabled on this domain.
8. Explore the Workflow Subsystem tab.
    a. Click the Workflow Subsystem tab.
    b. In this tab, you enable Workflow and Case Analyzer and adjust tuning parameters.

Procedure 2: Explore the Global Configuration folder structure

In this procedure, you explore the properties and objects located in the Global Configuration folder.

1. On the left, expand Global Configuration > Administration
2. Examine a database connection.
    a. Expand Database Connections and click FNOSDS.
    b. On the right, click the Properties tab.
        - Examine the properties displayed.

c. Click the Object Stores tab.
   - The object stores that use this database connection are listed.
d. Click the object store, LoanProcess.
   - A new tab opens next to P8Domain. You explore the object store in another procedure.
   - Close the LoanProcess tab.
e. Close the FNOSDS tab, click Close, or click the x on the tab.
f. Close the Database Connections tab.

3. Explore the other nodes under Administration.
   - When you are done, collapse the Administration node.
4. Expand the node, Data Design.
   a. Click Add-ons.
      - The list of available Add-ons are listed.

Information

When you create a new object store, you choose from this list of Add-ons. Each Add-on provides predefined metadata that extends the basic operation of FileNet Content Manager. For example, Thumbnail Extensions are required if your object store needs to support thumbnails.

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   b. Click Marking Sets.
      - Marking Sets are primarily used for records management.
      - No Marking Sets are defined in this domain.

Procedure 3: Explore the Object Stores folder structure

In this procedure, you explore the objects and properties located in the Object stores folder.

1. On the left, expand the node, **Object Stores**.
   a. The list of object stores that exist in the FileNet P8 Domain are listed.
2. Click the object store, **LoanProcess**.
   a. A new tab is opened, next to the P8Domain tab.

Note

The view is the same view that displayed when you selected the object store, LoanProcess, from the Database Connections tab in the Global Configuration node.

---

3. Explore the folder, **Administrative**.
   a. Expand the node, Administrative.

   b. Explore each of the nodes. Stop when you get to Workflow System.

4. Explore the subfolder, **Workflow System**.

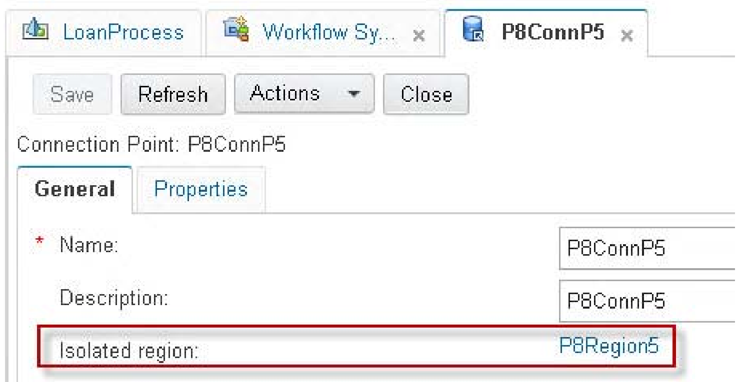
   a. On the left, click Workflow System.

   b. On the right, explore the tabs available that contain properties that apply to the entire Workflow System.

   c. On the left, expand Workflow system.

   d. Expand **Connection Points** and click **P8ConnP5** to open it.

      - On the right, in the General tab, you see that P8ConnP5 is associated with isolated region, P8Region5.



   e. On the left, expand the node, Isolated Regions and expand P8Region5.

      - You see all the isolated region objects, such as Application Spaces, Component Queues, User Queues.

Information

In previous versions of the software, these objects were configured with the Process Configuration Console.

   f. On the left, click P8Region5 to open it.

      - On the right, a series of tabs are displayed where you can adjust configuration properties for the isolated region.
      - Explore the tabs.

Information

If you want to learn more about how to configure a workflow system, see the course, F231: IBM Case Foundation 5.2.1 - Configure the workflow system.

   g. Close all open tabs on the right.

   h. On the left, collapse the folder, Administrative

5. Explore the folder, **Browse**.
    a. On the left, expand the node, Browse.
    b. You see two nodes, Root Folder and Unfiled Documents.
    c. Expand Root Folder to see all the folders that exist in the domain.
    d. Click **Root Folder** to open it. The contents of the folder are displayed on the right.
        - Explore each of the tabs on the right.
    e. On the left, click the folder, **Loans**, to open it.
        - Review the documents that are filed in the Loans folder.
        - Explore each of the tabs on the right.
        - Try opening one of the documents and exploring the tabs for the document.
    f. On the left, click the node Unfiled Documents.
        - This FileNet P8 Domain does not have any documents that are not filed in a folder.
    g. Close all open tabs on the right.
    h. On the left, collapse the folder, **Browse**.
6. Explore the folder, **Data Design** (you explore a few of the more commonly used data design objects).
    a. On the left, expand the node, Data Design.
        - Under this node, you find objects that are used to define metadata such as property definitions, classes, and choice lists.
    b. Expand **Classes > Document** to see all the subclasses.
        - Expand the subclass, **Loan**. You see one sub-class, **HomeLoan**.
        - Click **Loan** to open it.
        - On the right, click the Property Definitions tab to see the property definitions defined for Loan.
    c. On the left, expand the class, **Folder**. You see three sub-classes for the class Folder.
    d. Expand the folder, **Property Templates**. Scroll down until you see **LoanAmount**.
        - Click LoanAmount to open it.
        - On the right, explore the tabs.
    e. Close all open tabs on the right.
    f. On the left, collapse the folder, **Data Design**.
7. Explore the folder, **Events, Actions, Processes**.
    a. On the left, expand the node, **Event, Actions, Processes**.
    b. Click Event actions.
        - Two event actions are displayed.
    c. On the left, click Subscriptions.

- Two subscriptions display.
- Click each of the listed subscriptions.

Note

Only Loan Process Autolaunch has a workflow tab. Loan Process Autolaunch is a workflow subscription. Customer Creation subscription is an event subscription.

8. Explore the folder, **Sweep Management**.
   a. On the left, expand the node, Sweep Management.
   b. Explore each of the nodes listed.
   c. Close all open tabs on the right.
   d. On the left, collapse the folder, **Sweep Management**.
9. Log out of the administration console and close the browser.

3.2. Challenge - Find objects in the domain

Scenario

Use Administration Console for Content Platform Engine to find specific objects in the FileNet P8 Domain.

Data

- Object store to search in: Sales

Challenge

- Find the document class, PriceQuote. How many property definitions are defined in the class?
- What are the two names of the workflows in the folder, Workflows?

Verification

- The class, PriceQuote has three property definitions defined: customer_name, Description, and price.
- The two names of the workflows are: Sample Workflow, and Test Subscription Workflow.

Part 2. Build a FileNet Content Repository

Exercise 4. Build a FileNet Content Repository

Estimated time

00:30

Overview

Build an object store with its own JDBC data source and then add it as a repository to an IBM Content Navigator desktop.

Objectives

After completing this exercise, you should be able to:

- Create JDBC data sources for an object store.
- Create an object store
- Add an object store as a repository to an IBM Content Navigator desktop

Before you start

Before you start your lesson exercise, you must start your student system.

1. Open the WebSphere Admin folder on the desktop.
2. Double-click the Start Server1.bat to run the script.
3. Wait for the command window to disappear (Can take several minutes).

Information

If your system does not start properly, you can find more detailed instructions in "Start and Stop System Components" on page A-1.

Exercise Introduction

Introduction

In this exercise, you build a FIleNet Content repository and the underlying infrastructure.

Scenario

The Marketing team was added to the system. They require a separate database for their content repository. A database administrator created the database, but you must create the connection to the database and the object store. Finally, you must add the object store as a repository on the client application so that the Marketing team can access it.

Activities

User accounts

Application Name	User ID	Password
DB2 Control Center	p8admin	IBMFileNetP8
IBM FileNet Configuration Manager	p8admin	IBMFileNetP8
Administration Console for Content Platform Engine	p8admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

4.1. Create JDBC data sources for an object store

Introduction

The JDBC data source information is used by Content Platform Engine to connect to global configuration database (GCD) and object store databases. Object stores and isolated regions can share a database by using a single database connection.

Each site must maintain its own database connection. In this exercise, you must add a database connection for the Marketing team.

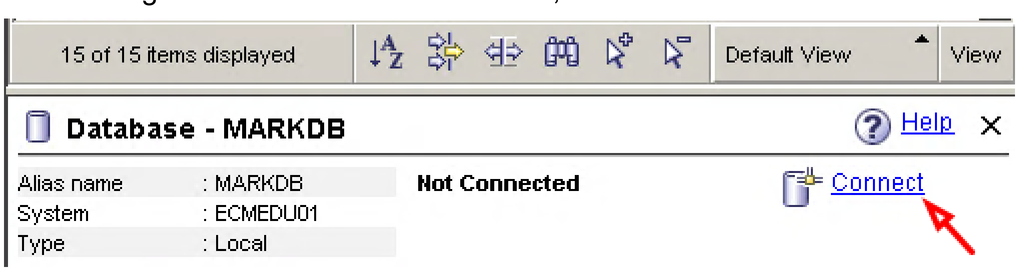
Procedures

Procedure 1: Examine the target database

In this procedure, you examine a database that is used as the target for the connection object that you are going to create.

1. Start the DB2 Control Center.
   a. Click Start > All Programs > IBM DB2 TDSV63DB2 (Default) > General Administration Tools > Control Center.

      The Control Center window opens.
   b. In *Control Center View* window, Leave the default value Advanced and click OK.
2. In the left pane, expand All Databases. A list of databases is shown in the left pane.
3. Connect to the MARKDB database.
   a. In the left pane of the Control Center, select MARKDB node.
   b. In the lower right corner of the Control Center, click the Connect link.



c. The properties of the MARKDB database are listed in the lower right pane of the Control Center.
    - DBM State: Started.
    - The Size of the database is shown in MB.
    - The Capacity of the database is shown in MB. A small horizontal bar icon displays the percentage of the available capacity used (such as 20%).

4. Expand the MARKDB in the left pane of the Control Center window.

   Many database components are listed, including Tables, Views, Triggers, Indexes, and Table Spaces.

5. Examine database components.
   a. Click the MARKDB > Table Spaces node.
   b. Several table spaces are listed in the upper right pane of the window. MARK_TS, USERTEMP1 and TEMPSYS1 are user-defined table spaces.
   c. From the menu bar, click Control Center > Exit to close the tool.

Procedure 2: Create the required data sources

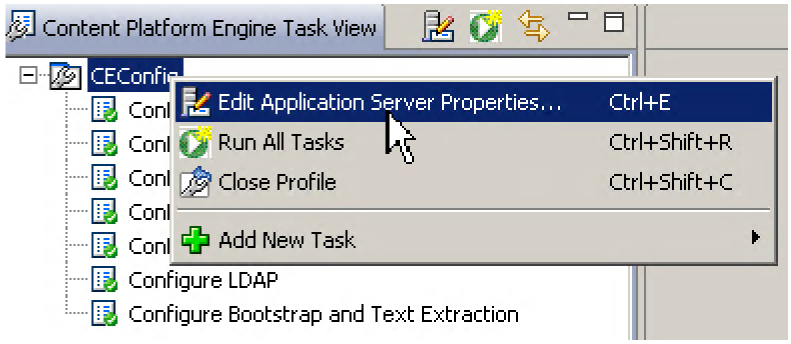
In this procedure, you use the Configuration Manager to create the data sources that are required for the Content Platform Engine to access the MARKDB database.

1. Start the IBM FileNet Configuration Manager.
   a. From the Windows desktop, double-click the FileNet Configuration Manager icon.

      The IBM FileNet Configuration Manager for Content Platform Engine window opens.
   b. If necessary, click the X icon on the Welcome tab to close the Welcome screen.
2. Open the profile.
   a. Click File > Open Profile. The window opens.
   b. In the Open window, go to the following folder:

      `C:\Program Files (x86)\IBM\cpit\install-scripts\profiles\CEConfig`
   c. Select the `CEConfig.cfgp` file and then click Open.
   d. When prompted with the “Verify your application server settings before proceeding” message, click OK.
   e. A list of tasks are listed in the left column.
3. Verify that the correct version of WebSphere Application Server selected.
   a. Right-click CEConfig in the left pane.

b. Click Edit Application Server Properties from the list. The Properties page opens.



c. Change the Application server version to version `8.5`.

d. Enter `IBMFileNetP8` in the Application server administrator password.

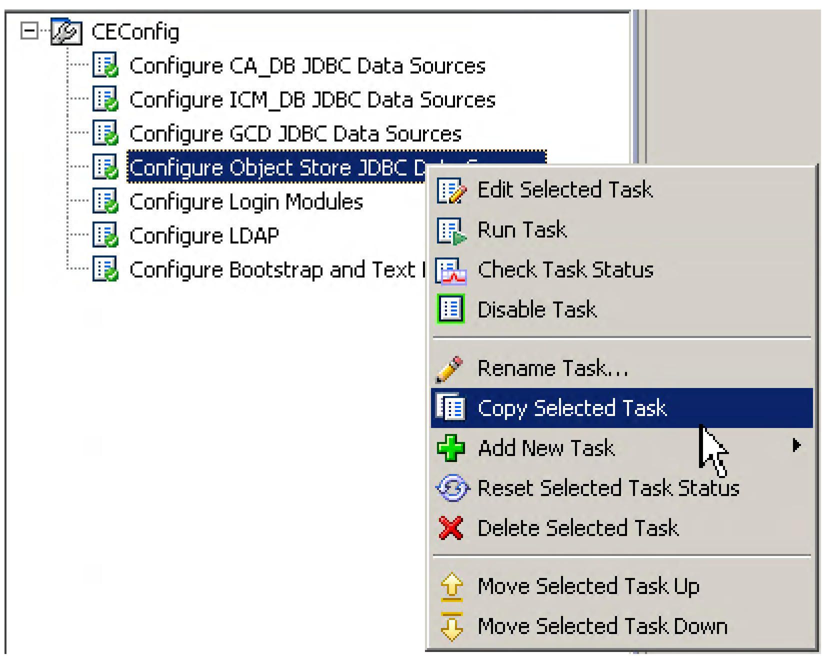
e. Click Test Connection. A *Test Results* window is shown with the message that the connection to the server is successful.

f. Click OK to close the Test Results message window.

g. Click Finish.

4. Create a task for Configure Marketing Object Store JDBC data sources.

a. Right-click the Configure Object Store JDBC data sources task and click Copy Selected Task.



A copy of the task with a name beginning with the string *Copy_of_* is listed in the left pane.

b. Right-click the task *Copy_of_*Configure Object Store JDBC Data Sources and click Rename Task.

A Rename Task window opens.

c. Enter the following name and then click OK: `Configure Marketing OS JDBC Data Sources`

d. In the left pane, double-click the renamed task.

5. Edit the configuration properties page for the task. Use the following data.

Table 1:

Item	Value
JDBC driver name	DB2 Universal JDBC Driver
JDBC Data Source name	MOSDS
JDBC XA Data Source name	MOSDSXA
Database server name	localhost
Database port number	50000
Database name	MARKDB
Database user name	osdbuser
Database password	IBMFileNetP8

a. Accept the default settings for any values that are not specified in the table

b. Click *Test Database Connection*.

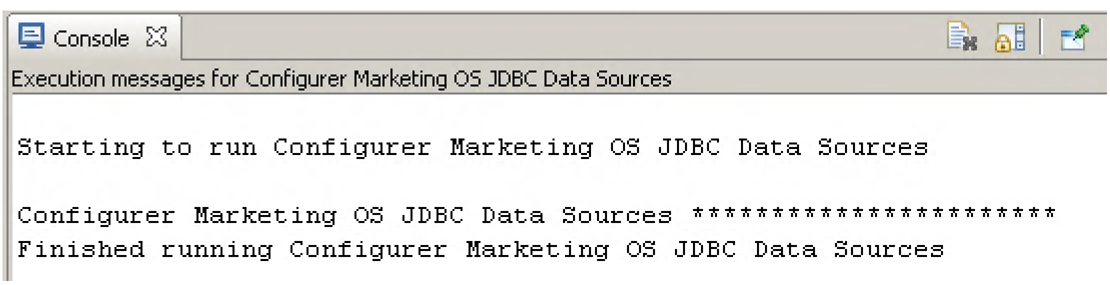
c. Click Yes on the *Action Required* window to save the task before proceeding. A *Test Results* window is shown with the message that the connection to the database is successful.

d. Click OK to close the Test Results message window.

6. Click Run Task to create and configure the data sources.

a. Monitor the status in the Console on the lower right corner of the window.

b. Wait for the message `Finished running Configure JDBC Data Sources` in the Console.



7. Close the profile and exit Configuration Manager.

a. From the menu bar, click File > Close Profile.

b. Click File > Exit to close the Configuration Manager.

Procedure 3: Test the data sources

In this procedure, you test the data sources in the WebSphere Application Server Administrative Console.

1. Open WebSphere Application Server Administrative Console.

a. In a Firefox browser, click the *WAS Admin server 1* link in the Bookmarks toolbar to open the Integrated Solutions Console.

You can also use the following URL to open this page:

`https://ecmedu01:9043/ibm/console/logon.jsp`

The *Integrated Solutions Console* login page is displayed.

b. Enter the account information and click *Login*.

- User ID: `p8admin`
- Password: `IBMFileNetP8`

The Welcome page is displayed.

- If a Login Conflict message is displayed, click OK.

Note

The activities in this unit refer to the Integrated Solutions Console as the WebSphere Application Server Administrative Console.

---

2. Open the *Data Sources* page.

a. In the left pane, expand the Resources > JDBC link.

b. Click the *Data Sources* link.

The *Data Sources* page is displayed in the right pane.

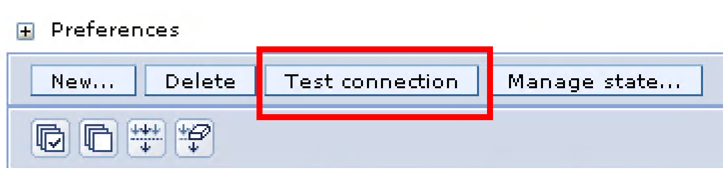
c. Scroll down and locate the MOSDS data source.

☐	MOSDS	MOSDS	Cell=P8Node01Cell	JDBC provider for DB2	CEMP DataSource
☐	MOSDSXA	MOSDSXA	Cell=P8Node01Cell	JDBC provider for DB2 (XA)	CEMP DataSource (XA)

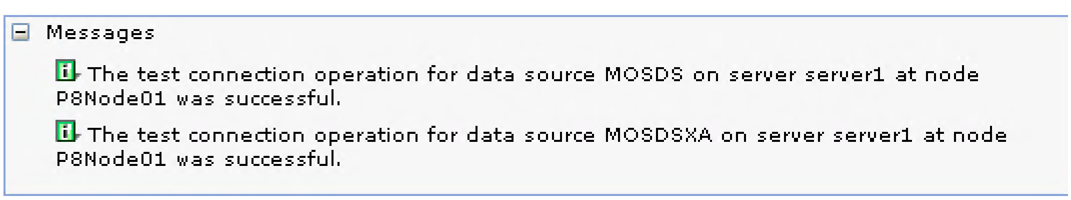
3. Test the MOSDS connection.

a. Select the MOSDS and the MOSDSXA check boxes.

b. Click *Test connection*.



After a few moments, a message is shown on the same page that the test connection operations for Data Source MOSDS and MOSDSXA were successful.



4. Log out of the WebSphere Application Server Administrative Console and close the browser.

4.2. Create an object store

Introduction

In this activity, you create an object store that uses the JDBC data sources that you created earlier.

Procedures

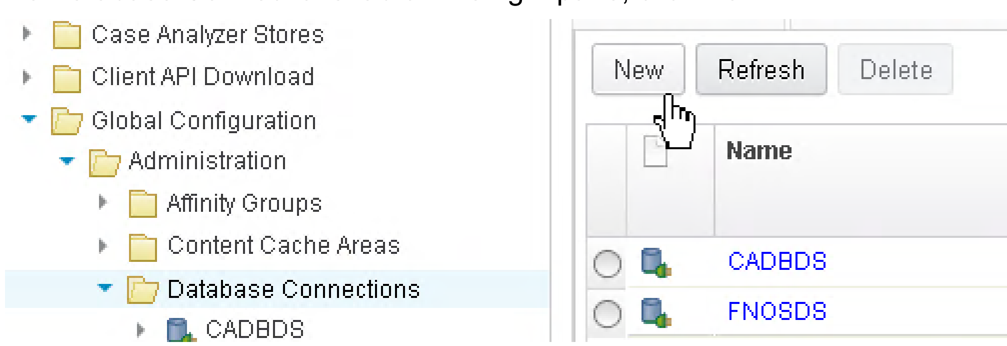
In this activity, you are going to create an object store with the data source that you created in the previous activity.

Procedures

Procedure 1: Create a Database Connection Object

In this procedure, you create a Database Connection Object in the Administrative Console for Content Platform Engine. You use the Data Source values that you created.

1. Start the Administration Console for Content Platform Engine.
   a. In your browser, go to `http://ecmedu01:9080/acce`
   b. Log in as the `P8admin` user (password: `IBMFileNetP8`).
2. Open the New Database Connection Object wizard.
   a. In the administration console, expand the P8Domain > Global Configuration > Administration node on the left pane.
   b. Click Database Connections.
   c. In the Database Connections tab on the right pane, click New.



   The New Database Connection tab opens.
3. Specify the Database Connection Name and Site.
   a. Enter `MarketingDC` as the value for the Display name field.
   b. Leave the default value (Initial Site) for the Site field.

   c. Click Next.

4. Specify Database Connection Data Source Names.
   a. Enter `MOSDS` for the JNDI Data Source field.
   b. If it is not automatically populated, enter `MOSDSXA` for the JNDI XA Data Source field.
   c. Click Next.
5. Complete the wizard.
   a. In the Summary page, view the details and click Finish.
   b. In the Success page, click Close.
6. Verify the new Database Connection object.
   a. In the Database Connections tab, click Refresh.
   b. Verify that the new MarketingDC connection is listed.
7. Leave the Administration Console open for the next activity.

Troubleshooting

If you get an error message when you complete the wizard, do the following steps:

1. Click OK on the Error page.
2. Verify your inputs and click Cancel in the Error page of the wizard.
3. Repeat the Steps 2-6 to create the database connection.

Procedure 2: Create an object store

1. Open the New Object Store wizard.
   a. In the Administration Console, click the P8Domain > Object Stores node on the left pane.
   b. In the Object Stores tab on the right pane, click New.
   c. The New Object Stores tab opens.
2. Name the Object Store.
   a. Enter `Marketing` as the value for the Display name field.

      The Symbolic name field is automatically populated with the same name.

Note

The symbolic name, which is used for internal programmatic purposes, must contain only ASCII characters and must begin with an alphabetic character.

---

   b. Optionally, enter a description to your object store.
   c. Click Next.

3. Define the database:
   a. Select MarketingDC from the list for the database connection field.
   b. Enter `MSchema` for the Schema name field.

Important

Since, the same database can be shared for two or more object stores, each object store must contain a schema name that is unique for that object store.

---

   c. Leave the default values (no value) for the other fields.
   d. Click Next.
4. On the Select the Type of Storage Area for Content page, click Next.

Information

If you select a storage area other than Database, two storage areas get created because an object store always has a database storage area. You are going to configure File Storage Area in the next lesson.

---

5. Grant Administrative Access.
   a. Click Add. The Add Users and Groups window opens.
   b. In the Search for field, clear the Search for Users and Search for Special accounts check boxes. Leave Search for Groups selected.
   c. Type `P8` in the field that is next to the Starts with field. Click Search.
   d. In the Search Results section > Available Users and Groups column, a list of groups that starts with P8 is listed.
   e. Select and Move `P8Admins` to the Selected Users and Groups column by clicking right arrow. Click OK.
   f. Use the same method to add the `Admins` group.
   g. Verify your administrators.

		Short Name	Principal Name
		Admins	CN=Admins,cn=groups,o=sample
		P8Admin	cn=P8Admin,o=sample
		P8Admins	cn=P8Admins,o=sample

   h. Click Next.

6. Grant Basic Access.

   a. Click Add on the Grant Basic Access page.

   b. Add the `P8Users` group.

Note

If you specify an empty list, the wizard automatically adds #AUTHENTICATED-USER, which gives all network users in the authentication realm access to the object store.

   c. Click Next.

7. Select AddOns.

   a. Select the following add-ons.

      - 5.2.1 Base Content Engine Extensions
      - 5.2.1 Process Engine Extensions
      - 5.2.1 Stored Search Extensions
      - 5.2.1 Thumbnail Extensions
      - 5.2.1 Workplace Base Extensions
      - 5.2.1 Workplace XT Extensions
      - 5.2.1 Workplace Template Extensions"

   b. Click Next.

8. Complete the wizard:

   a. In the Summary page, review your selections.

Summary

Name	Value
Display name	Marketing
Symbolic name	Marketing
Description	Marketing
Database connection	MarketingDC
Schema name	Mschema
Force case-insensitive search	False
Customize the schema creation script	False
Storage area type	Database
Administrators	cn=P8Admin,o=sample cn=P8Admins,o=sample CN=Admins,cn=groups,o=sample
Users Groups	CN=P8Users,cn=groups,o=sample
Add-ons	5.2.1 Base Application Extensions 5.2.1 Base Content Engine Extensions 5.2.1 Process Engine Extensions 5.2.1 Stored Search Extensions 5.2.1 Thumbnail Extensions 5.2.1 Workplace Base Extensions 5.2.1 Workplace Templates Extensions 5.2.1 Workplace XT Extensions

   b. Click Finish to create the object store.

Information

It can take a few seconds before the progress bar changes, and several more seconds for the new object store to be created.

If a message states that the script is unresponsive, click OK to continue.

   c. In the Success page, click Close.

Procedure 3: Verify the new object store

In this procedure, you create a test folder in the new object store to verify that the object store is working.

1. In the Administration Console > Object Stores tab, click Refresh.

   a. Verify that the new object store is listed.

Name	State	Isolated Regions	JNDI DataSource	JNDI XA DataSource
LoanProcess	Online	P8Region5	FNOSDS	FNOSDSXA
LoanProcessQA	Online		FNOSDS	FNOSDSXA
Marketing	Online		MOSDS	MOSDSXA
P8ConfigObjectStore	Online	P8Region	FNOSDS	FNOSDSXA
Sales	Online	SalesPERegi	FNOSDS	FNOSDSXA
SalesQA	Online		FNOSDS	FNOSDSXA
SalesSBx	Online		FNOSDS	FNOSDSXA

   b. Observe that the Marketing object store uses the new MOSDS data connection.

   c. Click the Marketing object store.

2. Create a folder.

   a. In the left pane, expand Marketing > Browse.

   b. Right-click the Root Folder and click New Folder from the list.

      The New Folder tab opens.

3. Define New Folders.

   a. Enter `Test Folder` in the Folder name field.

   b. Notice that Class field has `Folder` as the value. Click Next.

4. Complete the wizard.

   a. In the Specify Settings for Retaining Objects, leave the defaults and click Next.

   b. In the Summary page, click Finish.

   c. In the Success page, click Close.

5. Verify the new folder.

   a. In the Marketing tab, click Refresh.

   b. In the left pane, expand Marketing > Browse > Root Folder.

   c. Verify that the Test Folder that you created is listed.

      If the new folder is added, you successfully created the object store.

6. Log out of Administration Console for Content Platform Engine, and close the browser.

4.3. Add the repository to an IBM Content Navigator desktop

Introduction

The object store that you created can currently be accessed only through the Administration Console. To make it accessible to the Marketing team, you must make it a repository on a FileNet Content Manager client. In this activity, you add the object store as a repository on an IBM Content Navigator desktop.

Procedures

Procedure 1, "Configure your repository," on page 4-14

Procedure 2, "Edit the desktop to add your repository," on page 4-15

Procedure 3, "Make other repositories visible," on page 4-16

Procedure 1: Configure your repository

Users access and add content to your object store in IBM Content Navigator.

To access the content in an IBM FileNet P8 repository, you must first configure IBM Content Navigator to connect to that repository.

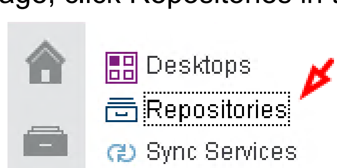
Then, you must associate this repository with a desktop to enable users to access the content.

You are going to learn in more detail how to configure the IBM Content Navigator in a separate unit. In this procedure, you configure the repository that recently created.

1. Start the IBM Content Navigator.
   a. In your browser, go to `http://ecmedu01:9080/navigator/`

      The URL value is case-sensitive.
   b. Enter the logon credentials for an administrator (user name: `P8admin`, password: `IBMFileNetP8`). The user should have administrative access.
2. On the Content Navigator desktop, click the Open Administration View icon in the leftmost pane.

3. Open the Repositories tab.
   a. In the Administration View page, click Repositories in the left pane.



b. On the Repositories tab, a list of the repositories that are configured is shown.

4. Create a connection to your repository.

   a. Click New Repository and select FileNet Content Manager from the list.

   b. Enter the values shown in the table.

Table 2.

Property	Value
DIsplay Name	Marketing
Server URL	iiop://ecmedu01:2809/FileNet/Engine
Object store symbolic name	Marketing
Object store display name	Marketing

Information

Your server name is ecmedu01.

5. Test the connection to the repository.

   a. Click Connect.

   b. In the Log In page, enter the credentials of a user with administrator access to the repository (User: `P8admin`; password: `IBMFileNetP8`).

   c. Click Log In.

6. Save the configuration settings for the new repository.

   a. Click Save and Close to save and close the New Repository tab.

7. Test the new repository.

   a. Verify that the new repository is listed on the Repositories tab. Click Refresh if you do not see it.

   b. This repository is now available to be used in the Content Navigator.

   c. Close the Repository tab.

Procedure 2: Edit the desktop to add your repository

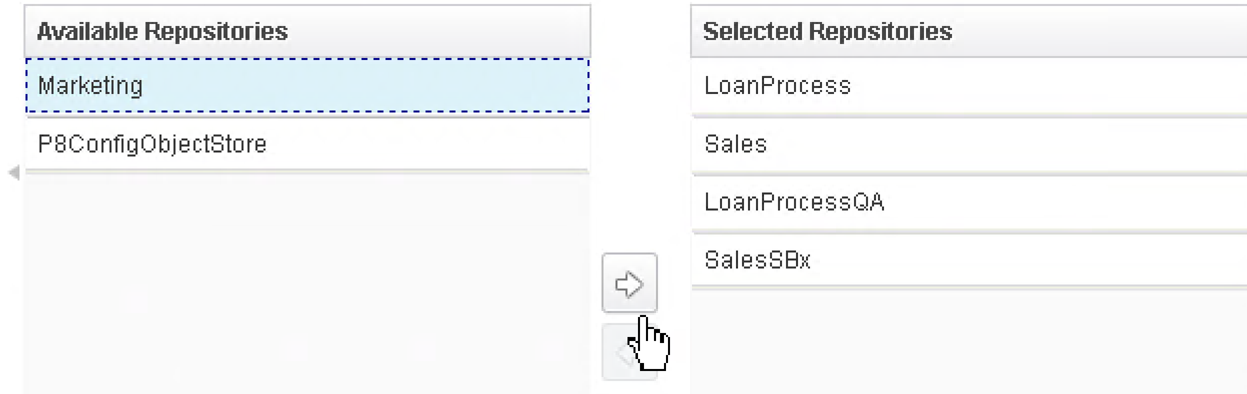
In this procedure, you associate your repository with a desktop.

1. In the Admin desktop page > Desktops tab, right-click Sample Desktop and click Edit.

   a. In the Sample Desktop tab, click the Repositories subtab.

2. Specify the repository for the desktop.

   a. In the Repositories tab, Select `Marketing` repository from the Available Repositories pane and use the right arrow (Add) to move it to the Selected Repositories pane.



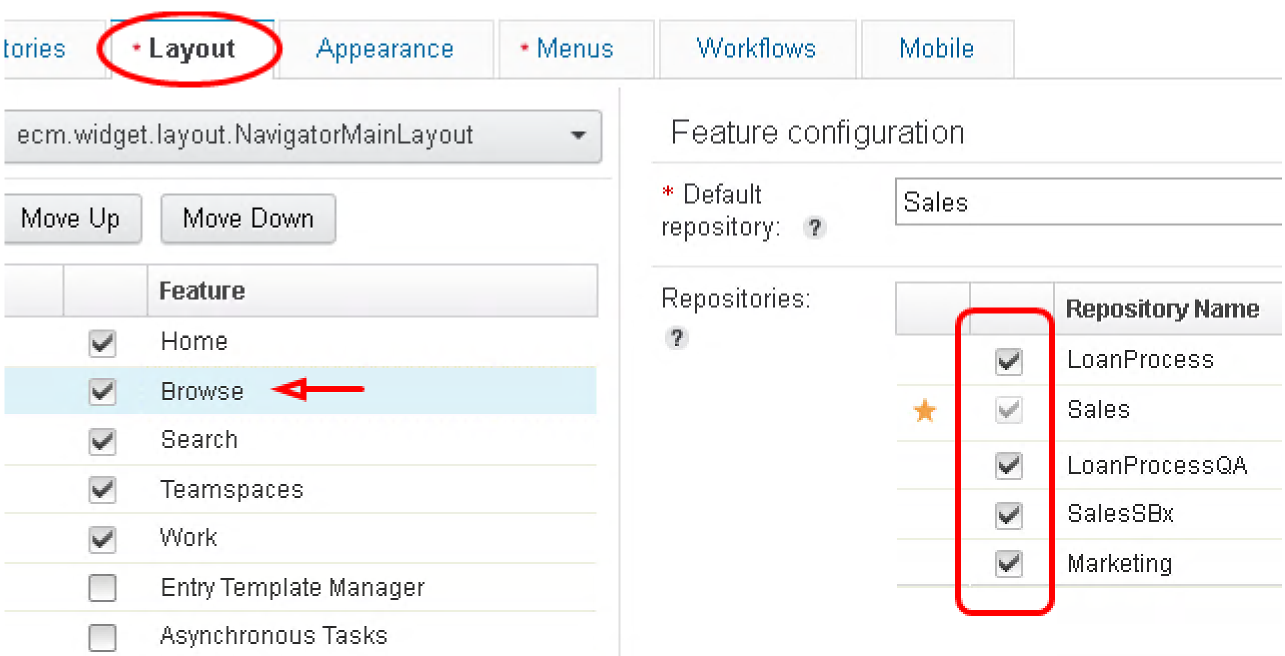
Procedure 3: Make other repositories visible

Although some repositories are enabled for this desktop, they are not visible to users. The repositories must also be selected for the Browse view.

1. Open the Layout tab.
2. Select the Browse option by clicking the word Browse (do not click the check box).

   The Feature Configuration pane opens.

3. On the Feature Configuration pane, ensure that all of the object stores are selected to display in the Browse feature.

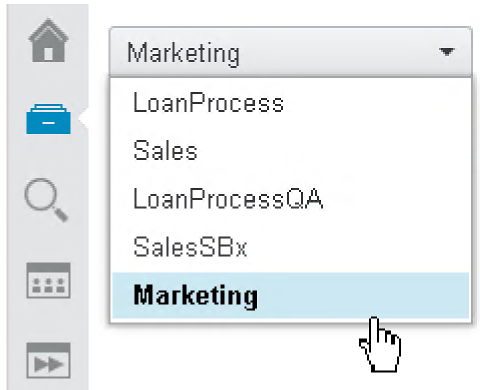


4. Save the settings for the new desktop.

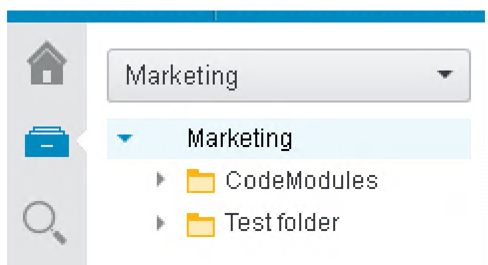
   a. Click Save and Close.

   b. If you get a prompt: “You must refresh your browser”, click Close.

5. Test the Desktop.
   a. Refresh your browser (press the F5 key).
   b. The desktop opens in Browse view.
   c. Verify that you are able to select your repository (Marketing) from the list.



   d. Click Marketing.
   e. Verify that the Browser view now shows your object store and the Test Folder that you created.



6. Log out of IBM Content Manager and close the browser.

End of exercise

Exercise review and wrap-up

In this exercise, you did the following tasks:

- Create JDBC data sources for an object store.
- Create an object store
- Add an object store as a repository to an IBM Content Navigator desktop

Exercise 5. Work with storage areas

Estimated time

00:40

Overview

Create a file storage area and a storage policy

Objectives

After completing this exercise, you should be able to:

- Create a file storage area.
- Create a file storage policy.
- Create an advanced file storage area.

Exercise Introduction

Introduction

In this exercise, you create a file storage area and a file storage policy. After the simple file storage area, you go on to create an advanced file storage area.

Scenario

You have created an object store for the new Marketing group. The Marketing group has many large files that must be stored in the system. You create a file storage area and a storage policy. As the Marketing content grows, the content grows. You then decide to create an advanced file storage area to handle the greater volume.

Activities

- Create a File Storage Area, on page 5-3
- Create a Storage Policy, on page 5-12
- Create an advanced file storage area, on page 5-18

User accounts

Application Name	User ID	Password
Administration Console for Content Platform Engine	p8admin	IBMFileNetP8
IBM Content Navigator (Administrator user)	p8admin	IBMFileNetP8
IBM Content Navigator (Business User)	burt	filenet

Note

Passwords are always case-sensitive.

5.1. Create a File Storage Area

Introduction

In this activity, you create a file storage area and set it as the default storage area for the Document class.

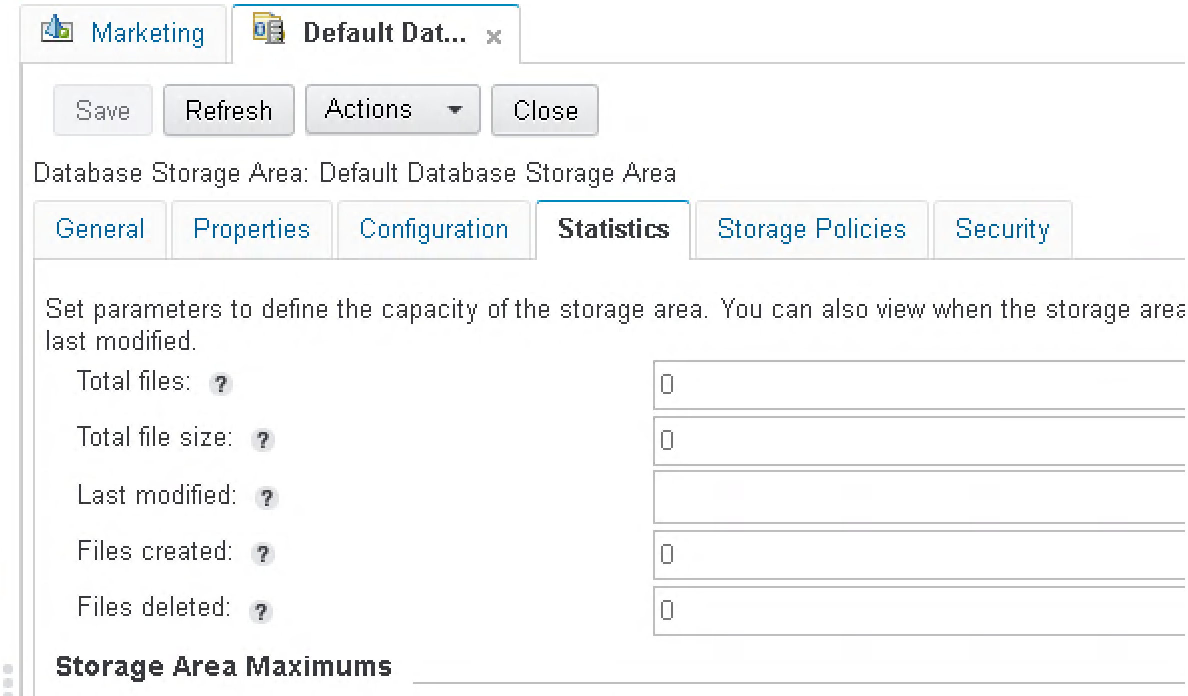
Procedures

Procedure 1: Inspect the default storage area

In this procedure, you add a document to check its default storage option for the Document class.

1. Start the Administration Console for Content Platform Engine.
   a. In your browser, go to `http://ecmedu01:9080/acce`
   b. Log in as the `P8admin` user (password: `IBMFileNetP8`).
2. Open the Marketing object store.
3. View the default storage area statistics:
   a. Go to Marketing > Administrative > Storage > Storage Areas.
   b. Select Default Database Storage Area.
   c. Open the Statistics tab.

d. Verify that the number of Total files is zero.



4. Open Test folder.

   a. Open Browse > Marketing > Root Folder > Test folder in the left pane.

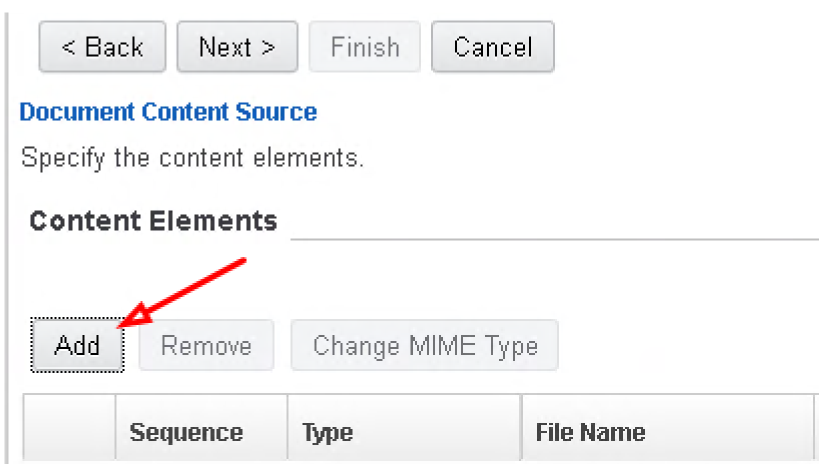
5. Add a document (Class: Document).

   a. Right-click the Test folder and click New Document.

   b. In the Create New Document wizard, enter `TestDoc` for the Document Title field.

   c. Select the With content option and click Next.

   d. On the Document Content Source page, click Add.



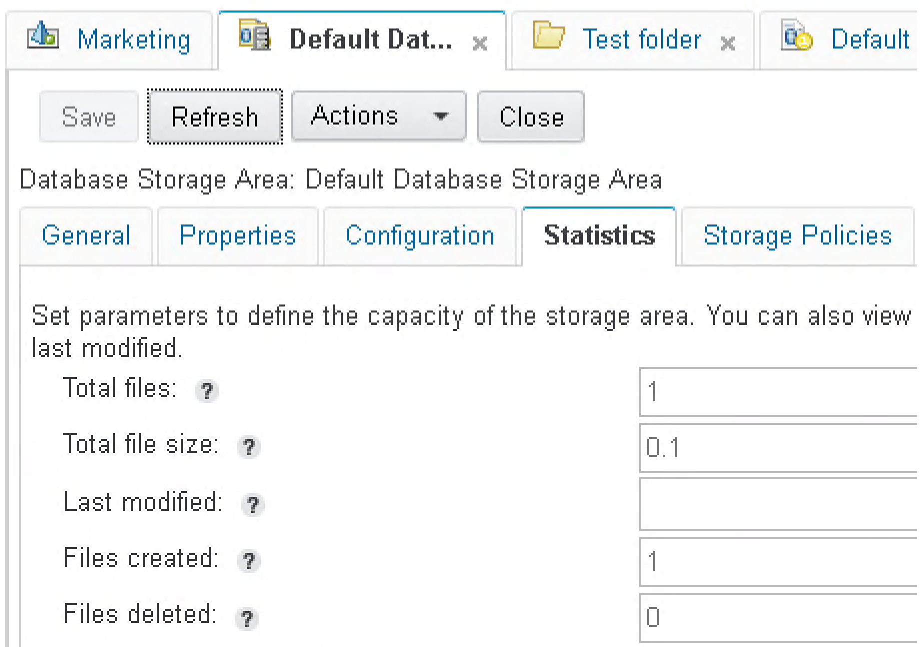
   e. Click Browse.

   f. Select a document from My Documents > sample documents folder.

   g. Click Add Content.

h. Click Next.

6. On the Object Properties page, click Next.
7. On the Document Content and Version page, click Next.
8. On the Specify Settings for Retaining Objects, click Next.
9. On the Advanced Features page, click Next.
10. On the Summary page, click Finish.
11. Click Close.
12. View the default storage area statistics again:
    a. Go to Marketing > Administrative > Storage > Storage Areas.
    b. Select Default Database Storage Area.
    c. Open the Statistics tab.
    d. Click Refresh.
    e. Verify that the number of total files is now 1.



13. Log out of Administration Console and close the browser.

Procedure 2: Inspect an existing storage directory

1. View the existing file storage directories.
    a. Open Windows Explorer (ECMEDU01 icon on the desktop).
    b. In Windows Explorer, go to `C:\filenet`. The student system uses this folder as the base directory for file storage.
    c. Expand the `filenet` folder and observe that there are several folders: file_stores, file_stores2, and BulkMoveFS. These folders are the root directories for file storage in the student system.

Note

You can use any string value for the base and root directory names. You can select any location in your local or distributed file system for the base directory.

d. Expand the `file_stores\content` folder and verify that there are 23 folders named `FN0` to FN22.

   These directories store the committed content element files. The Storage Area wizard creates these content folders.

e. Expand the `FN0` (or any one of the 23 folders) folder and verify that each of them contains a set 23 folders named `FN0` to `FN22`.

f. Expand the `file_stores\inbound` folder and verify that there are several folders.

g. The `inbound` folder is the working area for uploading new content.

Procedure 3: Create a subdirectory for the file storage area

2. Create a subfolder to use it as a root directory for the new file storage area.

   a. In Windows Explorer, go to `C:\filenet`.

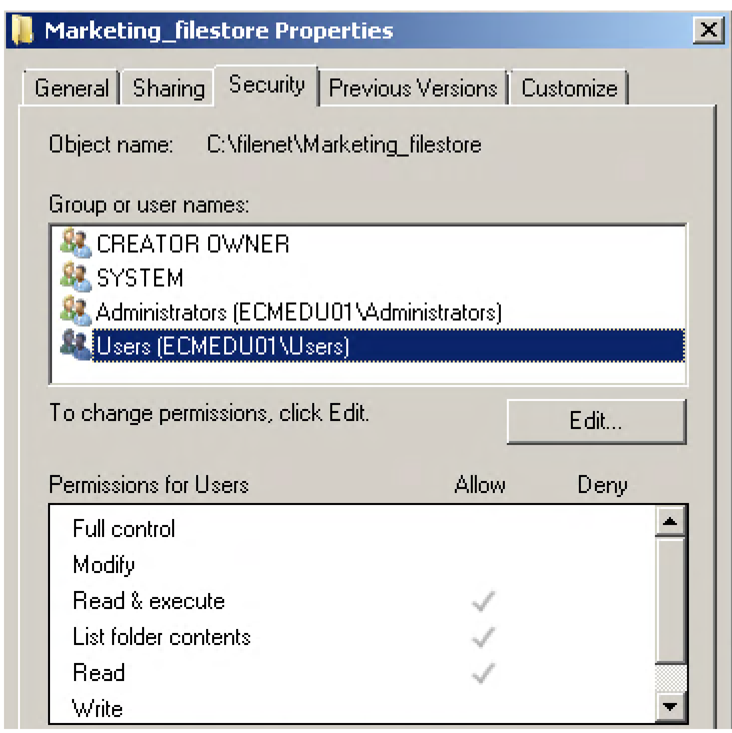
   b. Create a folder with a name: `Marketing_filestore.`

3. Verify and set the security for the folder.

   Only the admin user must be able delete and write files in the file store directories.

   a. Right-click the Marketing_filestore subdirectory and select Properties.

   b. In the Properties window, click the Security tab.



c. Verify that the permission for the non-admin users is read-only to the folder.

d. Click Cancel, then close the Windows Explorer.

Procedure 4: Create a file storage area

1. Start the Administration Console for Content Platform Engine.
   a. In your browser, go to `http://ecmedu01:9080/acce`
   b. Log in as the P8admin user (password: IBMFileNetP8).
2. Open the Marketing object store.
3. Go to Administrative > Storage > Storage areas.
4. Click New to start the New Storage Area wizard.
5. Create a Storage Area.
   a. In the New Storage Area tab, select `File` for the Storage area type field.
   b. Click Next.
6. Name the Storage Area:
   a. Enter `Marketing Storage Area` for the Display name field.
   b. Verify that `Initial Site` is selected for the Site field. Click Next.
7. Configure the Storage Area:
   a. Complete this page with the data provided in the following table.

Item	**Value or option**
Root directory	C:\filenet\Marketing_filestore
Directory structure size	Small
Maximum number of elements	Unlimited
Maximum size	Maximum allowed on device
Delete method	Destroy
Options	Suppress duplicate content elements: Cleared Encrypt content: Disabled Compress content: selected
Other fields	Leave the defaults.

   b. Click Next.

Hint

Click the question mark next to each field name to get more details about that field.

8. Select a Storage Policy for this Storage Area.
   a. You are going to create a storage policy in the next activity. Leave the defaults (not selected) and click Next.
   b. Click OK to close the message about mapping the storage area to a storage policy.

9. Complete the wizard:
   a. In the Summary page, review the details and click Finish.
   b. In the Success page, click Close to close the tab.
10. Refresh the view of the Storage Areas.
    a. In the Storage Areas tab, click Refresh.
11. Verify that the `Marketing Storage Area` is listed.
    a. Notice that `Marketing Storage Area` has the Type that you assigned (File Storage Area) and it is empty (the File Count is 0).
12. Log out of Administration Console for Content Platform Engine.
    a. Close the Browser.

Procedure 5: Verify the storage area directory structure

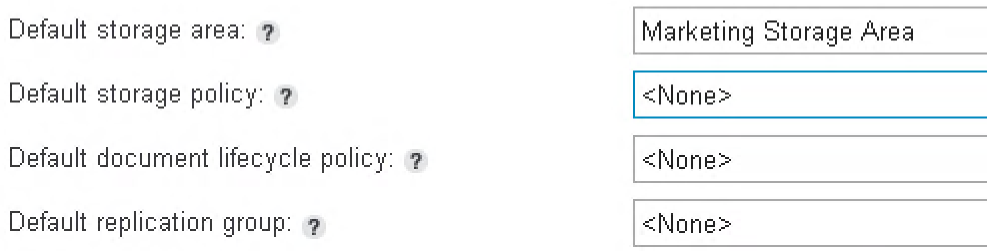
13. In Windows Explorer, go to `C:\filenet\Marketing_filestore` drive.
    a. Expand the `Marketing_filestore` folder and observe the structure.
    b. Verify that content and inbound directories are created. The wizard also creates a folder that is called `system` and an xml file called `fn_stakefile.xml`.
    c. Expand the `content` folder and verify that there are 23 folders named `FN0` to `FN22`.
    d. Expand the `FN0` (or any one of the 23 folders) folder and verify that each of them contains a set of 23 folders named `FN0` to `FN22`.
    e. Expand the `inbound` folder and verify that there are several folders.
    f. Close the Windows Explorer.

Procedure 6: Configure a Document class

In this procedure, configure the new file storage area that you created as the default storage container for the Document class.

1. Start the Administration Console for Content Platform Engine.
   a. In your browser, go to `http://ecmedu01:9080/acce`
   b. Log in as the P8admin user (password: IBMFileNetP8).
2. Open the Marketing object store.
3. Open the Document class.
   a. In the Marketing object store, expand Data Design > Classes on the left pane.
   b. Click Document. The Document tab opens.
4. Set default storage for the document content of Document class.
   a. In the General subtab, scroll down and select `Marketing Storage Area` from the list for the Default storage area field.

b. Select <None> from the list for the Default storage policy field.



c. Click Save.

d. When prompted, click Cancel in the Propagate Metadata Changes page.

The configuration on this page affects the subclasses of the Document.

e. Close the Document tab.

5. Refresh the object store.

a. In the Marketing tab, click Refresh.

Procedure 7: Edit your storage area

In this procedure, you edit the Marketing Storage Area that you created.

1. Open Marketing Storage Area.

a. In the Marketing tab, expand Marketing > Administrative > Storage Areas on the left pane.

b. Click Marketing Storage Area. The Marketing Storage Area tab opens.

2. Modify the properties of Marketing Storage Area.

a. Click the Configuration tab.

b. Edit the following values and leave the default values for the other fields.

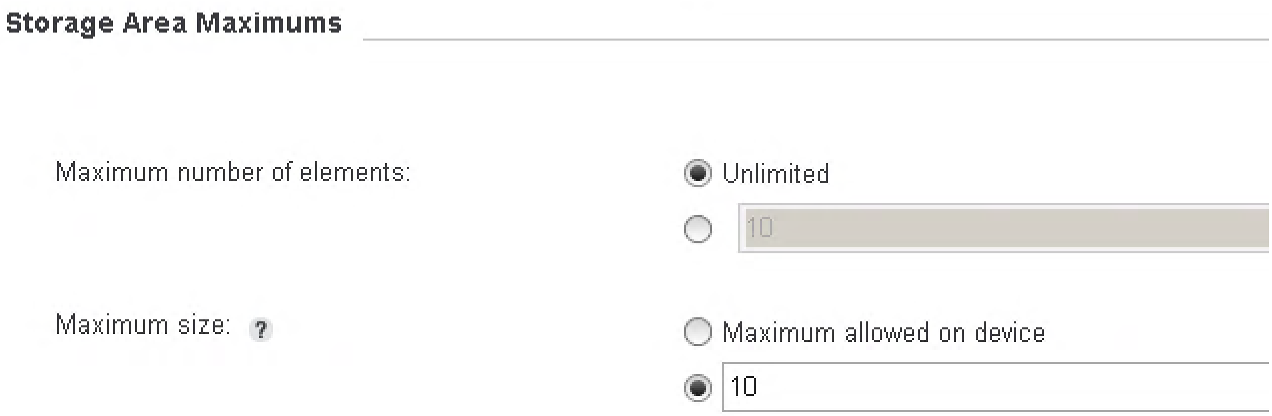
Item	Value
Content Caching	Not Allowed
Delete method	Purge

3. Update the Statistics tab.

a. Open the Statistics tab.

b. In the Storage Area Maximums section, change Maximum Size to 10 MB.

- Click the circle beside the field.
- Change the value.



4. Examine the Storage Policies tab.

   Observe that the Storage Area is not mapped to any Storage Policies.

5. Click Save to save your changes to the storage area properties.
6. Click Close to close the tab.
7. In the Marketing tab, click Refresh.

Procedure 8: Add a document to verify the configuration

In this procedure, you verify that adding a document of Document class to the system adds the content to the new file storage area.

ACCE - storage area statistics tab.

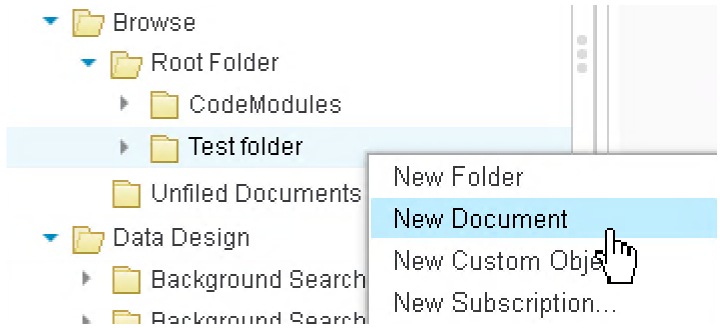
Add document to the Test folder.

Review the statistics tab

1. In Administration Console, open Administrative > Storage > Storage Areas > Marketing Storage Area tab.
2. On the Marketing Storage Area, open the Statistics tab.
3. Verify that there are zero file.
4. Add a document to the Test folder:

   a. Open Browse > Root Folder > Test folder.

b. Right-click Test folder and then select New Document.



c. Name the document: `Storage Area Test`.

d. Confirm that the Document class is selected.

e. Verify that the With Content check box is selected.

f. Click Next.

5. Add a content element to the new document.

   a. Click Add.

   b. Click Browse.

   c. Select a document.

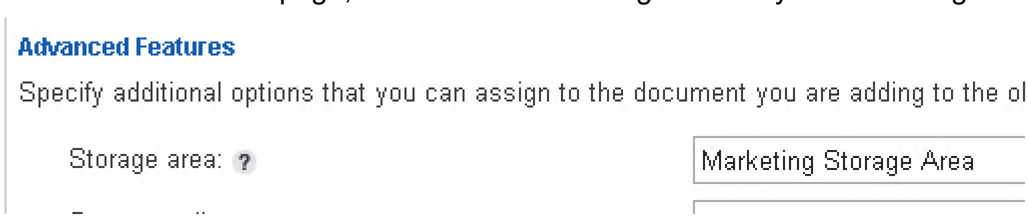
   d. Click Open.

   e. Click Add Content.

   f. Click Next.

6. Continue to the Advanced Features page of the wizard by clicking Next.

7. On the Advanced Features page, confirm that the Storage Area is your Marketing Storage Area.



8. Complete the wizard.

9. Close the wizard.

10. Verify the storage area:

    a. Click Refresh.

    b. Verify that your new document is in the Test folder.

    c. Open the Marketing Storage Area.

    d. Open the Statistics page.

    e. Confirm that the Marketing Storage area now contains 1 file.

11. Log out of Administration Console.

5.2. Create a Storage Policy

Introduction

In this activity, you create two file storage areas to represent a storage area farm. Create a storage policy that includes both of these storage areas and assign it to the Document class. The storage policy uses the load-balancing capabilities of the Content Platform Engine to distribute content within a storage area farm.

Add some documents to the object store and observe the file count information in the storage areas.

Procedures

Procedure 1, "Create storage area farms," on page 5-12

Procedure 2, "Configure a new storage policy," on page 5-14

Procedure 3, "Assign the storage policy to the Document class," on page 5-15

Procedure 3, "Assign the storage policy to the Document class," on page 5-15

Procedure 4, "Verify that storage area farming is working," on page 5-15

Procedure 1: Create storage area farms

1. Create two subdirectories for storage area farms.
   a. In Windows Explorer, go to `C:\filenet` drive.
   b. Create two folders: `FS-Farm1` and `FS-Farm2`.
   c. Close the Windows Explorer.
2. Start the Administration Console for Content Platform Engine.
   a. In your browser, go to `http://ecmedu01:9080/acce`
   b. Log in as the `P8admin` user (password: `IBMFileNetP8`)
3. Open the Marketing object store.
4. Start the New Storage Area wizard.
   a. Open Marketing > Administrative > Storage > Storage Areas.
   b. Right-click the Storage Areas node and then click New Storage Area from the list.

5. Create two file storage areas in the Marketing object store.
    a. In the New Storage Area tab, configure the Storage Area and complete the wizard. Use the data that is provided in the following table.

Item	Value for Storage Area 1	Value for Storage Area 2
Storage area type	File	File
Display name	FS1	FS2
Site	Initial Site	Initial Site
Root directory	C:\filenet\FS-Farm1	C:\filenet\FS-Farm2
Directory structure size	Small	Small
Maximum number of elements	Unlimited	Unlimited
Maximum size	20 MB	20 MB
Delete method	Clear	Clear
Options	Suppress duplicate content elements: Cleared Encrypt content: Cleared Compress content: selected	Suppress duplicate content elements: Cleared Encrypt content: Cleared Compress content: selected
Select a Storage Policy for this Storage Area	Do not select any at this step.	Do not select any at this step.
Other fields	Accept the defaults.	Accept the defaults.

Hint

Select a Storage Policy for this Storage Area.

a. You are going to create a storage policy in the next procedure. Leave the defaults (not selected).

b. When you are prompted with “Message: It is strongly recommended that you map the storage area to a storage policy,” click OK.

6. Complete the wizard:
    a. In the Summary page, review the details and click Finish.
    b. In the Success page, click Close to close the tab.
7. Refresh the view of the Storage Areas.
    a. In the Storage Areas tab, click Refresh.
8. Verify that the FS1 StorageArea is listed.
    a. Notice that FS1 has 0 File Count.
9. Create a second File Storage area:
    a. Use the data in the table.
    b. Verify that the FS2 StorageArea is listed.

c. Notice that FS2 has 0 File Count.

		Display Name	Type	Status	Total Files
		Default Database Storage Area	Database Storage Area	Open	1
		FS1	File Storage Area	Open	0
		FS2	File Storage Area	Open	0
		Marketing Storage Area	File Storage Area	Open	1

d. Leave the administration console opened for the next procedure.

Procedure 2: Configure a new storage policy

1. Start the New Storage Policy wizard.
   a. In the Marketing object store, expand Administrative > Storage > Storage Policies on the left pane.
   b. Right-click the Storage Policies and then click New Storage Policy from the list.

      The New Storage Policy wizard opens.
2. Name the Storage Policy:
   a. In the New Storage Policy tab, enter Display name: `Farm Storage Policy`.
   b. Click Next.
3. Select the Content Storage Method:
   a. Choose the `Select the storage Areas from a list` option.
   b. Click Next.
4. Specify Storage Areas:
   a. Select FS1 and FS2 from the list for the Storage areas field.
   b. Click Next.
5. Summary page
   a. Review the information.
   b. Click Finish.
6. Click Close to close the tab.
7. Click Refresh.
8. On Marketing > Storage Policies tab, verify that the Storage Policy that you created is listed.

Information

You can add more storage areas to the policy from the Storage Policy General tab.

Procedure 3: Assign the storage policy to the Document class

1. In the Marketing object store, expand Data Design > Classes > Document on the left pane.
2. Click Document Class.
3. In the General tab, scroll down and locate the Default storage policy field.
4. Change the value to Farm Storage Policy by selecting it from the list.
5. Select <None> for the Default storage area field.

Important

Verify that <None> is selected for the Default storage area. The Farm Storage policy specifies the FS1 and FS2 storage areas to save the content for the Document class.

If both the Default storage area and the Default storage policy are set, the Default storage area setting takes precedence and the storage policy that you defined is ignored.

6. In the Document tab, click Save.
   a. When prompted, click Cancel in the Propagate Metadata Changes window.
   b. Ensure that the check box for the Storage Policy item is cleared so that the changes are not propagated to the Document subclasses.

   c. In the Document tab, click Refresh.
   d. Click Close to close the Document tab.
7. Log out of the Administration Console and close the browser.

Procedure 4: Verify that storage area farming is working

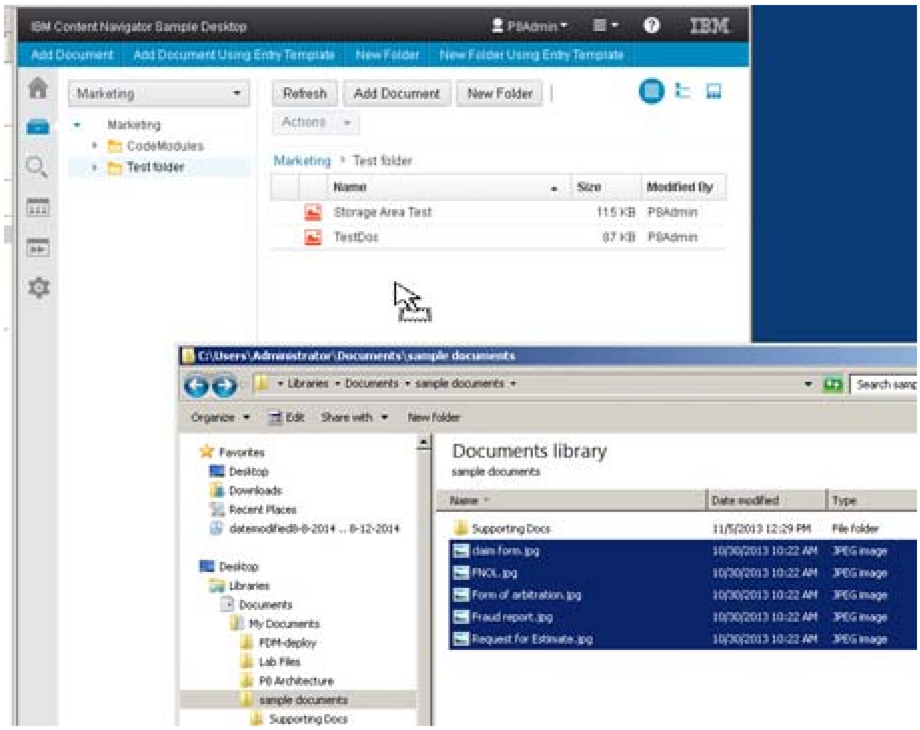
To see the storage area farm at work, you are going to add some documents to the Marketing object store and then view the statistics of the FS1 and FS2 storage areas.

1. Log on to IBM Content Navigator.
   - Use the Content Navigator bookmark to go to http://ecmedu01:9080/navigator/
   - Username/password: `p8admin/IBMFileNetP8`
2. Select the Marketing object store.

3. Open the Test folder.
4. In Windows Explorer, go to C:\Users\Administrator\Documents\sample documents.
5. Add all of the files in sample documents (but not the subfolder) to the Test folder.

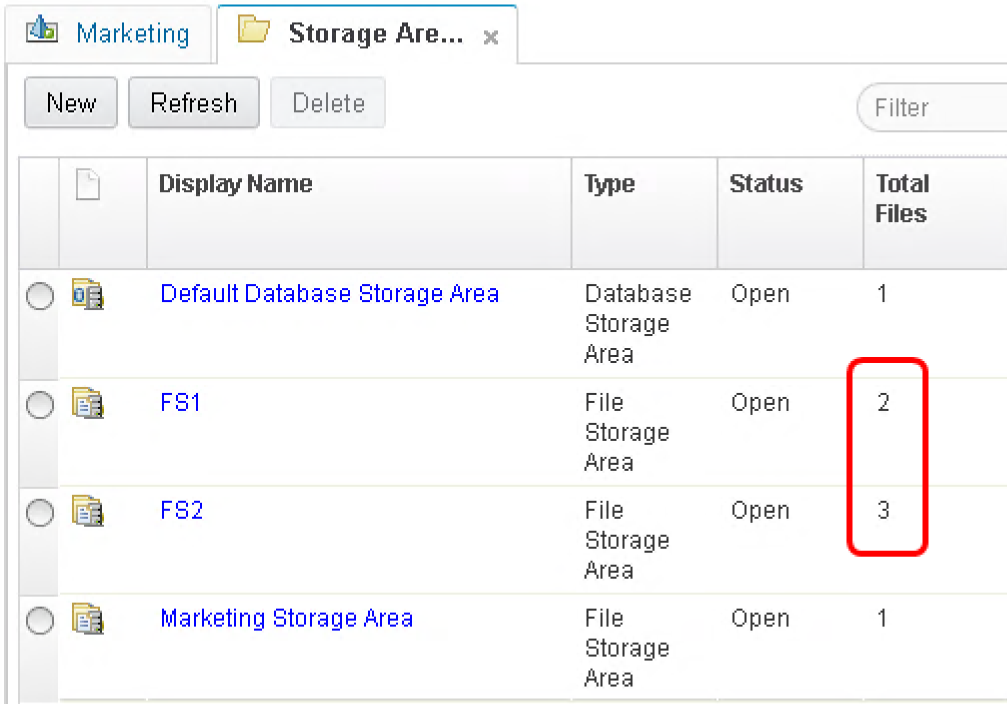
Hint

You can use the drag/drop function to add multiple documents in IBM Content Navigator.



6. Log out of Content Navigator.
7. Log on to Administration Console:
   - Use the ACCE bookmark to go to http://ecmedu01:9080/acce/
   - Username/password: `p8admin/IBMFileNetP8`
8. In Administration Console, open the Marketing object store.
9. Go to Administration > Storage > Storage Areas.

10. Confirm that FS1 and FS2 have some documents.



11. Log out of Administration Console.

5.3. Create an advanced file storage area

Introduction

In this activity, you create an advanced file storage area with two replication devices: ASFD1 and ASFD2. You want to make ASFD1 the primary synchronous device, and ASFD2 the secondary synchronous device. You then add it to the Farm storage policy.

Procedures

Procedure 1: Create Advanced Storage Devices

You must create an advanced storage device before you can use an advanced storage area.

1. In Windows, create the following folders:
   - `C:\filenet\ADVS1`.
   - `C:\filenet\ADVS2`.
2. Start Firefox.
3. Log on to Administration Console:
   - Use the ACCE bookmark to go to http://ecmedu01:9080/acce/
   - Username/password: `p8admin/IBMFileNetP8`
4. Open the Marketing object store.
5. Go to Marketing > Administrative > Storage > Advanced Storage > Advanced Storage Devices > File System Storage Devices.
6. Click New to create an Advanced Storage Device.
7. Complete the wizard using the values provided.

Page	Field	Value
Name and Describe the File System Storage Device	Display Name	`AFSD1`
Configure the File System Device	Root Directory Path	`C:\filenet\ADVS1`

8. Click Close.

9. Create another Advanced Storage Device using the values provided.

Page	Field	Value
Name and Describe the File System Storage Device	Display Name	AFSD2
Configure the File System Device	Root Directory Path	`C:\filenet\ADVS2`

Procedure 2: Create an Advanced Storage Area

1. Go to Marketing > Administrative > Storage > Advanced Storage > Storage Areas.
2. Click New to create an Advanced Storage Area.
3. Complete the wizard using the values provided.

Page	Field	Value
Name and Describe the Advanced Storage Area	Display name	ADV_SA
Configure the Advanced Storage Area	Encrypt Content	128-bit key
	Compress Content	Enabled
Associate a Storage Device with this Advanced Storage Area	Required synchronous devices:	2
	Available storage replication devices (select these)	AFSD1 AFSD2
Advanced Storage Area Parameters	Validate on creation	Enabled
Select Storage Policies	Farm Storage Policy	Selected

Information

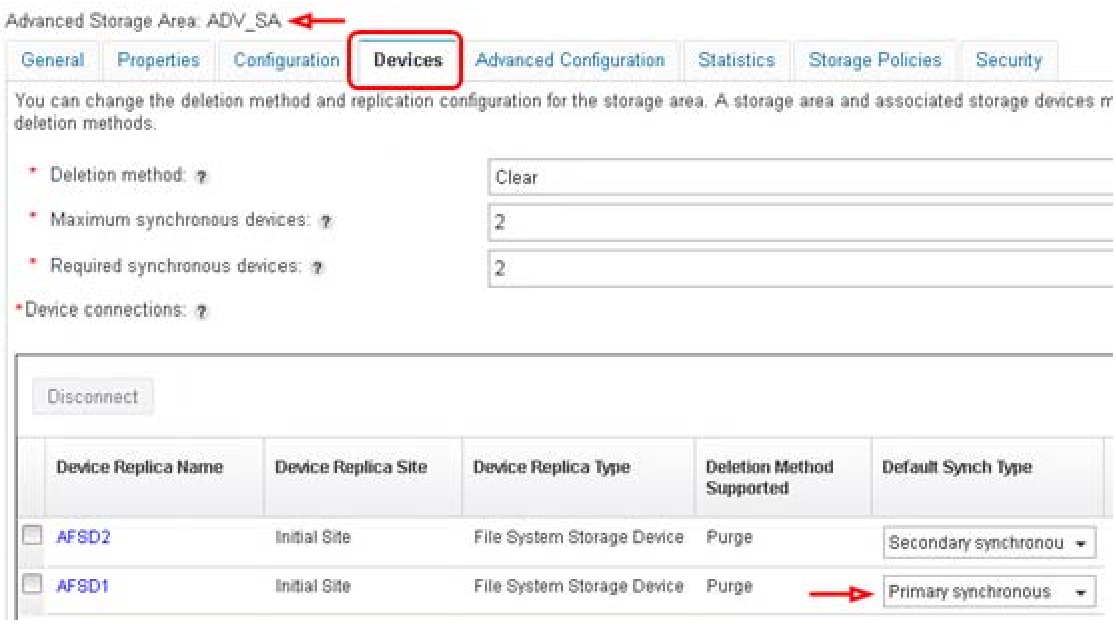
The number of Required synchronous devices must be greater than zero and equal to or less than the number of available storage replication devices.

Procedure 3: Configure the storage devices

In this exercise, you want to change the second storage device to a secondary synchronous device. The storage device settings are configured with the defaults. You can change these settings on the Devices tab of the advanced storage area.

1. Open the advanced storage area that you created.
2. Open the Devices tab.

3. Set AFSD1 to be a primary synchronous device.



4. Click Save.
5. Click Close.

Information

Logical constraints for these values exist.

- The number of required devices must be greater than zero.
- The number of maximum synchronous devices must be equal to or greater than the number of required devices.
- The number of required and maximum synchronous devices cannot exceed the number of synchronous devices listed.

Procedure 4: Edit the storage policy

The Farm Storage Policy has three storage areas associated with it. You are going to remove the two file storage areas.

1. In Administration Console, go to Marketing > Administration > Storage > Storage Policies.
2. Open Farm Storage Policy.
3. Select FS1 and FS2.
4. Click Remove.
5. Save your changes.
6. Log out of Administration Console.

Procedure 5: Test the advanced storage area

1. Log on to IBM Content Navigator.
   - Use the Content Navigator bookmark to go to http://ecmedu01:9080/navigator/
   - Username/password: `p8admin/IBMFileNetP8`
2. Select the Marketing object store.
3. Open the Test folder.
4. In Windows Explorer, go to C:\Users\Administrator\Documents\sample documents\Supporting Docs
5. Add all of the files in Supporting Docs to the Test folder.
6. Log out of IBM Content Navigator.
7. Log on to Administration Console with the following information:
   - Username/password: `p8admin/IBMFileNetP8`
8. In Administration Console, go to Marketing > Administration > Storage > Advanced Storage > Advanced Storage Areas.
9. Verify that ADV_SA contains some files.

		Display Name	Status	Total Files	Total File Size
		ADV_SA	Open	7	315.8 KB

10. Log out of Administration Console.
11. Close all browser instances.

End of exercise

Exercise review and wrap-up

In this exercise, you did the following tasks:

- Create a file storage area.
- Create a file storage policy.
- Create an advanced file storage area.

Part 3. Work with Object Metadata

Exercise 6. Create document and folder classes

Estimated time

00:30

Overview

This exercise provides practice in creating custom document and folder classes. You also work with property templates and choice lists.

Objectives

After completing this exercise, you should be able to:

- Create a document class.
- Create a folder class.
- Create a property template with a choice list.

Introduction

This exercise provides practice with creating document and folder classes.

Requirements

You must have access to a student system that is configured for these activities. If you are taking this course as a self-paced virtual course (SPVC), ensure that your student system is started.

System start

To start your system:

1. Open the WebSphere Admin folder on your desktop.
2. Double-click Start Server1.bat.
3. Wait for the command window to close.

For more information about starting, stopping, and verifying the system status, refer to "Start and Stop System Components" on page A-1.

Exercise Introduction

Introduction

A property is a characteristic of a class. You must create custom property templates for your classes. As a Solution Builder, you create choice lists and property templates that are based on the needs of your organization and assign them to your custom classes.

Scenario

The Sales team has joined the organization. The Sales team needs some new classes that they can use to represent sales prospects. You create the document class for them.

Activities

- Create a choice list, on page 6-3
- Create property templates, on page 6-7
- Create document and folder classes, on page 6-13

User accounts

Application Name	User ID	Password
IBM Content Navigator	p8admin	IBMFileNetP8
Administration Console for Content Platform Engine	p8admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

6.1. Create a choice list

Introduction

Choice lists help save time and prevent errors during data entry. Choice lists constrain property values to a pre-defined set values. In this activity, you create a choice list that you can later use in a property template.

Procedures

- Procedure 1, "Create a choice list," on page 6-3
- Procedure 2, "Verify the new choice list," on page 6-5

Procedure 1: Create a choice list

In this procedure, you create a choice list in the Administrative Console for Content Platform Engine.

1. Start the Administration Console for Content Platform Engine.
   - In a Firefox browser, go to `http://ecmedu01:9080/acce` or use the ACCE shortcut.
   - Log in as the P8admin user (password: `IBMFileNetP8`)
2. Open the SalesQA object store.
3. Open the New Choice List wizard.
   e. In the SalesQA object store, expand the SalesQA > Data Design node on the left pane and click Choice Lists.
   f. In the Choice Lists tab on the right pane, click New. The New Choice List tab opens.
4. Define Choice Lists.
   a. In the New Choice List tab, enter `Prospect Type` for the Display name field.
   b. Click Next.
5. Select Data Types.
   a. In the New Choice List tab, select String for the Choice list data type field.
   b. Click Next.
6. Add Choice List Items.
   a. In the New Choice List tab, click New Items.
   b. In the New Items window, for each name in the table, type the choice item name in the Display Name field.

Display Name	Value
Reseller	Reseller
End User	End User

c. When you click outside Display Name field, the value is automatically populated in the Value field. Optionally, you can edit the value field.

Important

Verify that the Value field is populated before you click Add.

d. Click Add. The choice item is added to the panel.

e. Click OK to close the New Item window.

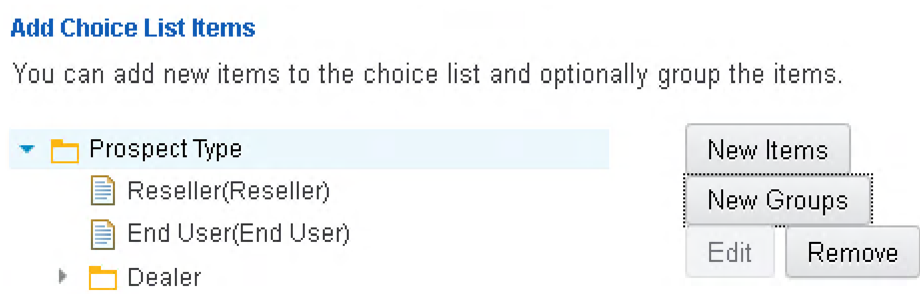
7. Add a group to the choice list.

a. In the New Choice List tab, click New Groups.

b. In the New Groups window, enter `Dealer` in the Display Name field.

c. Click Add. The group name is added to the panel.

d. Click OK.



8. Add choice items to the group.

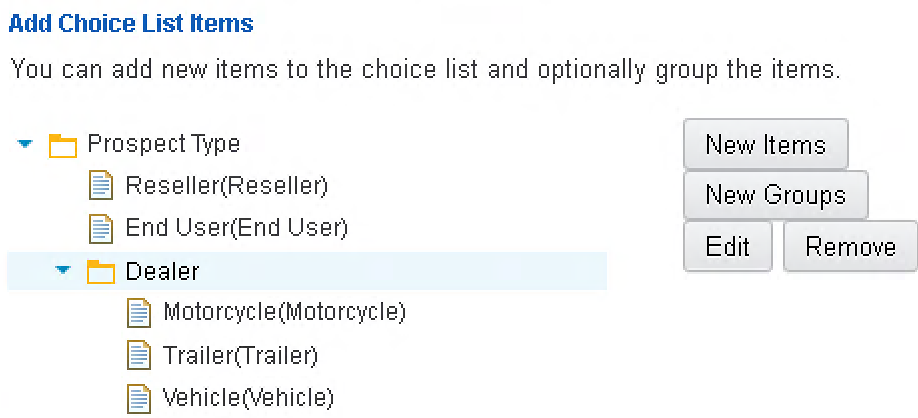
a. In the New Choice List tab, select Dealer.

b. Add choice items to the Dealer group by clicking New Items.

c. In the New Items window, add the following items..

Display Name	Value
Motorcycle	Motorcycle
Trailer	Trailer
Vehicle	Vehicle

d. Verify that your completed choice list includes a group with vehicle choice items.



Hint

You can edit the choice items. To edit, select the item and click Edit.

You can also rearrange the choice items. To rearrange, click the item and use the Move Up or Move Down.

e. Click Next.

9. Complete the wizard.

   a. In the Summary page, view the details and click Finish.

   b. In the Success page, click Close.

Procedure 2: Verify the new choice list

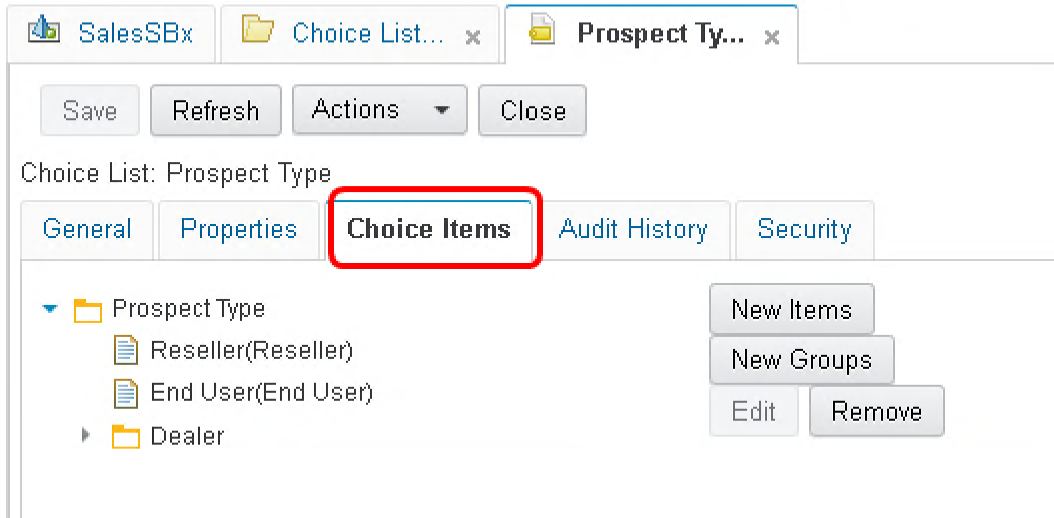
1. Click the Choice Lists tab and click Refresh.

   a. Verify that Prospect Type is shown.

   b. Click Prospect Type.

   c. In the Prospect Type tab, click the Choice Items subtab.

d. Verify that the choice items are listed as you defined.



2. Log out of the administration console and close the browser.

6.2. Create property templates

Introduction

In this activity, you create several property templates for the SalesQA object store in Administration Console for Content Platform Engine. You associate the choice list that you created to a property template. You are going to use these property templates to create Folder and Document classes later.

Procedures

Procedure 1: Create a String Property Template

1. Start the Administration Console for Content Platform Engine.
   a. In a Firefox browser, go to `http://ecmedu01:9080/acce`
   b. Log in as the `P8admin` user (password: `IBMFileNetP8`).
2. Open the New Property Template wizard.
   a. In the administration console, expand the P8Domain > Object Stores node on the left pane and click SalesQA.
   b. In the SalesQA tab, expand the SalesQA > Data Design node on the left pane and click Property Templates.
   c. In the Property Templates tab on the right pane, click New.
   d. The New Property Template tab opens.
3. Name and Describe the Property Template.
   a. In the New Property Template tab, enter `sales_prospect_name` for the Display name field.
   b. Verify that the Symbolic name and Descriptions fields are automatically populated. Click outside of the Display name field.
   c. Optionally edit the Description. Click Next.

Hint

It is sometimes useful to use a name prefix for property templates to track the property templates that are created for a specific application. Optionally, add the prefix to the symbolic name only.

4. Select the data type.
   a. Select `String` from the list for the data type field.
   b. Click Next.
5. Select Choice List or Marking Set: Click Next.
6. Complete the Single or Multi-Value page.
   a. Select the `Single` option for the Single or Multi-Value.
   b. Click Next.
7. Complete the wizard.
   a. In the Summary page, view the details and click Finish.
   b. In the Success page, click Close.
8. Verify that the new property template is listed.
   a. Click the Property Templates tab and click Refresh.
   b. Scroll down and verify that sales_prospect_name is listed.

Hint

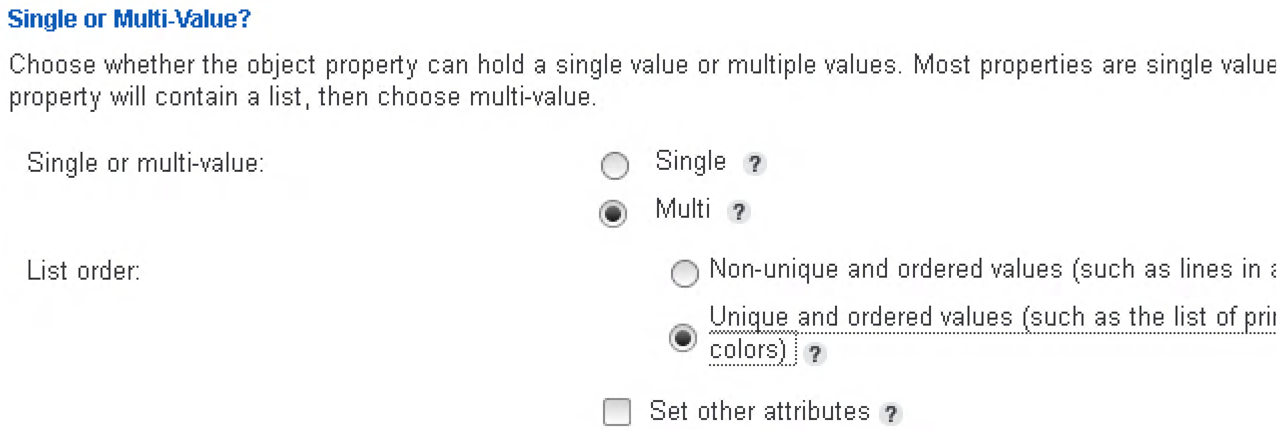
You can click the Date Created column heading to sort the properties by the date created. Your new property moves to the top or the bottom of the list.

Procedure 2: Create a Multi-valued Property Template

You are on the property templates page of the SalesQA object store.

1. Open the New Property Template wizard. In the Property Templates tab on the right pane, click New.
2. Name and Describe the Property Template.
   a. In the New Property Template tab, enter `sales_ contact_methods` for the Display name.
   b. Verify that the Symbolic name and Descriptions fields are automatically populated. Click outside of the Display name field.
   c. Optionally edit the Description. Click Next.
3. Select the data type.
   a. Select `String` from the list for the Data type field. Click Next.
4. Select Choice List or Marking Set. Click Next.

5. Complete the Single or Multi-Value page.
   a. Select `Multi` for the Single or Multi-Value.
   b. Select Unique and ordered values for the List order option.



   c. Click Next.
6. Complete the wizard.
   a. In the Summary page, view the details and click Finish.
   b. In the Success page, click Close.
7. Verify that the new property template is listed.
   a. Click the Property Templates tab and click Refresh.
   b. Verify that sales_contact_methods is listed.

Procedure 3: Create a Value-required Property Template

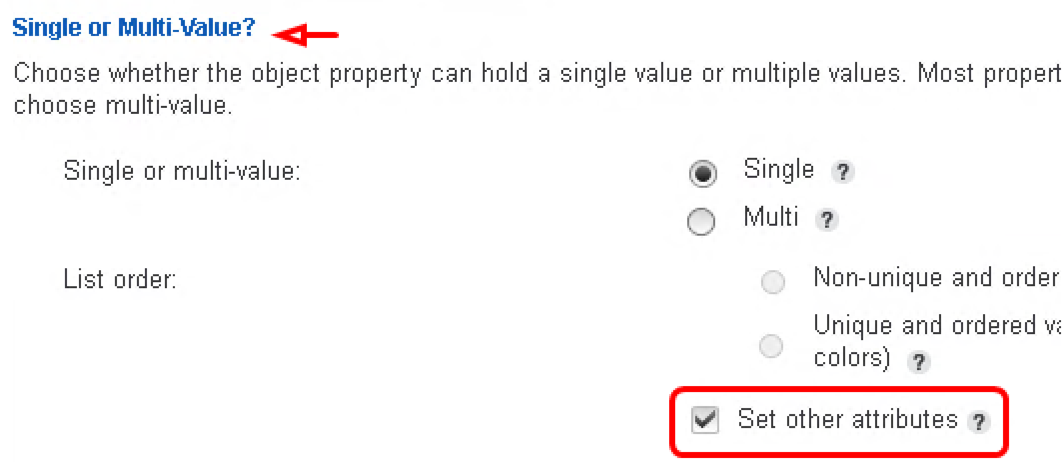
1. In the administration console, create a property template called `sales_prospect_id`.
   a. Follow the steps in Procedure 1 to complete this task. Use the following data table.

Page	Field	Value
Name and Describe The Property Template	Name Symbolic Name Description	sales_prospect_id sales_prospect_id sales_prospect_id
Select the Data Type	Data type	String
Select a Choice List Or Marking Set	Assign a choice list Assign marking set	<None> <None>
Single or Multi-value?	Single	Selected
	Set other attributes	Selected
Additional Property Template Attributes	Value required	Selected

   b. Accept the default values for the other fields that are not listed in the table.

Hint

When you select the `Set other attributes` option in the Single or Multi-Value page, the wizard opens with more pages to set other attributes for the property template.



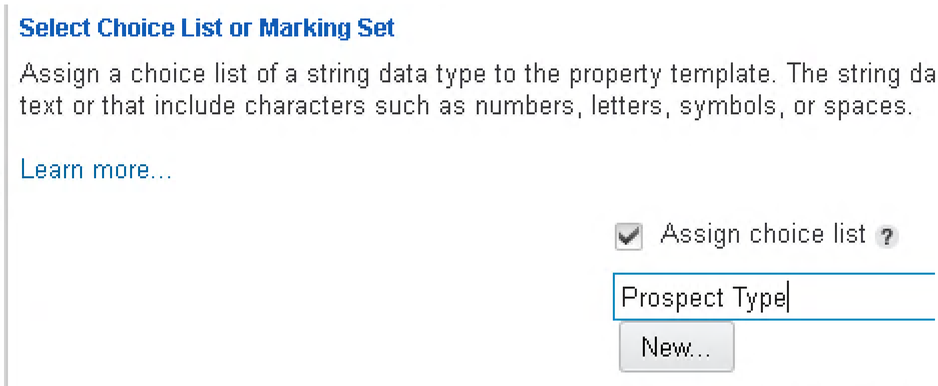
2. Verify that the new property template is listed.
   a. Click the Property Templates tab and click Refresh.
   b. Verify that sales_ prospect_id is listed.

Procedure 4: Create a Property Template with Choice List

1. In the administration console, create a property template called sales_prospect_category.
2. Use the following data table to set the initial property attributes.

Page	Field	Value
Name and Describe The Property Template	Name	sales_prospect_category
	Symbolic Name	sales_prospect_category
	Description	sales_prospect_category
Select the Data Type	Data type	String

3. In the Select Choice List or Marking Set window, select `Assign choice list`.
   a. Select the `Prospect` Type choice list that you created in the earlier activity.



   b. Click Next.
   c. Select `Single` on the Single or Multi-Value page and click Next.
   d. In the Summary page, click Finish.
   e. Click Close in the confirmation page.
4. Verify that the new property template is listed.
   a. Click the Property Templates tab and click Refresh.
   b. Verify that sales_prospect_category is listed.

Procedure 5: Create a Date Time Type Property Template

1. In the administration console, create a property template called `sales_last_contact_date`.
2. Follow the steps in Procedure 1 to complete this task.
   a. Use the following data table. Accept the default values for the other fields that are not listed in the table.

Page	Field	Value
Name and Describe the Property Template	Name	sales_last_contact_date
	Symbolic Name	sales_last_contact_date
	Description	sales_last_contact_date
Select the Data Type	Data type	Date Time
Single or Multi-Value?	Single	Selected

3. Verify that the new property template is listed.
   a. Click the Property Templates tab and click Refresh.
   b. Verify that sales_last_contact_date is listed.

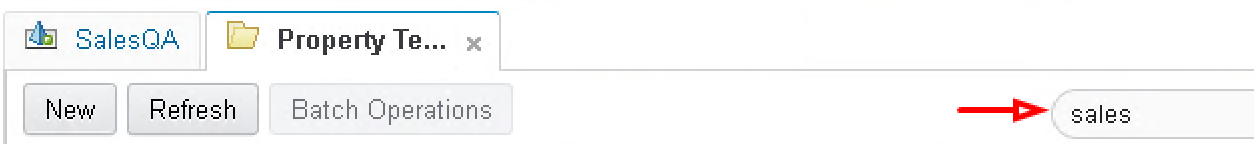
Procedure 6: Create an Integer type Property Template

1. In the administration console, create a property template called `sales_times_contacted`.

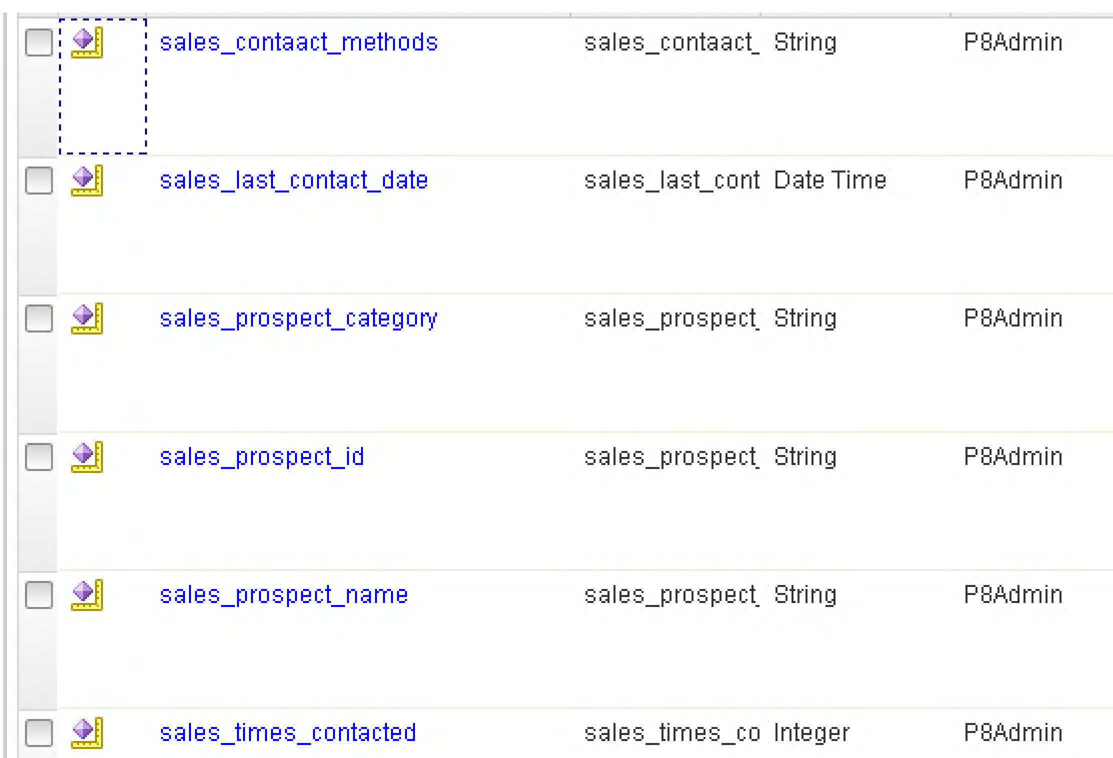
2. Follow the steps in Procedure 1 to complete this task. Use the following data table.
   a. Accept the default values for the other fields that are not listed in the table.

Page	Field	Value
Name and Describe the Property Template	Name	sales_times_contacted
	Symbolic Name	sales_times_contacted
	Description	sales_times_contacted
Select the Data Type	Data type	Integer
Single or Multi-value?	Single	Selected

3. Verify that the new property template is listed.
   a. Click the Property Templates tab and click Refresh.
   b. Verify that sales_times_contacted is listed.
4. Review the Property Templates.
   a. Select the Property Templates node.
   b. Click Refresh.
   c. Type “sales” in the filter. Only the property templates that include sales are displayed..



   d. Verify that your property templates and data types are correct.



5. Log out of the Administration Console for Content Platform Engine and close the browser.

6.3. Create document and folder classes

Introduction

Documents that are checked into Content Platform Engine require a class. You can organize the documents and other objects into folders. You must define the Document and Folder classes that are based on the needs of your organization before you can add documents or other objects to an object store.

Procedures

Procedure 1: Create a Folder Class

1. Start the Administration Console for Content Platform Engine.
   a. In a Firefox browser, go to `http://ecmedu01:9080/acce`
   b. Log in as the `P8admin` user (password: `IBMFileNetP8`)
2. Open the New Folder Class wizard.
   a. In the administration console, expand the P8Domain > Object Stores node on the left pane and click SalesQA.
   b. In the SalesQA tab, expand the SalesQA > Data Design > Classes node on the left pane.
   c. Right-click Folder and select New Class from the list.
   d. The New Folder Class tab opens.
3. Name and Describe the Class.
   a. In the New Folder Class tab, enter `sales_ProspectsFolder` for the Display name.
   b. Verify that the Symbolic name and Descriptions fields are automatically populated. Click outside of the Display name field.
   c. Optionally edit the Description. Click Next.
4. Complete the wizard.
   a. In the Summary page, click Finish.
   b. In the Success page, click Close.
5. Verify that the new Folder subclass is listed.
   a. In the SalesQA tab, click Refresh.
   b. If needed, expand the SalesQA > Data Design > Classes > Folder node.
   c. Verify that the sales_ProspectsFolder class is listed.

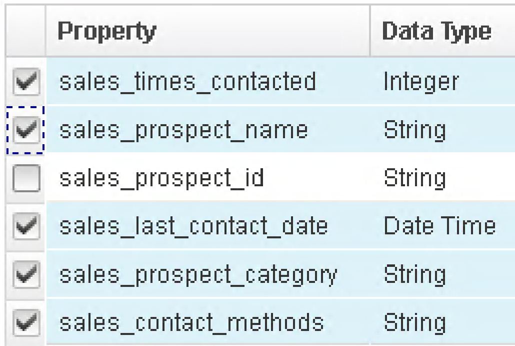
6. Click sales_ProspectsFolder in the left pane. The sales_ProspectsFolder tab opens in the right pane.
7. Add Property Definitions to the class.
   a. Select the Property Definitions subtab. Click Add.
   b. In the Add Properties page, scroll down and select the following properties that you want to add to this class.
      - sales_prospect_category
      - sales_prospect_id
   c. Click OK to close the Add Properties page.
8. Verify that the properties are listed.
   a. Click Save. Click Close to close the sales_ProspectsFolder tab.
9. Leave the administration console opened for the next procedure.

Procedure 2: Create a Document Class

1. Open the New Document Class wizard.
   a. Expand the SalesQA > Data Design > Classes node on the left pane.
   b. Right-click Document and select New Class from the list.
   c. The New Document Class tab opens.
2. Name and Describe the Class.
   a. In the New Document Class tab, enter `sales_Prospect` for the Display name field.
   b. Verify that the Symbolic name and Descriptions fields are automatically populated. Click outside of the Display name field.
   c. Optionally edit the Description. Click Next.
3. Complete the wizard.
   a. In the Summary page, click Finish.
   b. In the Success page, click Close.
4. Verify that the new Document subclass is listed.
   a. In the SalesQA tab, click Refresh.
   b. If needed, expand the SalesQA > Data Design > Classes > Document node.
   c. Verify that the sales_Prospect class is listed.
5. Add Property Definitions to the class.
   a. Click sales_Prospect in the left pane. The Prospect tab opens in the right pane.
   b. Select the Property Definitions subtab. Click Add.
   c. Type `sales` in the filter to show sales-related property templates only.

d. In the Add Properties page, select the following properties to add.

- sales_times_contacted
- sales_prospect_name
- sales_last_contact_date
- sales_prospect_category,
- sales_contact_methods,



	Property	Data Type
☑	sales_times_contacted	Integer
☑	sales_prospect_name	String
☐	sales_prospect_id	String
☑	sales_last_contact_date	Date Time
☑	sales_prospect_category	String
☑	sales_contact_methods	String

e. Click OK. Verify that all the properties are listed.

f. Click Save and then Close.

6. Log out of Administration Console for Content Platform Engine.

Procedure 3: Test your Folder class

In this activity, you create an instance of your Folder class in IBM Content Navigator. You verify that the instance has the metadata as specified in the class specification.

1. Start the IBM Content Navigator.

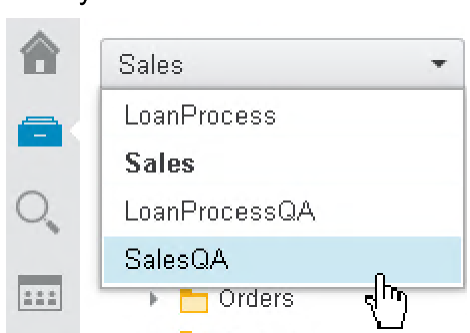
   a. In your browser, go to `http://ecmedu01:9080/navigator/`

      The URL value is case-sensitive.

   b. Enter the logon credentials for an administrator (user name: `P8admin`, password: `IBMFileNetP8`).

   c. The Content Navigator Sample Desktop opens in Browse view.

   d. Select the SalesQA repository from the list.



2. Click New Folder to create a folder of the class that you created.

3. Select your Folder class.
   a. In the New Folder window > Properties section, select `sales_ProspectsFolder` from the list for the Class field.
   b. Click OK.
   c. Enter `NYB Company` for the Folder Name.
   d. Select `Reseller` for the sales_prospect_category from the list.
   e. Click OK.
   f. Enter `NYBC` for the sales_prospect_id. The value for the field is required as you specified.
4. Click Add (in the lower right corner) to create the folder.
5. Verify that your new folder is listed.

Procedure 4: Test your Document class

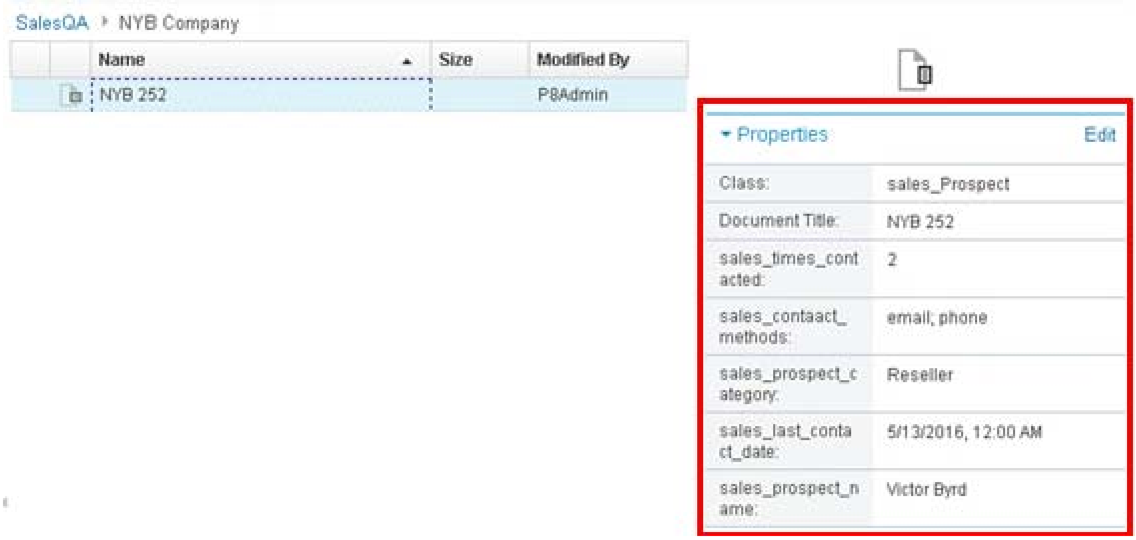
In this activity, you create an instance of your Document class in IBM Content Navigator. You verify that the instance has the metadata as specified by the class. You can add documents to the folder that you created.

1. Double-click the `NYB Company` folder to open.
2. Click Add Document to add a document to this folder.
3. Enter the properties for your class.
   a. In Add Document page, select “Information about the document” for the “What do you want to save?” field.
   b. In the Properties section, select sales_Prospect from the list for the Class field. Click OK.
   c. Enter the values for the other fields from the following table.

Field	Value
Document Title	NYB 252
sales_contact_methods	Email, phone call
sales_last_contact_date	Five days before the current date
sales_prospect_category	Reseller (Select from the choice list)
sales_prospect_name	Victor Byrd
sales_times_contacted	2

   d. For the contact_methods, click the field. A new window opens. Enter each value in the New field and click Add, then click OK.
   e. Click Add in the lower right corner.
4. Verify that your new document is listed in the folder.

5. Click the document. Verify that the properties and their values are shown in the rightmost pane.



6. Log out of IBM Content Navigator and close the window.

Create a Folder Class: Practice

Complete the following exercise scenario to practice the procedures that you learned in this unit.

Scenario: Create a Folder class to organize Vendor information

Your Solution Designer sends you the specification for a Folder class to organize the Vendor-related information.

Challenge

- Create two property templates in the Administration Console.
- Create a Folder class in the Administration Console.
- Verify the class by creating an instance of that class in the IBM Content Navigator.
- Use the default values for the fields that are not specified in the tables.

Data

Field	Value
Administration Console for Content Platform Engine account (logon/password)	p8admin/IBMFileNetP8
Object Store name	SalesQA

Data for the property template - 1

Field	Value
Name	sales_vendor_name
Symbolic Name	sales_vendor_name
Description	sales_vendor_name
Data type	String
Assign a choice list	<none>
Single or Multi-Value	Single

Data for the property template - 2

Field	Value
Name Symbolic Name Description	sales_vendor_ID sales_vendor_ID sales_vendor_ID
Data type	String
Assign a choice list	<none>
Single or Multi-Value	Single

Data for creating a Folder class

Field	Value
Name Symbolic Name Description	sales_Vendor sales_Vendor sales_Vendor Folder
Property definitions	sales_vendor_name sales_vendor_ID

Data for creating an instance of a Folder

Field	Value
IBM Content Navigator client account (logon/password)	p8admin/IBMFileNetP8
Object Store name	SalesQA
Folder class	sales_vendor
Name of the Folder	PC Paper
vendor_name	Pretty Cool Paper
vendor_id	1001

Hint

Remember to switch to the SalesQA object store.

Verification

- Verify that the property templates are available to add to the Folder class.
- Verify that the new Folder class is listed under the Folder class node on the left pane.
- Verify that you are able to create an instance of this Folder class.

Create a Document Class: Practice

Complete the following exercise scenario to practice the procedures that you learned in the two lessons.

Scenario: Create a Document class for the Quotes information

Your Solution Designer sends you the specification for a Document class to store the Quotes information.

Challenge

- Create two property templates in the Administration Console.
- Create a Document class in the Administration Console.
- Verify the class by creating an instance of that class in the IBM Content Navigator.
- Use the default values for the fields that are not specified in the tables.

Data

Item	**Value**
Administration Console for Content Platform Engine account (logon/password)	p8admin/IBMFileNetP8
Object store	SalesQA

Data for the property template - 1

Field	**Value**
Name Symbolic Name Description	sales_person_name sales_person_name Sales person name
What do you want to save?	Information about a document
Data type	String
Assign a choice list	<none>
Single or Multi-Value	Single

Data for the property template - 2

Field	Value
Name Symbolic Name Description	sales_person_ID sales_person_ID Sales person ID
Data type	Integer
Assign a choice list	<none>
Single or Multi-Value	Single

Data for creating a Document class

Field	Value
Name Symbolic Name Description	sales_Quote sales_Quote Sales Quote
Add Properties	sales_person_name sales_person_ID

Data for creating an instance of a Document

Field	Value
IBM Content Navigator client account (logon/password)	p8admin/IBMFileNetP8
Object store	SalesQA
Folder	PC Paper
Document class	sales_Quote
Document Title	TestPriceQuote
sales_person_name	Mary Williams
sales_person_ID	1

Hint

Remember to switch to the SalesQA object store.

Verification

- Verify that the property templates are available to add to the Document class.
- Verify that the new Document class is listed under the Document class node on the left pane.
- Verify that you are able to create an instance of this Document class.
- Verify that the properties have the value that you entered.

End of exercise

Exercise review and wrap-up

In this exercise, you did the following tasks:

- Create a document class.
- Create a folder class.
- Create a property template with a choice list.

Exercise 7. Modify classes and properties

Estimated time

00:30

Overview

This exercise provides practice in modifying classes and properties. You learn to work with metadata dependencies to change or remove properties and choice lists on classes.

Objectives

After completing this exercise, you should be able to:

- Change a property template name.
- Modify a choice list.
- Change the class of an object.
- Remove a choice list from a class.

Introduction

This exercise provides practice with modifying classes and properties.

Requirements

You must have access to a student system that is configured for these activities. If you are taking this course as a self-paced virtual course (SPVC), ensure that your student system is started.

System start

To start your system:

1. Open the WebSphere Admin folder on your desktop.
2. Double-click Start Server1.bat.
3. Wait for the command window to close.

For more information about starting, stopping, and verifying the system status, refer to "Start and Stop System Components" on page A-1.

Exercise Introduction

Introduction

In a development environment you continually design, test and refine your design. In some instances, you might have an application design that is a large investment in time that just needs a few minor changes. To make metadata changes, though, you must be aware of the metadata dependencies, and how to work around them. In this exercise, you practice working around these issues by modifying some metadata.

Scenario

Your Solution Designer identifies the aspects of your business solution that require changes to existing content data structures. As the Solution Builder, you must implement the required changes.

Activities

- Change the Property Template Name, on page 7-3
- Modify a Choice List, on page 7-9
- Change the Class for an Object, on page 7-13
- Work with Metadata Dependencies, on page 7-17

User accounts

Application Name	User ID	Password
IBM Content Navigator	p8admin	IBMFileNetP8
Administration Console for Content Platform Engine	p8admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

7.1. Change the Property Template Name

Introduction

In this activity, you modify the display name of a property template. The effect of this change is to change how the system displays the property name to users.

Scenario

The Sales team wants simplified display names for the properties. You must change the display names on the property templates.

Procedures

- Procedure 1, "View the property template display name," on page 7-3
- Procedure 2, "Change the property template display name," on page 7-5

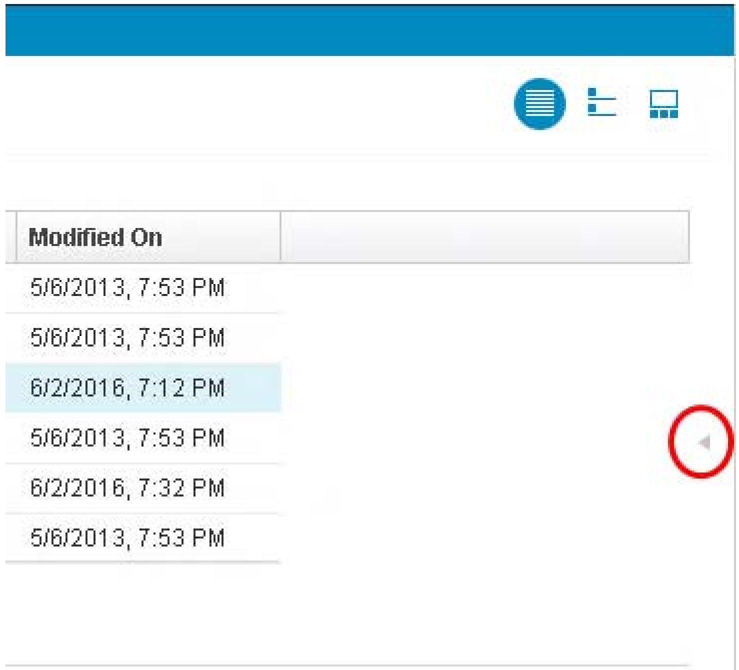
Procedure 1: View the property template display name

1. Start the IBM Content Navigator.
   a. In a Firefox browser, go to `http://ecmedu01:9080/navigator/`

      The URL value is case-sensitive.
   b. Enter the logon credentials for an administrator (user name: `P8admin`, password: `IBMFileNetP8`).
   c. The Content Navigator Sample Desktop opens in Browse view.
   d. Select the SalesQA repository from the list. The Browser view now displays SalesQA.
2. View the display name of the sales_prospect_id property definition.
   a. Click SalesQA in the left pane.
   b. Select the NYB Company folder in the middle pane.
   c. Expand Properties on the right pane if they are not expanded.

Hint

If you do not see the right pane, click the small arrow to open the right pane.



d. Observe the property display name sales_prospect_id.

e. You are going to change this display name to Prospect ID.

f. Log out of the Content Navigator.

Procedure 2: Change the property template display name

In this procedure, you change the display name of the sales_prospect_id property template to Prospect ID.

1. Start the Administration Console for Content Platform Engine.
   a. In a Firefox browser, go to `http://ecmedu01:9080/acce`
   b. Log in as the `P8admin` user (password: `IBMFileNetP8`)
2. Open the property definition.
   a. In the administration console, expand the P8Domain > Object Stores node on the left pane and click SalesQA.
   b. In the SalesQA tab, expand the SalesQA > Data Design > Property Templates node on the left pane.

Hint

Type `prospect` in the property filter to make the property easier to find.

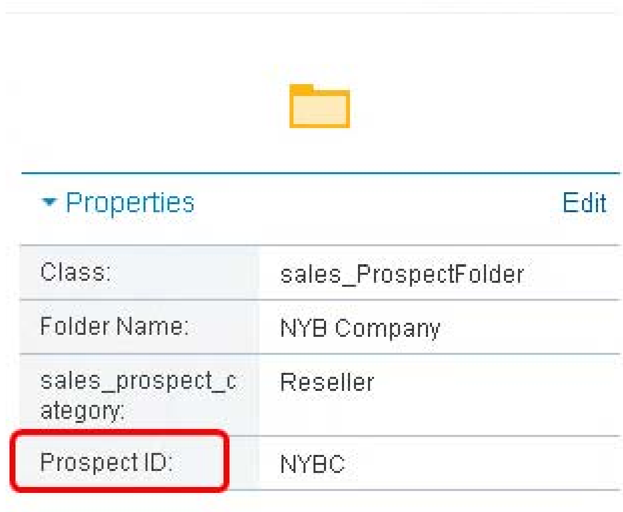
---

   c. Click sales_prospect_id.
3. Change the display name for the property definition.
   a. In the sales_prospect_id tab > General subtab, delete the existing Display name value and enter `Prospect ID` in the Display name field.
   b. Observe that the Symbolic Name field and Description field continues to display sales_prospect_id.
   c. Optionally change the Description field value to `Prospect ID.`
   d. Click Save to save the changes and then Close.

      The Properties page closes.
4. In the SalesQA tab, click Refresh.
5. Verify the name change.
   a. If needed, expand the SalesQA > Data Design > Property Templates node on the left pane.
   b. Verify that the property template is listed as `Prospect ID` in the right pane.

6. Verify the name change in your Folder class.
   a. Expand the SalesQA > Data Design > Classes > Folder node on the left pane and click sales_PropspectsFolder.
   b. In the sales_PropspectsFolder tab > Property Definitions subtab, verify that the value is displayed as `Prospect ID`.

7. Log out of the administration console and close the browser.
8. Verify the new display name for the property definition in the IBM Content Navigator.
   a. In a Firefox browser, clear the cache by clicking History > Clear Recent History from the top menu.
   b. In the Clear All History window, click Clear Now.
   c. Log in to IBM Content Navigator as `p8admin` (password: `IBMFileNetP8`).
   d. Open the SalesQA object store.
   e. Click the NYB Company folder to view its properties in the right pane.
   f. Verify that the property display name now shows as Prospect ID.



   g. Verify that the value of the property was retained.
9. Log out of the IBM Content Navigator and close the browser.

Note

The name change to the property template was automatically propagated to the property definition based on the property template.

Only name changes to a property template are automatically propagated to property definitions.

Procedure 3: Update the remaining property display names

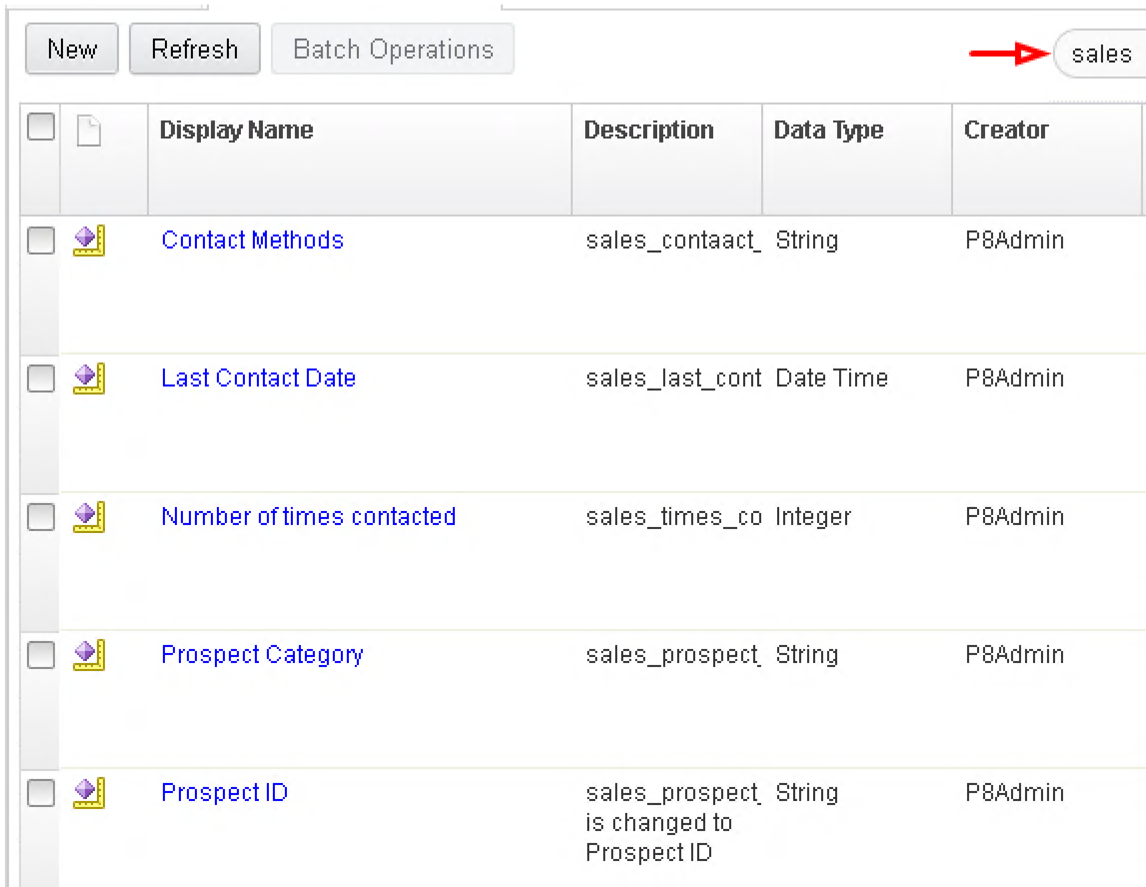
You want the display names that users see to be more elegant. Now that you know how, you can update the display names quickly.

1. Log into Administration Console as `p8admin` (password: `IBMFileNetP8`).
2. In Administration Console, open the SalesQA object store.
3. Open each of the new property templates and edit the Display name as shown in the table.

Old display name	New display name
sales_contact_methods	Contact Methods
sales_last_contact_date	Last Contact Date
sales_person_ID	Salesperson ID
sales_person_name	Salesperson Name
sales_prospect_category	Prospect Category
sales_prospect_name	Prospect Name
sales_times_contacted	Number of times contacted
sales_vendor_ID	Vendor ID
sales_vendor_name	Vendor Name

4. Click Refresh to see the updated metadata.
5. Type sales in the property filter.

6. Verify that the property display names are updated and that the property name filter continues to function as before.



7. Log out of Administration Console.

7.2. Modify a Choice List

Introduction

In this activity, you modify a choice list by adding a group and some choice list items.

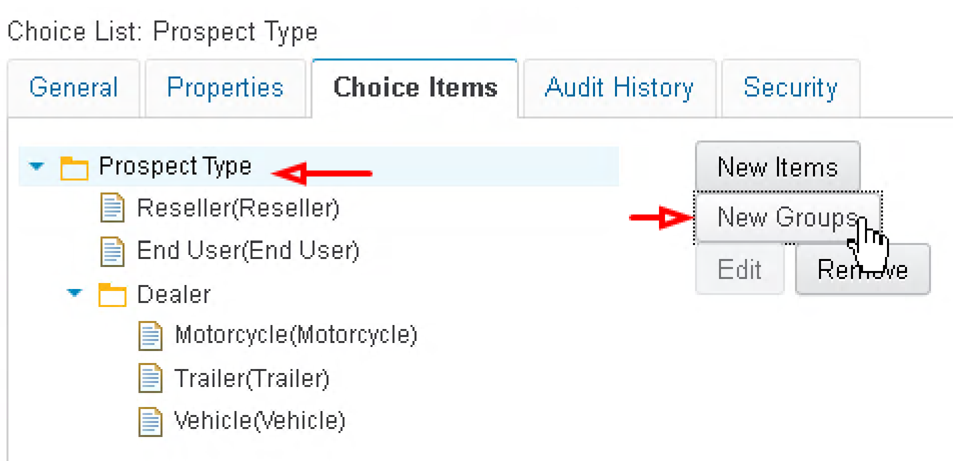
Procedures

- Procedure 1, "Add a group to a choice list," on page 7-9
- Procedure 2, "Verify the modified choice list," on page 7-11

Procedure 1: Add a group to a choice list

In this procedure, you add a group to an existing choice list.

1. Start the Administration Console for Content Platform Engine.
   a. In a Firefox browser, go to `http://ecmedu01:9080/acce`
   b. Log in as the `P8admin` user (password: `IBMFileNetP8`)
2. Open the choice list.
   a. In the administration console, expand the P8Domain > Object Stores node on the left pane and click SalesQA.
   b. In the SalesQA tab, expand the SalesQA > Data Design > Choice List node on the left pane and click Prospect Type.
3. Open the Choice Items tab.
4. Add a group to the choice list.
   a. Select the Prospect Type node in the Choice Items tab.
   b. Click New Groups.



   c. In the New Groups window, enter `Manufacturer` in the Display name field.
   d. Click Add. The group name is added to the panel.
   e. Click OK.

5. Add choice items to the group.
   a. In the Choice Items tab, select Manufacturer.
   b. Add choice items to the Manufacturer group by clicking New Items.
   c. In the New Items window, for each name in the table, type the choice item name in the Display name field.

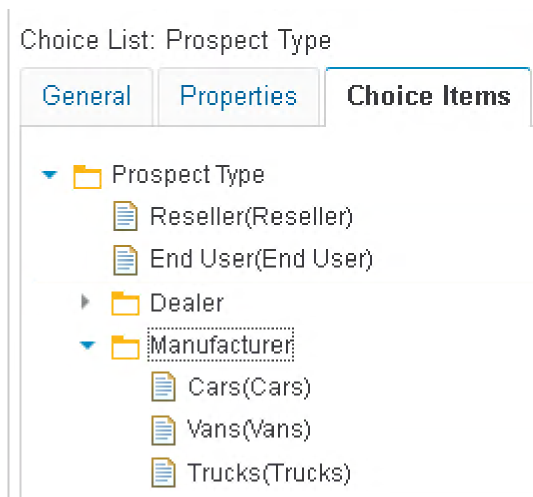
Display Name	Value
Cars	Cars
Vans	Vans
Trucks	Trucks

   d. When you click outside Display name field, the value is automatically populated in the Value field. Optionally, you can edit the value field.

Important

Verify that the Value field is populated before you click Add.

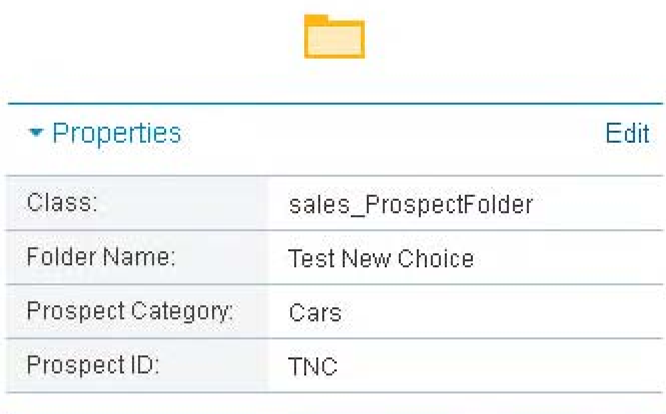
   e. Click Add. The choice item is added to the panel.
   f. Click OK to close the New Item window.
6. Click Save to save the choice list changes.
7. Verify that your completed choice list includes the new group.



8. Refresh the object store.
   a. In the Prospect Type tab, click Close.
   b. In the SalesQA tab, click Refresh.
9. Log out of the administration console and close the browser.

Procedure 2: Verify the modified choice list

1. Start the IBM Content Navigator.
   a. In your browser, go to `http://ecmedu01:9080/navigator/`
   b. Enter the logon credentials for an administrator (user name: `P8admin`, password: `IBMFileNetP8`).
   c. Select the SalesQA repository from the list.
2. Create a folder.
   a. Click New Folder.
   b. In the New Folder window > Properties section, select sales_ProspectsFolder from the list for the Class field.
   c. Click OK.
   d. Enter `Test New Choice` for the Folder Name.
3. Verify that you are able view and select a choice item from your new choice group.
   a. Select Manufacturer > Cars from the Prospect Category list.
   b. Click OK.
   c. Enter `TNC` for the Prospect ID. The value for the field is required.
4. Click Add to create the folder.
5. Verify that your new folder is listed.
6. Click the Test New Choice folder. Verify that the properties are shown in the rightmost pane.



7. Optional: Examine an existing folder (that was created before you added the new choice item) to verify the new choice group.
   a. Right-click the NYB Company folder and click Properties.
   b. In the Properties window, verify that you are able view and select a choice item from you new choice group.
   c. Select Vans for the Prospect Category from the list.
   d. Click OK.

e. Click Save.

f. Right-click the NYB Company folder and click Properties. Verify that the properties are shown.

g. Click Cancel.

8. Log out of the IBM Content Navigator and close the browser.

7.3. Change the Class for an Object

Introduction

In this activity, you create a Document class and use it to change the class for an existing document (that belongs to a different class).

Procedures

- Procedure 1, "Create a Document class," on page 7-13
- Procedure 2, "Examine the properties of a document," on page 7-14
- Procedure 3, "Change the class of an object," on page 7-14

Procedure 1: Create a Document class

1. Start the Administration Console for Content Platform Engine.
   a. In a Firefox browser, go to `http://ecmedu01:9080/acce`
   b. Log in as the `P8admin` user (password: `IBMFileNetP8`)
2. Open the SalesQA object store.
3. Open the New Document Class wizard.
4. Complete the wizard and create a Document class with the data in the table.

Field	Value
Name	ProspectUpdated
Symbolic Name	ProspectUpdated
Description	ProspectUpdated

5. Add Property Definitions to the ProspectUpdated class.
   a. Click Document > ProspectUpdated in the left pane. The ProspectUpdated tab opens in the right pane.
   b. Select the Property Definitions subtab. Click Add.
   c. In the Add Properties page, scroll down and select the following properties that you want to add.
      - Contact Methods
      - Prospect ID
      - Prospect Category
      - Prospect Name
   d. Click OK. Verify that all the properties are listed.
   e. Click Save and then Close.
6. Log out of Administration Console.

Procedure 2: Examine the properties of a document

In this procedure, you examine the properties of the document (Class: Prospect) for which you are going to change the class to ProspectUpdated. You added a document (Name: `NYB252`) to the SalesQA object store > NYB Company folder.

1. Log on to IBM Content Navigator as `p8admin`, password `IBMFileNetP8`.
2. Open the SalesQA object store.
3. Open the NYB Company folder.
4. Select the NYB 252 document to see the properties in the right panel.
5. Observe that the object class is sales_Prospect.
6. Verify that the document has the following properties:
   - Number of times contacted
   - Last Contact Date

Note

These properties are removed from this instantiated object when you change the class of this object.

---

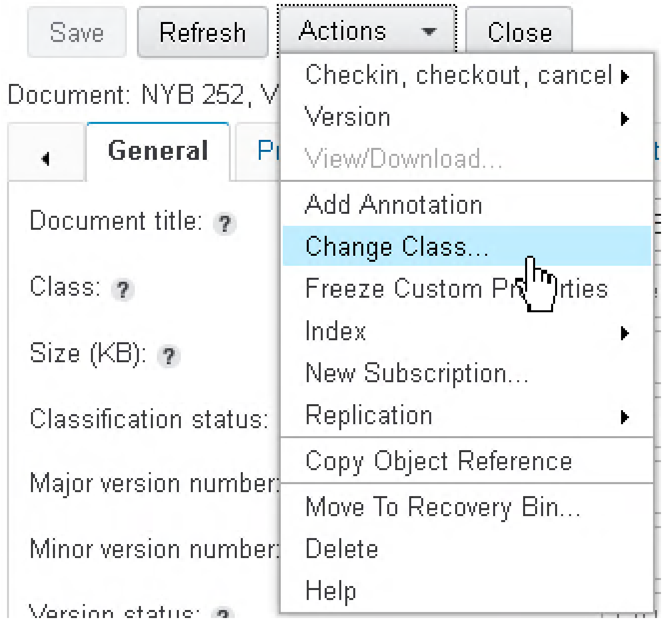
7. Verify that the document does not have Prospect ID property. This property is added to this instantiated object when you change the class of this object.
8. Log out of IBM Content Navigator.

Procedure 3: Change the class of an object

1. Log in to Administration Console with user name `p8admin` and password `IBMFileNetP8`.
2. Open the document.
   a. In the administration console, expand the SalesQA > Browse > Root Folder node.
   b. Click the NYB Company folder.
      The NYB Company tab opens in the right pane.
   c. In the NYB Company tab, click NYB 252.

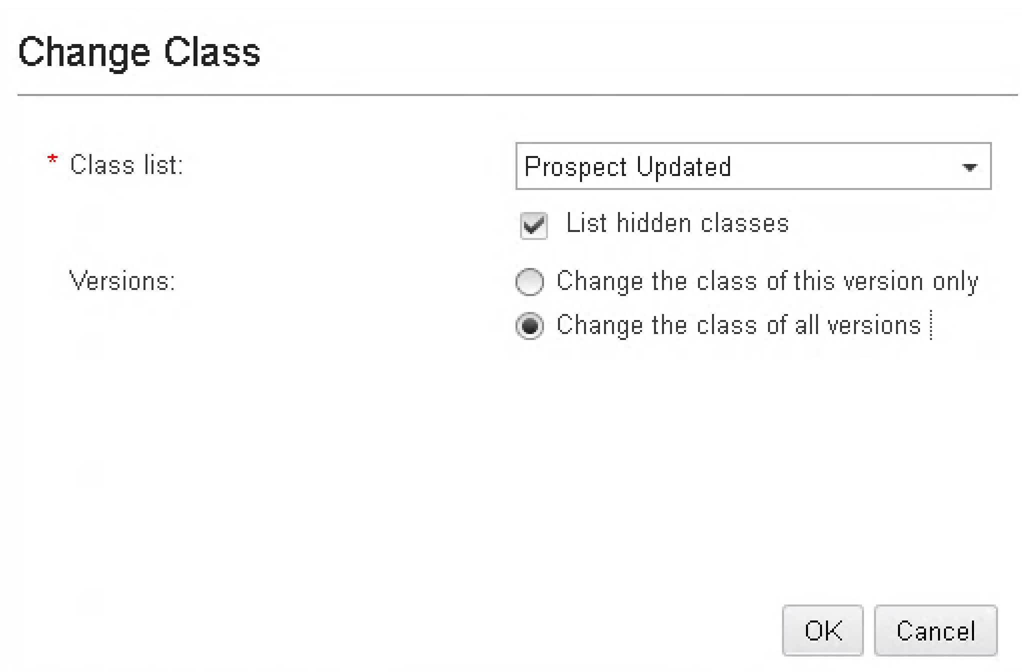
3. Change the class of a document from Prospect to ProspectUpdated.

   a. In the NYB 252 tab, click Actions > Change Class.



   b. In the Change Class window, select `ProspectUpdated` from the list of classes in Class List.

   c. Select the “Change the class of all versions” option.



   d. Click OK.

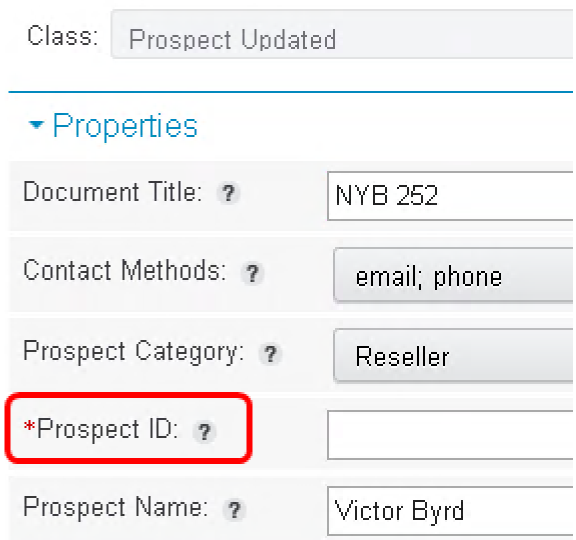
   e. Click Close to close the document tab.

   f. In the SalesQA object store tab, click Refresh.

4. Log out of Administration Console.

Procedure 4: Verify the class change

1. Log on to IBM Content Navigator as `p8admin` with password `IBMFileNetP8`.
2. Open the SalesQA object store.
3. Open the NYB Company folder.
4. Right-click the NYB 252 document and select Properties.
5. Verify the Properties for the document.
   a. Verify that Prospect ID property is listed. Recall that this document did not have this property you changed the class.



   b. Observe that the Class Description has the new class name (ProspectUpdated).
   c. The *Last contact date* and *Number of times contacted* properties are removed from the document.

Note

The Prospect ID property has a required value (indicated by the red asterisk). You cannot update and save the document properties until you supply a value for this property.

6. Click Cancel.
7. Log out of IBM Content Navigator, then close the browser.

7.4. Work with Metadata Dependencies

Introduction

In this activity, you replace a choice list with a data entry value for a property template. The updates to a property template do not automatically update the existing property definitions of a class. You must apply this change to a class definition. You must remove the original property definition from the class and add the updated one.

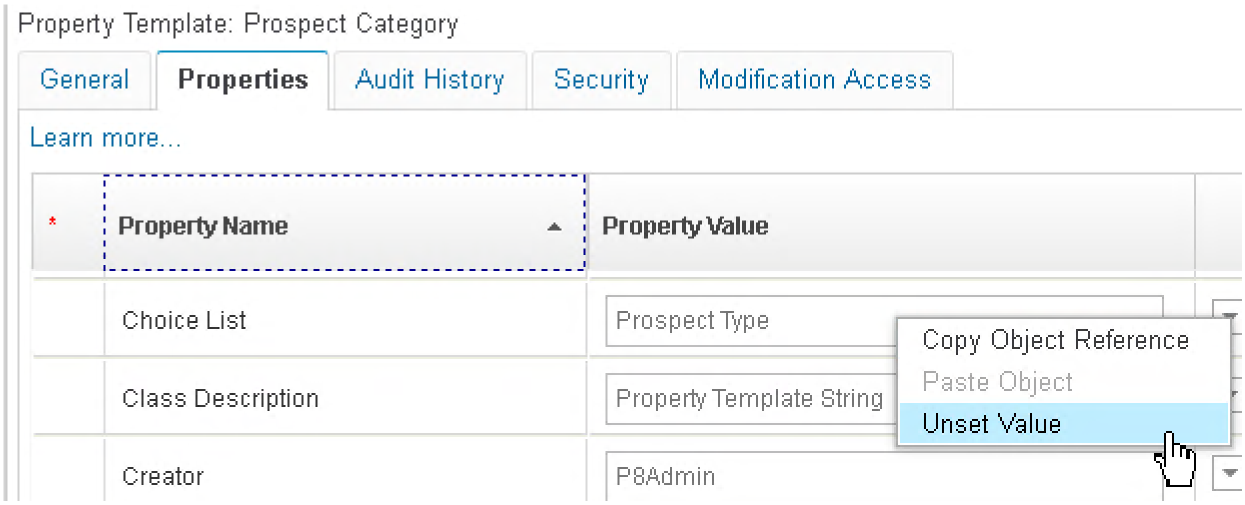
Procedures

Procedure 1: Remove the choice list

In this procedure, you remove the association of a choice list from a property template and make the template as a data entry value.

1. Start the Administration Console for Content Platform Engine.
   a. In a Firefox browser, go to `http://ecmedu01:9080/acce`
   b. Log in as the `P8admin` user (password: `IBMFileNetP8`)
2. Open the SalesQA object store.
3. Open the Prospect Category property template.
   a. Select the SalesQA > Data Design > Property Templates node on the left pane.
   b. Type `prospect` in the filter.
   c. Select Prospect Category
4. Remove the Prospect Type choice list from the property template.
   a. Open the Properties tab of the Prospect Category property template.
   b. Click the Property Name column to list the items in alphabetical order.
   c. Scroll down and find the Choice List property.
   d. Observe that this property template is associated with the Prospect Type choice list.

e. To remove the association of the choice list, click the arrow next to it and select Unset Value.



f. Verify that the Choice List field has no value.

g. Click Save to save the changes.

h. This change makes the Prospect Category as a data entry property template.

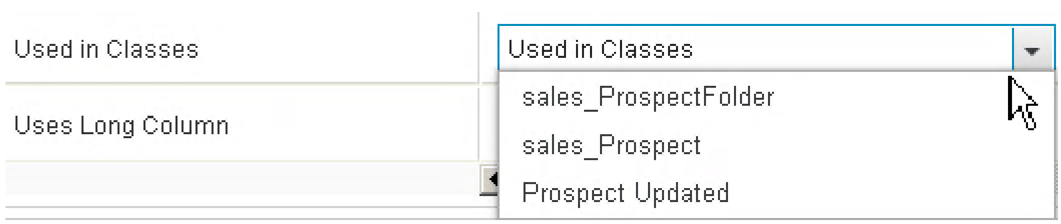
Procedure 2: Remove a property definition from a class

1. Check the classes that use the Prospect Category property template.

   a. In the Prospect Category property template > Properties tab, click the Property Name column to list the items in alphabetical order.

   b. Scroll down and find the Used in Classes property.

   c. Click the arrow to see the list. Observe that the classes that use this property template is listed.



   d. Close the Prospect Category tab.

2. Remove the unmodified Prospect Category property definition from the ProspectUpdated class definition.

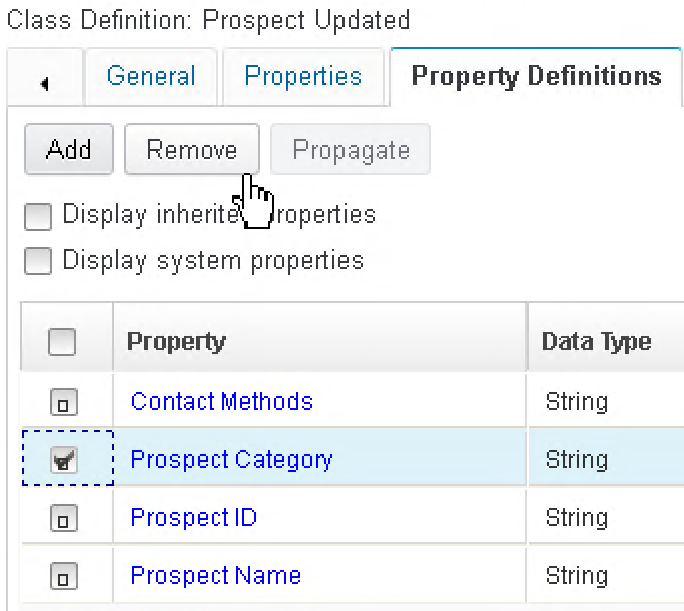
   a. In the SalesQA tab, expand the SalesQA > Data Design > Classes > Document node on the left pane.

   b. Click ProspectUpdated.

   c. In the ProspectUpdated tab, click the Property Definitions tab.

   d. Select the Prospect Category property definition.

e. Click Remove.



f. Verify that the property is removed from the list.

g. Click Save.

h. Click Close to close the tab.

i. In the SalesQA tab, click Refresh.

Procedure 3: Assign the property definition to the class

In this procedure, you assign the modified Prospect Category property (without the choice list) to the PropspectUpdated class.

1. Open the PropspectUpdated class.

   a. In the administration console > SalesQA tab, expand the SalesQA > Data Design > Classes > Document node.

   b. Click the ProspectUpdated class.

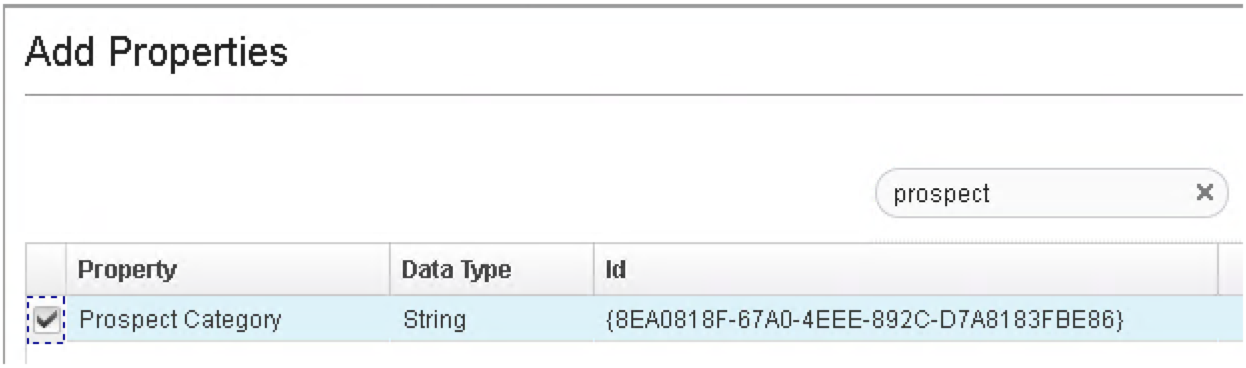
   c. For the ProspectUpdated class, open the Property Definitions tab.

2. Assign the property.

   a. Click Add.

   b. In the Add Properties window, type `prospect` into the filter.

c. Select Prospect Category.



d. Click OK.

e. Verify that the property is added to the list.

f. Click Save to save your changes.

g. Click Close to close the tab.

h. In the SalesQA tab, click Refresh.

3. Log out of Administration Console.

Procedure 4: Verify the modifications

In this procedure, you create a document of the PropspectUpdated class and verify the change in property definition. IBM Content Navigator has a metadata cache that retains metadata in the application for an interval. To refresh the metadata within that interval, you are going to recycle the IBM Content Navigator application.

1. Open the WebSphere Integrated Solutions Console:

   a. In a Firefox browser, go to `https://ecmedu01:9043/ibm/console/logon.jsp`

   b. Log in as the `P8admin` user (password: `IBMFileNetP8`)

2. Restart the Content Navigator application.

   a. Expand the Applications > Application Types.

   b. Click the WebSphere enterprise applications node in the left pane.

   c. Select navigator from the list on the right pane.

   d. Click Stop. Wait until the message is shown.

   e. Select navigator and click Start. Wait until the message is shown.

   f. Log out of the WebSphere Integrated Solutions Console.

Important

For the property template changes to show in the IBM Content Navigator, you must restart the Content Navigator in the WebSphere Application Server.

---

3. Start the IBM Content Navigator.
   a. In a Firefox browser, go to `http://ecmedu01:9080/navigator/`
   b. Enter the logon credentials for an administrator.
   c. Log in as the `P8admin` user (password: `IBMFileNetP8`)
   d. The Content Navigator Sample Desktop opens in Browse view.
   e. Select the SalesQA repository from the list. The Browser view now displays SalesQA.
4. Add a document.
   a. Click the SalesQA > NYB Company folder in the left pane.
   b. Click Add Document in the tool bar.
5. Enter the properties.
   a. In Add Document page, select “Information about the document” for the “What do you want to save?” field.
   b. In the Properties section, select PropspectUpdated from the list for the Class field.
   c. Click OK.
   d. Enter the values for the other fields from the following table.

Field	Value
Document Title	Test Prop
Prospect ID	TP724
Prospect Name	Gloria Stanton

   e. For the Prospect Category, notice that there is no choice list. Enter Dealer as the value.
   f. Click Add.
6. Verify that your new document is listed in the folder.

Procedure 5: Examine the ProspectsFolder class

Recall that you created a ProspectsFolder class that also uses the Prospect Category property template. This class still retains the choice list, because this property definition for the folder class is not updated after you removed the choice list from the template. The change in the property template is not automatically propagated to the Classes.

In this procedure, you verify the Prospect Category property of the folder class.

7. Open the folder properties:
   a. In the Content Navigator, click SalesQA in the left pane.
   b. Select the NYB Company folder in the middle pane.
   c. Click Action > Properties from the toolbar.
8. Observe the Prospect Category property.
   a. Verify that if you edit the Prospect Category property, the choice list is available.
   b. Click Cancel to close the Properties page.

9. Log out of the Content Navigator and close the browser.

End of exercise

Exercise review and wrap-up

In this exercise, you completed the following tasks.

- Change a property template name.
- Modify a choice list.
- Change the class of an object.
- Remove a choice list from a class.

Exercise 8. Create event subscriptions

Estimated time

00:30

Overview

This exercise provides practice in creating and modifying event subscriptions.

Objectives

After completing this exercise, you should be able to:

- Create a subscription with an event action.
- Update an event action with a new code module.
- Examine a workflow subscription.

Introduction

A subscription is a device for starting a user-implemented server-side component that extends the core functionality of the Content Platform Engine. When an event is triggered on the target object, the event action is run.

Requirements

You must have access to a student system that is configured for these activities. If you are taking this course as a self-paced virtual course (SPVC), ensure that your student system is started.

System start

To start your system:

1. Open the WebSphere Admin folder on your desktop.
2. Double-click Start Server1.bat.
3. Wait for the command window to close.

For more information about starting, stopping, and verifying the system status, refer to "Start and Stop System Components" on page A-1.

Exercise Introduction

Introduction

With event subscriptions, you can automatically launch custom code to streamline your business application. For example, you can use a script to automatically launch a workflow or to create subfolders, or send notifications when documents are added to the system.

Scenario

You are working with a developer for the Sales team to develop and test some event subscriptions. These event subscriptions automatically perform operations when certain documents or folders are created. The developer has provided the code modules. You must create the event subscriptions.

Activities

- Create a Subscription with an Event Action, on page 8-3
- Update the Event Action with new Code Module, on page 8-9
- Examine a Workflow Subscription, on page 8-14
- Create a Subscription with an Event Action, on page 8-19

User accounts

Application Name	User ID	Password
IBM Content Navigator	p8admin	IBMFileNetP8
Administration Console for Content Platform Engine	p8admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

8.1. Create a Subscription with an Event Action

Introduction

In this activity, you create a code module with prewritten Java code, an event action, and a subscription for the Order document subclass. You associate the event action with the subscription and test it by creating an Order document. Document creation triggers the subscription and the code is executed which creates an entry in a log file.

Scenario

Whenever a new Order document is created, you want a notification to be sent to the product sales manager. A developer created a simple Java class for you to test with. You must create an event action and a subscription that triggers the action when a new Order document is added to the repository.

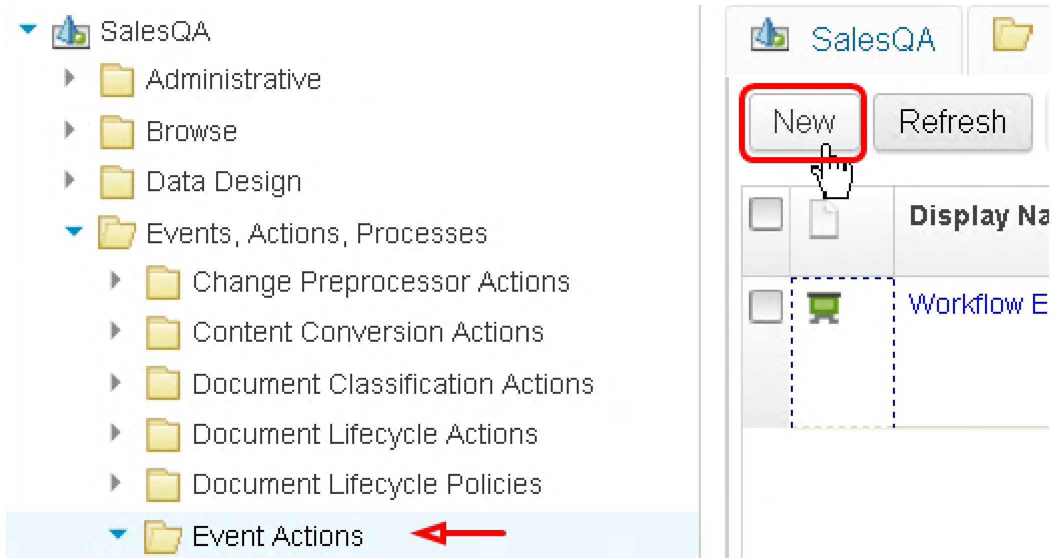
Procedures

- Procedure 1, "Create an Event Action," on page 8-3
- Procedure 2, "Create a Subscription," on page 8-5
- Procedure 3, "Test the Subscription and Event Action," on page 8-7
- Procedure 4, "Examine the EventLog.txt file," on page 8-8

Procedure 1: Create an Event Action

1. Log on to Administration Console for Content Platform Engine.
    a. Go to http://ecmedu01:9080/acce and log on as `p8admin` with password: `IBMFileNetP8`.
2. Open the SalesQA object store.
3. Create an event action.
    a. Expand SalesQA > Events, Actions, Processes.
    b. Select Event Actions.

c. Click New.



d. Create Event Action wizard opens.

4. Name and Describe the Event Action.

a. Enter `Log Event Action` in the Display Name field.

b. Click Next.

5. Specify the Type of Event Action.

a. Leave the Enabled checked for the Initial Status field.

b. Select the Class option.

c. For the Java Class Handler field, type the following text:

`com.ibm.filenet.edu.LogEventActionEDU`

Note

Type the Java class name exactly as shown because it is case-sensitive.

---

d. Select the Configure Code Module option.

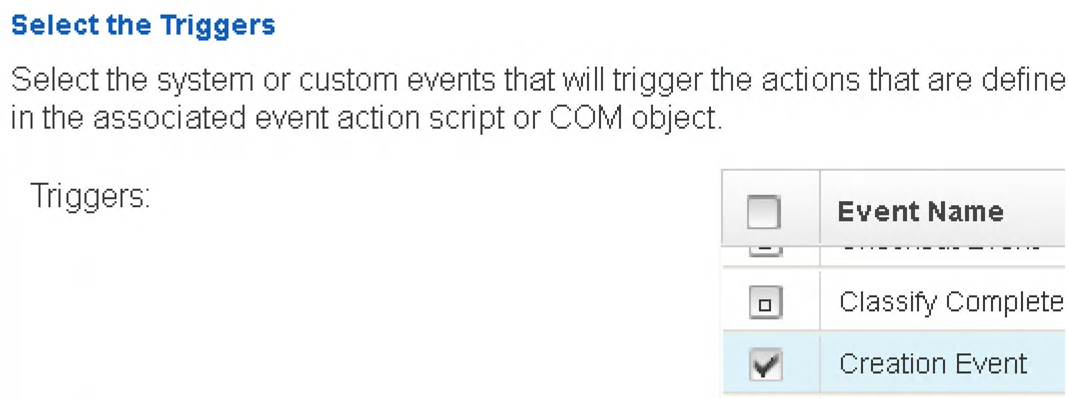
e. Click Next.

6. Specify the Code Module to be configured.
   a. Click Browse.
   b. In the Open window, go to `Documents\Lab Files\Event Subscriptions.`
   c. Select `EDULog.jar` and then click Open.
   d. For the Code Module title, type `Log Event Action`.
   e. Click Next.
   f. Note the entries in the Create an Event Action wizard and click Finish.
   g. Click Close.
7. Verify that the event action was created.
   a. Select the Event Actions node.
   b. Click Refresh.
   c. Verify that the Event Action that you created is listed on the right pane.

Procedure 2: Create a Subscription

1. Create a subscription.
   a. In the SalesQA tab, expand SalesQA > Data Design > Classes > Document > Order on the left pane.
   b. Right-click Order and then click New Subscription from the list.
2. Name and Describe the Subscription.
   a. In the New Subscription tab, enter `Log Subscription` in the Display name field.
   b. Optionally enter a description and click Next.
3. Specify the Subscription Behavior.
   a. Leave the default option of “Applies to all objects of this class” for the Scope field.
   b. Click Next.
4. Select the Triggers.
   a. Select Creation Event in the Event Name list.

b. Click Next.



5. Select an Event Action.
   a. Select `Log Event Action` from the list.
   b. Click Next.
6. Specify Additional Options.
   a. Select Enable this subscription.
   b. Optionally, select Include subclasses.
   c. For the filter expression field, enter the following text:

      ```
      (MajorVersionNumber=1 and MinorVersionNumber=0) OR (MajorVersionNumber=0 and
      MinorVersionNumber=1)
      ```

   d. Click Next.

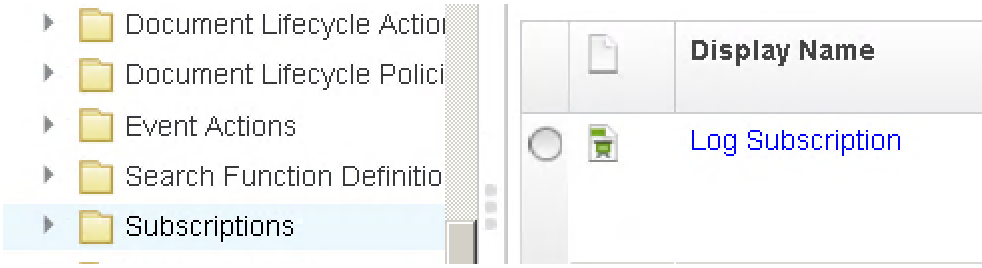
Note

The filter expression ensures that the triggering event occurs only when the document is first added to the repository.

---

7. Review the summary and click Finish.
8. Click Close when you receive the confirmation message that you successfully created the Log Subscription.
9. View the subscription that you created.
   a. Select the SalesQA tab, and click Refresh.
   b. Expand SalesQA > Events, Actions, Processes > Subscriptions on the left pane.

c. Click Subscriptions and verify that `Log Subscription` is listed on the right pane.



Procedure 3: Test the Subscription and Event Action

Note

The Java Code Module contains instructions to write an entry into a log file each time a document of the class that is subscribed to is created.

1. Create a folder.
   a. In the SalesQA object store tab, expand the SalesQA > Browse > Root Folder node on the left pane.
   b. Right-click the Root Folder and click New Folder.
   c. Enter `Test Events Folder` for the folder name.
   d. Leave the default value (Folder) for the Class field.
   e. Click Next and leave the default values for all other fields.
   f. Click Next and click Finish.
   g. Click Close to close the New Folder tab.
   h. In the SalesQA object store tab, click Refresh to refresh the Object store.
2. Add a document.
   a. In the SalesQA object store tab, expand the SalesQA > Browse > Root Folder > Test Events Folder node on the left pane.
   b. Right-click Test Events Folder and click New Document.
   c. Enter `Log Test` as the Document title.
   d. Select Order from the list for the Class field.
   e. Clear the *With Content* check box.
   f. Complete the wizard by clicking Next several times. Leave the default values for all the fields.
   g. In the final page, view the summary and click Finish.
   h. When the page displays that the Log Test document is created, click Close to close the New Document tab.

3. In the Test Events Folder tab, click Refresh.
   a. Verify that the new document is listed.
4. Log out of Administration Console for Content Platform Engine.
   a. Close the Browser.

Procedure 4: Examine the EventLog.txt file

1. Verify that the file EventLog.txt was created.
   a. In Windows Explorer, open the following folder and locate the file:

      `C:\Program Files\IBM\WebSphere\AppServer\profiles\AppSrv01`.
   b. Verify that the `EventLog.txt` file has the current date and time.

Note

The code for the Log Action adds a text line to the EventLog.txt file each time that the event action executes. This line consists of the following statement:

`A new document is created on:` *`Day Mon DD HH:MM:SS EDT YYYY`*`. Document class name = Order, Document id = {GUID}`

---

2. Verify that the log file has an entry for the Order document that you created.
   a. Open the EventLog.txt file with the text editor. Example: Notepad
   b. Verify that it includes a line that identifies the date and time that your new document was created in the object store.
   c. Close the EventLog.txt file.

8.2. Update the Event Action with new Code Module

Introduction

Your Management wants to include the user who creates the document in the event log every time a document is added. The Developer provides the new JAR file that contains the updated code to the Administrator.

In this activity, you are going to modify the Code Module to use the new JAR file. You also update the Event Action that references the Code Module and test it.

Procedures

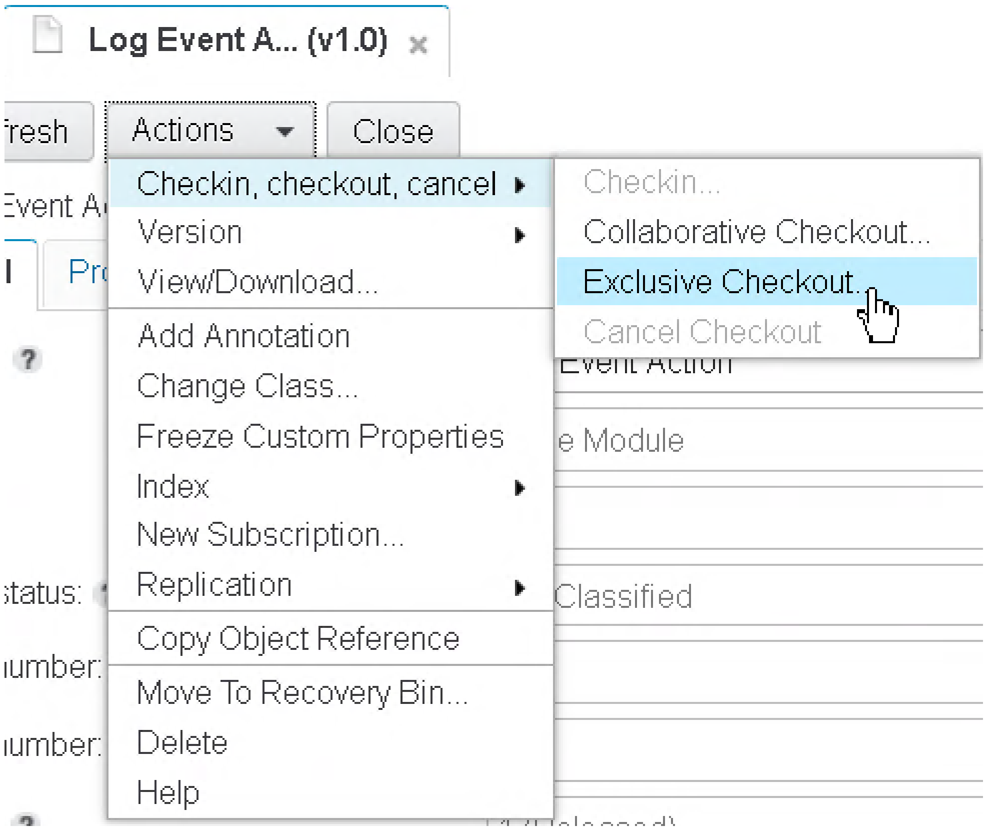
- Procedure 1, "Update the Code Module," on page 8-9
- Procedure 2, "Update the Event Action," on page 8-11
- Procedure 3, "Test the new Code Module," on page 8-12

Procedure 1: Update the Code Module

In this procedure, you check in a new version of code module that contains more line code.

1. Log on to Administration Console for Content Platform Engine.
   a. Go to http://ecmedu01:9080/acce and log on as `p8admin` with password: `IBMFileNetP8`.
2. Open the SalesQA object store.
3. Go to Browse > Root Folder > Code Modules.
4. Check out the code module:
   a. Select the Log Event Action code module link on the right pane (do not check the check box).

b. In the menu bar, select Action > *Checkin, checkout, cancel* > *Exclusive Check Out*.



c. On the Exclusive Checkout window, select the content element.

d. Click Checkout.

5. Check in the new version of the code module.

   a. Click Action > *Checkin, checkout, cancel* > *Checkin*.

   b. In *Content Elements* window, click Add.

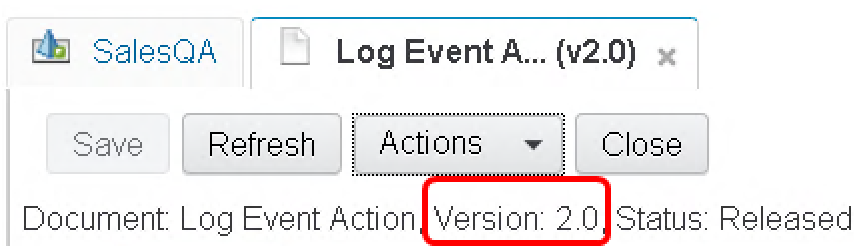
   c. Browse to C:\Users\Administrator\Documents\Lab Files\Event Subscriptions.

   d. Select *EDULogv2.jar* and click Open.

   e. Click Add Content.

   f. Click Check In Major Version.

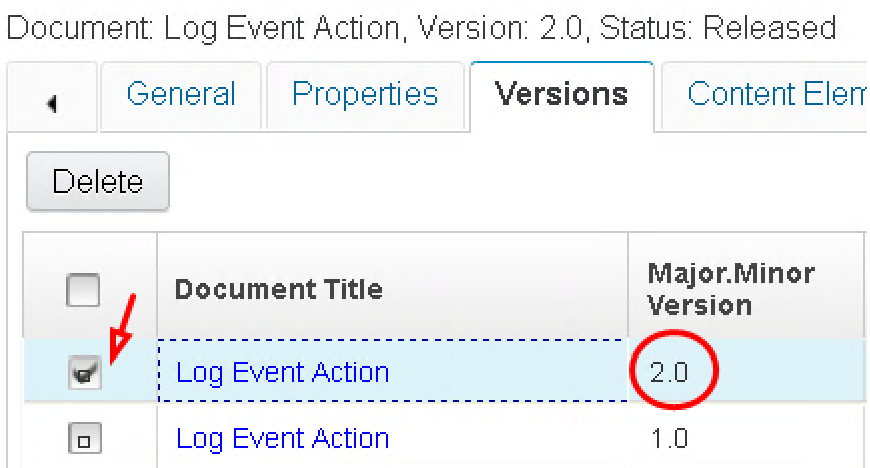
6. Verify that the new version was created. The title under the row of buttons now shows that the document is version 2.0..



Procedure 2: Update the Event Action

In this procedure, you edit the event action to associate it with the new version of code module. The Log Event Action tab is open in the Administration Console.

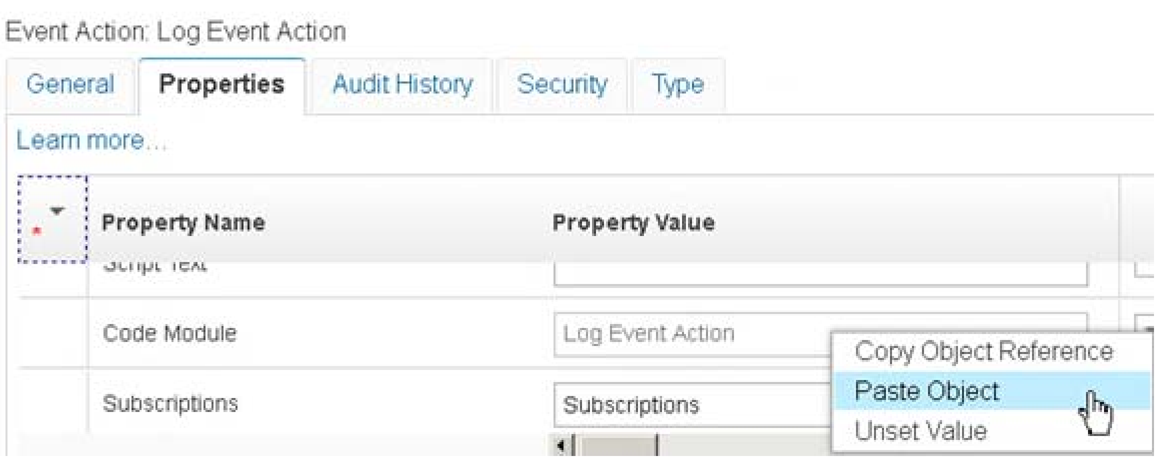
1. Copy the object reference for the new code module version.
   a. Select the Log Event Action code module.
   b. Open the Versions tab.
   c. Select Version 2.



   d. From the menu bar, click Action > *Copy Object Reference*.

      No visible change occurs.

2. Select the event action to update:
   a. Expand SalesQA > Events, Actions, Processes > Event Action.
   b. Click Log Event Action.
   c. Open the Properties tab of the Log Event Action.
3. Update the event action with the new code module version:
   a. Scroll down to the Code Module property at the bottom of the window.
   b. Click the menu arrow to the right of the Code Module field, then click *Paste Object*.



No visible change occurs.

c. Click Save to save your change to the event action.

d. Click Close.

Procedure 3: Test the new Code Module

You are in Administration Console. The SalesQA object store is open.

1. Add a document.
    a. Expand the SalesQA > Browse > Root Folder > Test Events Folder node on the left pane.
    b. Right-click the Test Events Folder and click New Document.
    c. Enter `Log Update` as the Document title.
    d. Select Order from the list for the Class field.
    e. Clear the With Content check box.
    f. Complete the wizard by clicking Next several times. Leave the default values for all the fields.
    g. In the final page, view the summary and click Finish.
    h. When the page displays that the document is created, click Close to close the New Document tab.
2. In the Test folder tab, click Refresh.
3. Verify that the new document is listed.
4. Verify that the file EventLog.txt was updated.
    a. In Windows Explorer, open the following folder and locate the file:

       `C:\Program Files\IBM\WebSphere\AppServer\profiles\AppSrv01`.
    b. Verify that the `EventLog.txt` file has the current date and time.

Note

The updated Code Module generates an event log entry that also includes the name of user that added the document:

The entry consists of the following statement:

`A new document is created on:` *`Day Mon DD HH:MM:SS EDT YYYY`*`. Document class name = Order, Document id = {GUID}`

`Added by: P8Admin`

---

5. Verify that the log file has an entry for the Order document that you created.
    a. Open the EventLog.txt file with the text editor. Example: Notepad
    b. Verify that it includes a line that identifies the user who created it.

c. Close the EventLog.txt file.

d. Log out of the Administration Console for Content Platform Engine and close the browser.

8.3. Examine a Workflow Subscription

Introduction

In response to a fired event on an object, a Workflow Subscription launches a workflow. In this activity, you examine a Subscription that is already configured on your student system.

Information

You can create a subscription that launches a workflow as well as executes an event action handler.

Procedures

Procedure 1: Open a Workflow Subscription

In this procedure, you inspect a workflow subscription on the Sales object store.

Note

The Sales object store has a workflow subscription that the SalesQA object store does not. In the following procedures, ensure that you are viewing the correct object store.

1. Start the Administration Console for Content Platform Engine.
   a. Go to the http://ecmedu01:9080/acce
   b. Log in as theP8admin user (password: IBMFileNetP8)
2. Open a workflow subscription.
   a. Open the Sales object store.
   b. In the Sales object store tab, expand the Sales > Events, Actions, Processes node and click the Subscriptions on the left pane.
   c. In the Subscriptions tab, observe that Test Workflow Subscription is listed.

d. Verify that the subscription is enabled. The Enabled column has the value as `True`.

		Display Name	Enabled	Description
		Test Workflow Subscription	True	Test Workflow Subscription launches a workflow when a document (Product document class) is created.

e. Click Test Workflow Subscription to open the Properties page.

Procedure 2: Explore the Workflow Subscription

1. Open the General tab:

   a. Verify that the Description field identifies it as a workflow subscription.

   b. The Target ID is Product, indicating that the subscription monitors this object class.

2. Examine the Properties tab.

   a. Open the Properties tab.

   b. Confirm that the Event Action field has a value: `Workflow Event Action` indicating that when an event triggers a workflow is launched.

3. Examine the Configuration tab.

   a. Open the Configuration tab.

   b. Inspect the settings:

   - There are options to enable the event action to include the subclasses, and to run the event action as a synchronously.
   - In the Filter expression field, you specify conditions to trigger the subscription. This workflow is launched when quantity property has a value of 20.

4. Examine the Subscribed Events tab.

   a. Open the Subscribed Events tab.

   b. Confirm that the Creation Event is selected. When a document is created, it triggers the subscription.

5. Examine the WorkFlow tab.

Information

The Properties page for this subscription has a WorkFlow tab because it is a Workflow Subscription. When the subscription is only associated with a custom event handler, the Properties page does not have a WorkFlow tab.

a. Verify that for the Workflow definition field, Test Subscription Workflow is selected. (Version number is selected at the time of creation but not shown in the view).

b. Scroll down and locate the Property Maps.

	Property Map
☐	quantity=quantity
☐	product_id=product_id
☐	description=product_description

The workflow properties are mapped to the document properties.

6. Log out of Administration Console for Content Platform Engine and close the browser.

Important

The names of workflow and document properties do not have to match, but they must be of the same data type. Example: both quantity properties are of integer type; description and product_description are of string type.

Procedure 3: Test the Workflow Subscription

In this procedure, you create a document of Product class that triggers the workflow. You verify that a workflow is launched and a work item is shown.

1. Start IBM Content Navigator for the Sample Desktop.

   a. In your browser, go to `http://ecmedu01:9080/navigator/?desktop=SampleDesktop`.

      The URL value is case-sensitive.

   b. Enter the logon credentials for an administrator (user name: `P8admin`, password: `IBMFileNetP8`).

   c. The IBM Content Navigator client opens with the Browse view.

   d. Verify that Sales object store is shown.

2. Add a document.

   a. Expand Sales object store node and click Products in the left pane.

b. Click Add Document from the toolbar on the right pane. Add Document page opens.

3. Specify the content:

a. For the “What do you want to save” field, select “Information about a document” from the list.

4. Enter the properties:

a. In the Properties section, select Product from the list for the Class field.

b. Enter the following values for each property:

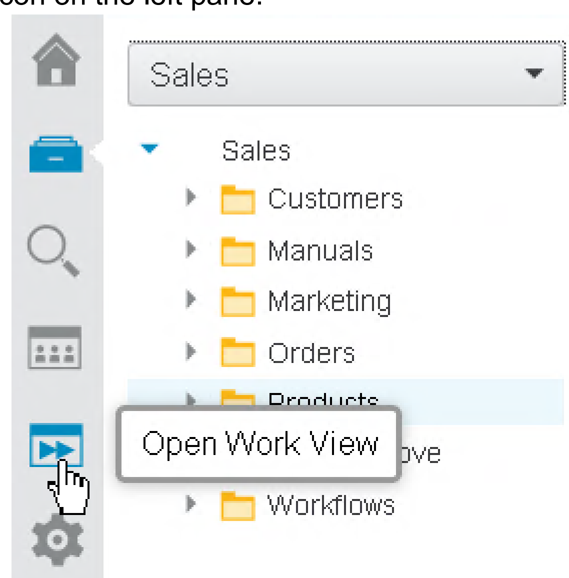
Property Name	**Value**
Document Title	Subscription Test
product_id	PYM02
product_description	Fair
price	10
quantity	20 (This value needs to be 20 for the workflow to launch as defined in the subscription filter).

c. Click Add.

d. Verify that the new document is listed.

5. Verify that the workflow is launched and work item is shown.

a. Click the Work View icon on the left pane.



Information

Your student system is configured for the Workflow Subscription. When you add a document of Product class, a workflow is launched. A work item is available in the Sales Officer in-box.

b. Click My work items.

c. Verify that a work item with the subject “Verify the subscription” is listed with the current date and time.

Note

The product_id, quantity, and description fields have the same values that you set for the document properties. These fields are the workflow properties that are mapped to the document properties.

d. Log out of Administration Console for Content Platform Engine and Content Navigator.

e. Close the browsers.

8.4. Create a Subscription with an Event Action

Introduction

Complete the following exercise scenario to practice the procedures that you learned in this lesson.

Scenario: Create an automated action for the Sales Department

Sales Department of your company requests the following automated action for their IBM FileNet Content Manager system: Whenever, a business user creates a Project folder, they want specific subfolders to be automatically created for that project.

Name of the sub folders: Contracts, Orders, and Quotes

The Solution Developer provides you the Java code that creates these subfolders. As the Solution Builder, you must create a Subscription with an Event Action that uses the code.

Challenge

- Create an event action with Code Module in the Sales object store. Associate it with a Subscription and test it. Use the data in the following tables.

Data for creating an Event Action

Item	Value
Object store	Sales
Name of the Event Action	`CreateProjectSubFoldersAction`
Specify the Type of Event Action	Initial Status: Enabled Class Java class handler: `com.ibm.filenet.edu.CreateProjectSubFoldersAction` Configure code module: Yes
Specify the Code Module	Code module title: `CreateProjectSubFoldersModule`
Location of the Java class	C:\Users\Administrator\Documents\Lab Files\Event Subscriptions

Hint

Create an Event Action with a code module first, then the subscription.

Java class handler name is case-sensitive.

Data for creating a Subscription

Item	Value
Administration Console for Content Platform Engine account (logon/password)	p8admin/IBMFileNetP8
Object store	Sales
Target Object (Folder Class name)	ProjectFolder
Folder class node in the object store	Sales > Data Design > Classes > Folder > ProjectFolderr
Name of the Subscription	Project Folder Subscription
Subscription Behavior	Scope: Apply to all objects of this class (default value)
Triggers > Event Name	Creation event
Name of the Event Action	CreateProjectSubFoldersAction
Specify Additional Options	Initial state: Enabled Subclass option: Include Subclasses

Verification

Create a folder (Name: `Subscription Test`) of `ProjectFolder` class in the Sales object store. Verify that the subfolders (`Contracts`, `Orders`, and `Quotes`) are created inside the Subscription Test folder

Hint

You might need to refresh the object store before you can see the subfolders.

End of exercise

Exercise review and wrap-up

In this exercise, you did the following tasks:

- Create a subscription with an event action.
- Update an event action with a new code module.
- Examine a workflow subscription.

Part 4. Security

Exercise 9. Resolve access issues

Objectives

After completing this exercise, you should be able to:

- Resolve logon failure.
- Verify object store access.

Overview

This exercise shows how to resolve typical security access issues.

Estimated time

00:30

Introduction

In this exercise, you simulate a problem with the authentication provider and then observe the results.

Requirements

You must have access to a student system that is configured for these activities. If you are taking this course as a self-paced virtual course (SPVC), ensure that your student system is started.

System start

To start your system:

1. Open the WebSphere Admin folder on your desktop.
2. Double-click Start Server1.bat.
3. Wait for the command window to close.

For more information about starting, stopping, and verifying the system status, refer to Appendix A, "Start and Stop System Components," on page A-1.

Exercise Introduction

Why is this lesson important?

IBM FileNet Content Manager uses an LDAP provider for authentication. Users cannot log in if the LDAP provider service is not running, or the Content Platform Engine cannot connect to the LDAP provider.

Activities

Resolve login failure, on page 9-3

Exercise review and wrap-up, on page 9-9

User accounts

Application Name	User ID	Password
Operating System	Administrator	passw0rd
IBM Content Navigator	p8admin	IBMFileNetP8
IBM Content Navigator	carol	filenet

9.1. Resolve login failure

Introduction

In this activity you observe the effects of an LDAP service connection failure.

Scenario

Carol attempts to log on to IBM Content Navigator but receives an error. You track the issue down to the connection with the LDAP provider.

Procedures

Procedure 1: Stop the authentication provider

You stop the service that provides authentication information to the web application server and then observe the effects on the users who attempt to log on.

1. On the desktop of your student system, click Start > Services.
2. Select IBM Tivoli Directory Server Instance V6.3 - dsrdbm01
3. Stop the service.

Procedure 2: Observe logon failure

Carol, a user, complains that she cannot log on to the system. You need to determine the reason. Assume that you have already eliminated the possibility that her account information is wrong.

1. Use Firefox to log on to IBM Content Navigator as carol:
   - http://ecmedu01:9080/navigator
   - User name: carol
   - Password: filenet
2. Verify that you get an error with the logon that indicates the wrong username or password was used.
3. Verify that the Content Platform Engine is running by going to the CE Ping Page.
   - http://ecmedu01:9080/FileNet/Engine

Note

The ping page is up. You have verified that the Content Platform Engine is running. You can check the log files to find out what happened.

4. Copy the location of the log files from the CE Ping page.
5. Using Windows Explorer, open the p8_server_error.log file from this location:
   - C:\Program Files\IBM\WebSphere\AppServer\profiles\AppSrv01\FileNet\server1
6. Search the log files for any errors that relate to connectivity to the LDAP provider.
7. Use Windows Services console to restart IBM Tivoli Directory Server Instance V6.3 - dsrdbm01.

Procedure 3: Observe object store access

Object stores are usually secured by using group memberships. Users who have access to object stores can log on and use the object stores. In addition, when a user logs on to IBM Content Navigator, the desktop must have the object store configured as a repository for that desktop.

1. Log on to IBM Content Navigator as carol:
   - http://ecmedu01:9080/navigator
   - User name: `carol`
   - Password: `filenet`
2. Verify that you can see the following object stores in the repository menu:
   - LoanProcess
   - Sales
   - LoanProcessQA
   - SalesQA

Note

You might see other object stores as well, depending on your previous activities.

3. Attempt to open each of the object stores from the object stores menu.
4. Verify that carol is denied access to LoanProcess.
5. Log out of IBM Content Navigator.

Procedure 4: Create a user

A user must have permission on at least one object store in order to log on to an IBM FileNet Content Manager client. However, if an object store is configured so that #AUTHENTICATED

USERS have access, then anyone who can log in to the domain can have access. You are going to create a user for testing system security.

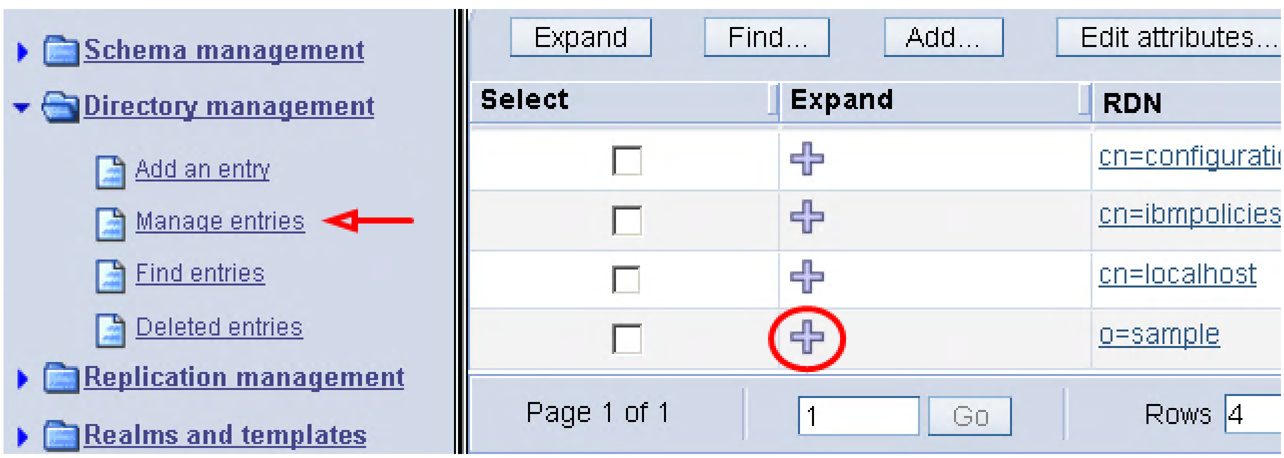
1. Use Internet Explorer to go to the Tivoli Directory Service Web Administration Tool.
   - http://localhost:9080/IDSWebApp/
   - User DN: `cn=root`
   - Password: `IBMFileNetP8`

Troubleshooting

If you get a website security certificate error, select the Continue to this website option, then click Yes.

---

2. In the navigation pane, expand Directory Management > Manage entries.
3. In the details area, expand o=sample by clicking the plus (+) sign.



4. Expand cn=users.
5. Click Add to add a user.
6. In the Select object class window, do the following steps:
   a. Select inetOrgPerson from the Structural object class menu.
   b. Click Next.

Note

You use inetOrgPerson to match the other entries in LDAP.

---

7. On the Select auxiliary object classes page, click Next.
8. On the Required Attributes page, enter the following information, and then click Next:
   - Relative DN: `cn=outsider`
   - Parent DN: `cn=users,o=sample`

- cn: `outsider`
- sn: `outsider`

9. On the Optional Attributes page, do the following steps:
   a. Scroll down to the bottom of the page.
   b. Enter a value for userPassword: `filenet`
   c. Click Finish.
   d. Click No to add a similar entry.
10. Log out of Tivoli Directory Service Web Administration Tool.

Procedure 5: Log on to IBM Content Navigator as outsider

1. Attempt to log on to IBM Content Navigator as outsider:
   - http://ecmedu01:9080/navigator
   - User name: outsider
   - Password: filenet
2. Verify that you cannot log on.
3. Note the error message is different than the one that you saw earlier.

Information

Outsider does not have access to the object stores defined for the default user desktop. A user must have access to the object store that IBM Content Navigator uses for authentication to log on. In some cases, an authorization problem might appear to be an authentication problem.

Pay attention to the error messages: they provide a clue about the underlying cause of the logon failure.

9.2. Verify object store access

Users have access to different sets of object stores. In this exercise, you log in to IBM Content Navigator with different accounts to see how security affects which object stores you can access.

Procedures

Procedure 1, "Log in as different users," on page 9-7

Procedure 2, "Review object store security," on page 9-7

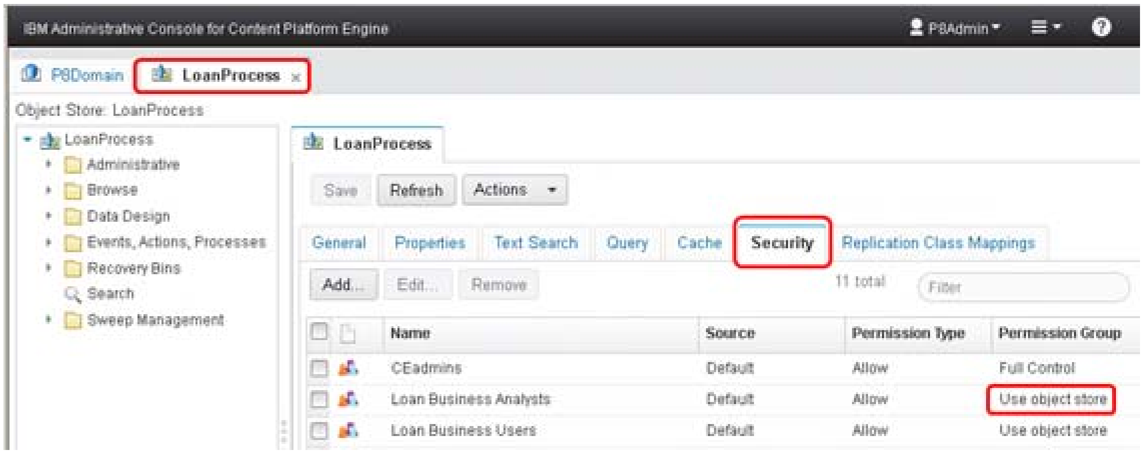
Procedure 1: Log in as different users

1. Log on to IBM Content Navigator as amy:
   - http://ecmedu01:9080/navigator
   - User name: `amy`
   - Password: filenet
2. Select each object store.
3. Observe whether the object store is visible or whether an error occurs.
4. Repeat the procedure with the remaining users. The password for each user is filenet.
- allen
- peadmin
- carol

Procedure 2: Review object store security

1. Log on to Administration Console for Content Platform Engine:
   - http://ecmedu01:9080/acce/ (or use the ACCE shortcut)/
   - User name: `p8admin`
   - Password: `IBMFileNetP8`
2. Open the Security tab for each object store.

3. Review the list of users and groups with permission to use the object store.



4. Log out of Administration Console for Content Platform Engine.
5. Close the browser.

End of exercise

Exercise review and wrap-up

In this lesson, you did the following tasks:

- Resolved logon failure from stopped authentication system.
- Observed logon failure from failed object store authorization.
- Observed object store security.

Exercise 10.Modify direct security

Estimated time

00:30

Overview

This exercise covers how to modify direct security on objects.

Objectives

After completing this exercise, you should be able to:

- Change direct security on a document.
- Change ownership of a document.
- Customize document access.

Introduction

In this exercise, you modify direct security on objects in an object store.

Requirements

Your student system is already started.

Exercise Introduction

Why is this lesson important?

Users with sufficient authorization can change the direct security on documents. This is particularly true with the owner of the document. You are going to change security of a document.

Activities

Change direct security of a document, on page 10-3

Customize access, on page 10-9

User accounts

	Type	User ID	Password
	Operating system	Administrator	passw0rd
	P8 Domain	p8admin	IBMFileNetP8
	Finance clerk	Carol	filenet
	Finance clerk	Charles	filenet

Note

Passwords are always case-sensitive.

10.1. Change direct security of a document

Introduction

In this exercise, you create a document as one user in order to observe default instance security. You then modify the security directly and observe the results.

Procedures

Procedure 1: Add a folder and document

You create a document and then change security on it.

1. Log on to IBM Content Navigator as carol:
   - http://ecmedu01:9080/navigator
   - User name: `carol`
   - Password: `filenet`
2. Open the LoanProcessQA object store.
3. Create a folder:
   a. Click New Folder.
   b. Name the folder Loandocs.
   c. Click Add.
4. Open the Loandocs folder.
5. Create a document:
   a. Click Add Document.
   b. For the document content, select any file from Libraries\Documents\sample documents.
   c. Click Add.
6. Log out of IBM Content Navigator.

Procedure 2: Verify access

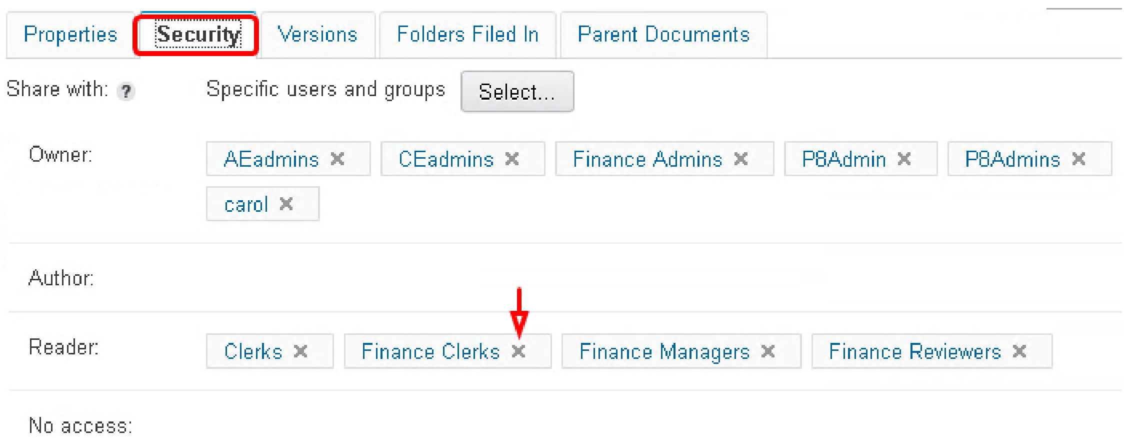
1. Log on to IBM Content Navigator as charles.
   - User name: `charles`
   - Password: `filenet`
2. Open the LoanProcessQA object store.
3. Open the Loandocs folder.
4. Select the file.
5. Verify that you can see and download the document.
   a. Click Actions > Download > As original.
   b. Open the file.
   c. Close the file.
6. Log out of IBM Content Navigator.

Procedure 3: Remove group access to a document

1. Log on to IBM Content Navigator as carol.
   - User name: `carol`
   - Password: `filenet`
2. Open the LoanProcessQA object store.
3. Open the Loandocs folder.
4. Open the properties of the document by clicking Action > Properties.
5. Open the Security tab.
6. Verify the following settings:

Access group	Members
Owners	AEAdmins CEAdmins Finance Admins P8Admin P8Admins carol
Readers	Clerks Finance Clerks Finance Managers Finance Reviewers

7. Remove the permission for Finance Clerks to read the document.
   a. Click the X on the Finance Clerks group.



   b. Click Save.
8. Log out of IBM Content Navigator.

Procedure 4: Verify that access is removed

Carol has removed access to the document to Finance Clerks. Other Finance clerks, such as Charles, should no longer see the document. However, Carol still has access. You are going to verify these statements.

1. Log on to IBM Content Navigator as Charles.
   - User name: `charles`
   - Password: `filenet`
2. Go to LoanProcessQA > Loandocs.
3. Verify that the folder is empty.

Note

This security configuration is an example of implicit denial. When a user has no permissions, the document is not visible.

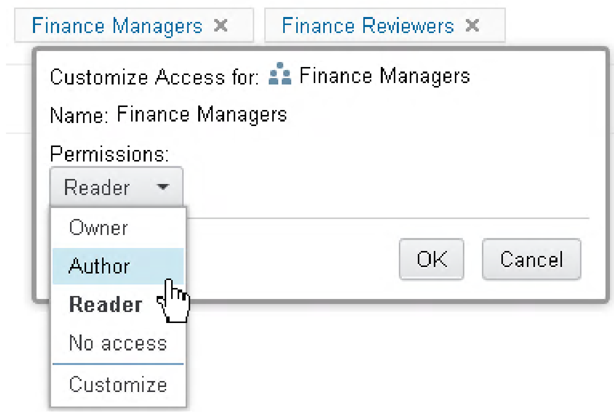
4. Log out of IBM Content Navigator.

Procedure 5: Change access level

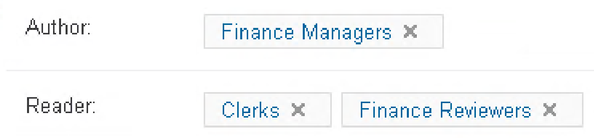
Finance Managers should be authors of the document. As an owner, Carol can change access levels.

1. Log on to IBM Content Navigator as Carol.
   - User name: `carol`
   - Password: `filenet`

2. Go to LoanProcessQA > Loandocs.
3. Open the document Properties page.
4. Open the Security tab.
5. Click Finance Managers.
6. Select Author from the Permissions menu.



7. Click OK.
8. Verify that Finance Managers are now in the Authors group.



9. Click Save.

Procedure 6: Remove ownership

Carol removed Finance Clerks from the document Readers. Other Finance Clerks can no longer access the document. However, Carol can still access the document. To find out what happens when Carol removes herself from the document owners, you remove Carol from the ACL. You are logged on to IBM Content Navigator as Carol. You are in the Loandocs folder of the LoanProcessQA object store.

1. Open the Security tab for the document.
2. Remove carol from the Owners group.
3. Click Save. Verify that you can still see the file.
4. Log out of IBM Content Navigator.

Note

You might think that Carol’s continued access to the file is caused by browser caching or some other glitch. It is not, but you can test this hypothesis if you want. You can clear the browser history and re-open folder. The document is still visible.

Procedure 7: Change ownership

You removed Finance Clerks and Carol from the document's ACL. However, Carol can still see it. To find out why she can still see it, you must use Administration Console for Content Platform Engine to investigate.

1. Use Firefox to log on to Administration Console for Content Platform Engine:
   - URL: http://emcedu01:9080/acce
   - User name: `p8admin`
   - Password: `IBMFileNetP8`
2. Go to LoanProcessQA > Browse > Root Folder > Loandocs.
3. Open the document properties by clicking the document link.
4. Scroll the tabs to the right to open the Security tab.

5. Verify that Carol is still the owner.
   a. Scroll down the page to the Owner/Active Markings area.
   b. Confirm that the Owner is CN=carol, cn=users,o=sample.

6. Change the owner to Charles:
   a. Click Change Owner.
   b. Select the *Change Owner to* option.
   c. Click Find.
   d. Search for Charles.
   e. Select Charles and click the right-facing arrow.
   f. Click OK.
   g. Verify that Charles is now the owner.

7. Click Save.
8. Log out of Administration Console for Content Platform Engine.

Information

The Owner of a document is not the same thing as a member of the Owner role in the ACL. The Owner of an object has implicit READ, WRITE_OWNER and WRITE_ACL privileges no matter what is in the object's ACL.

These implicit rights can be lost by marking sets.

Procedure 8: Verify the change in ownership

1. Verify that Charles can see the document:
   a. Log on to IBM Content Navigator as Charles.
   b. Go to LoanProcessQA > Loandocs.
   c. Verify that you can see the document.
   d. Log out of IBM Content Navigator.
2. Verify that Carol cannot see the document:
   a. Log on to IBM Content Navigator as Carol.
   b. Go to LoanProcessQA > Loandocs.
   c. Verify that you cannot see the document.
3. Log out of IBM Content Navigator.

10.2. Customize access

Introduction

In IBM Content Navigator, you can specify security on a document or folder by using predefined security roles, including:

- Owner
- Author
- Reader
- No access

Each of these groups has a predefined set of access rights.

In Administration Console for Content Platform Engine, you can specify security by using predefined Permission Groups. These groups are similar to, but not identical to the roles in IBM Content Navigator. The groups include:

- Full Control
- Minor versioning
- major versioning
- Modify properties
- View content
- View properties
- Publish
- Create subfolder
- Custom

In this exercise, you are going to see how to use Permission Groups for common security scenarios, and specify custom permissions for fine-grained security configurations.

Procedures

Procedure 1, "Add typical document permissions," on page 10-9

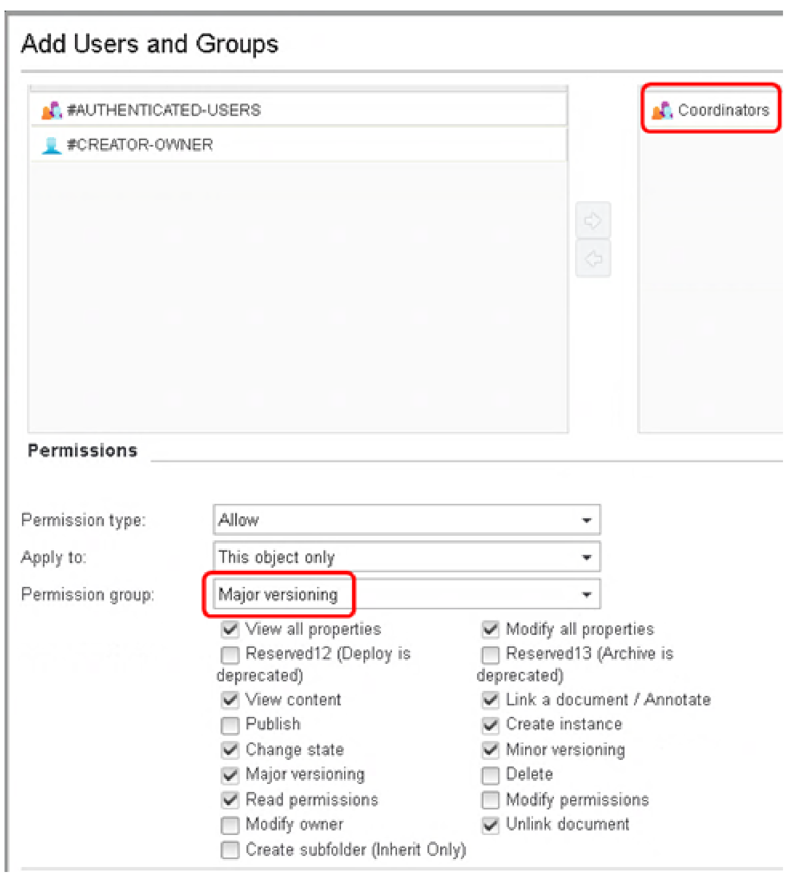
Procedure 2, "Edit security settings," on page 10-11

Procedure 1: Add typical document permissions

You create a document and then modify permissions for different security principals by using the predefined Permission Groups.

1. Log on to Administration Console for Content Platform Engine as p8admin.
   - URL: http://emcedu01:9080/acce
   - User name: `p8admin`
   - Password: `IBMFileNetP8`

2. Open the LoanProcessQA object store.
3. Go to Browse > Root Folder.
4. Use the Actions menu to create a folder that is named `Access Test`.
5. Add a document to this folder, by using one of the files in Libraries\Documents\sample documents as a content element.
    a. Click Actions > New Document.
    b. Name the document anything that you want.
    c. Click Add to add a content element.
    d. Browse to select a document from Libraries\Documents\sample documents.
    e. Complete the wizard by clicking Next and Finish to add the document with default values.
    f. Click Open to open the properties of the document.
6. On the document properties page, open the Security tab.
7. Add Major Versioning permission to Coordinators.
    a. Click Add.
    b. Search for Coordinators.
    c. Add Coordinators to Selected Users and groups.
    d. Select Major Versioning from the Permission group menu.



Troubleshooting

If all the rights do not show, logout and log back in to retry.

e. Verify that the following individual permissions are selected:

- View all properties
- View content
- Change state
- Major versioning
- Read permissions
- Modify all properties
- Link a document/Annotate
- Create instance
- Minor versioning
- Unlink document

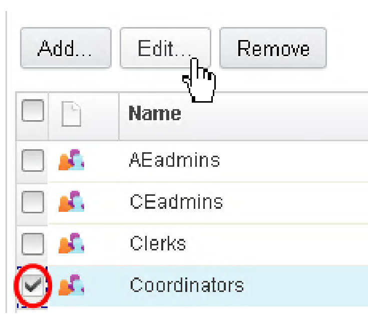
f. Click OK.

8. Click Save.

Procedure 2: Edit security settings

The Major Versioning Permission group has permissions that are not quite what you need. You do not want coordinators to be able to unlink a document. You can specify security more precisely by setting custom permissions. You are logged on to Administration Console for Content Platform Engine as p8admin. You are viewing document properties.

1. Select the Coordinators row.



2. Click Edit.
3. Clear the Unlink document permission.
4. Click OK.
5. Click Save.
6. Verify that the Permission group for Coordinators is now Custom.

7. Log out of Administration Console for Content Platform Engine.

End of Exercise

Exercise review and wrap-up

In this lesson, you completed the following tasks:

- Observed the effects of implicit denial.
- Modified direct security on a document.
- Changed the owner of a document.
- Customized user permissions on a document.
- Observed the effects of implicit denial.

Exercise 11. Configure object store security

Estimated time

00:40

Overview

This exercise covers how to configure security on a new object store, how to manage object store access, and how to update the security on an object store by using the Security Script Wizard.

Objectives

After completing this exercise, you should be able to:

- Configure security on a new object store.
- Add an object store to an IBM Content Navigator desktop.
- Use supergroups to manage object store access.
- Use the Security Script wizard to update security on an object store.

Introduction

In this exercise, you create an object store and configure security on it.

Requirements

Your student system is already started. You have completed the previous exercises in this course.

Exercise Introduction

Why is this lesson important?

Your IBM FileNet P8 solution design identifies specific security requirements for the object store that is used in the business solution. A solution builder must implement these security requirements. Document security begins with object store security. Correctly configured object store security can make the difference between a security schema that is effective and flexible and one that must be constantly worked around.

Activities

Configure Initial Object Store Security, on page 11-3

Add groups to an object store by using a supergroup, on page 11-17

Use the Security Script wizard, on page 11-21

User accounts

	Type	User ID	Password
	Operating system	Administrator	passw0rd
	P8 Domain	p8admin	IBMFileNetP8
	Legal user	Larry	filenet
	unauthorized authenticated user	outsider	filenet
	Finance Admin	Adam	filenet
	Finance Admin	Allison	filenet
	Grouptest	Grouptester	filenet
	Scriptest	Scriptester	filenet

Note

Passwords are always case-sensitive.

11.1. Configure Initial Object Store Security

Introduction

In this exercise, you create an object store. You specify security on the object store so that all P8 users (but not all authenticated users) can see it.

This exercise provides a challenge and a walkthrough.

If you are familiar with object store creation, you can skip the walkthrough.

Important

You must complete this exercise to continue the lesson exercises.

Scenario

The Finance department needs an object store for its operations. All P8 users must have default access to the object store. You can further configure security on objects within the object store later.

Procedures

Procedure 1: Create an object store

1. In Firefox, sign in to Administration Console as p8admin:
   - http://ecmedu01:9080/acce/ (or use the ACCE bookmark).
   - User name: `p8admin`
   - Password: `IBMFileNetP8`
2. Open the New Object Store wizard.
   a. In the Administration Console, click the P8Domain > Object Stores node on the left pane.
   b. In the Object Stores tab on the right pane, click New.
   c. The New Object Stores tab opens.
3. Name the Object Store.
   a. Enter `Finance` as the value for the Display name field.
      The Symbolic name field is automatically populated with the same name.
   b. Optionally, enter a description to your object store.
   c. Click Next.

4. Define the database:
   a. Select FNOSDS from the list for the database connection field.
   b. Enter `Finance` for the Schema name field.
   c. Leave the default values (no value) for the other fields.
   d. Click Next.
5. On the Select the Type of Storage Area for Content page, click Next.
6. Grant Administrative Access.
   a. Click Add. The Add Users and Groups window opens.
   b. In the Search for field, clear the Search for Users and Search for Special accounts check boxes. Leave Search for Groups selected.
   c. Type `P8` in the field that is next to the Starts with field. Click Search.
   d. In the Search Results section > Available Users and Groups column, a list of groups that starts with P8 is listed.
   e. Select and Move `P8Admins` to the Selected Users and Groups column by clicking the right-facing arrow. Click OK.
   f. Verify your administrators.

		Short Name	Principal Name
		P8Admin	cn=P8Admin,o=sample
		P8Admins	cn=P8Admins,o=sample

   g. Click Next.
7. Grant Basic Access.
   a. Click Add on the Grant Basic Access page.
   b. Add the `P8Users` group.

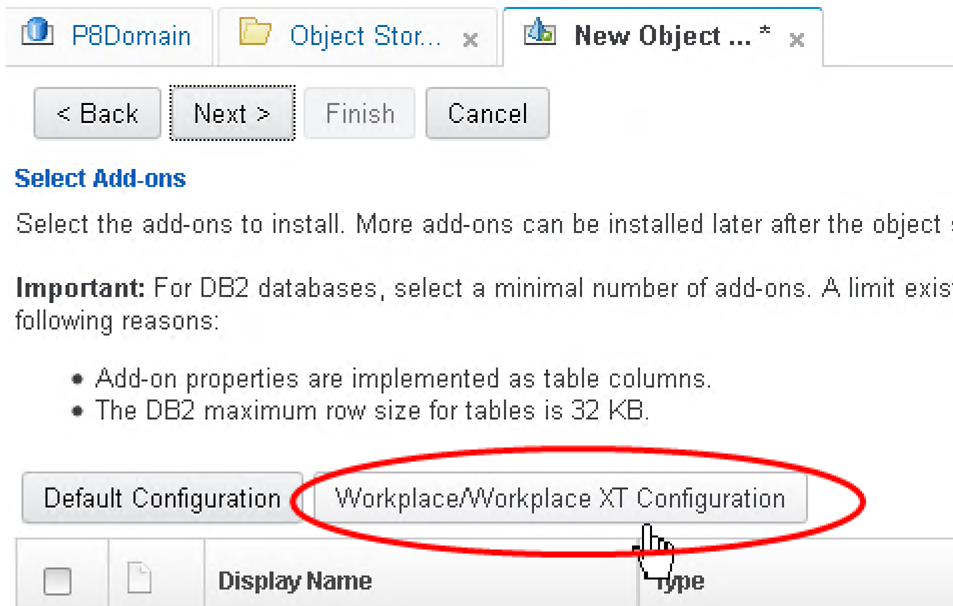
Note

If you specify an empty list, the wizard automatically adds #AUTHENTICATED-USER, which gives all network users in the authentication realm access to the object store. Unless you want anyone who can log in to automatically access this object store, you must specify a group.

   c. Click Next.

8. Select AddOns.

   a. Click the Workplace/WorkplaceXT Configuration button.



Information

Although FileNet Workplace XT is no longer used, the add-ons are still required for property definitions to be configured properly. The Workplace/Workplace XT Configuration button selects the following add-ons.

- 5.2.1 Base Content Engine Extensions
- 5.2.1 Process Engine Extensions
- 5.2.1 Publshing Extensions
- 5.2.1 Workplace Access Role Extensions
- 5.2.1 Workplace Base Extensions
- 5.2.1 Workplace E-mail Extensions
- 5.2.1 Workplace Forms Extensions
- 5.2.1 Workplace Template Extensions"
- 5.2.1 Workplace XT Extensions

   b. Click Next.

9. Complete the wizard:

   a. In the Summary page, review your selections.

   b. Click Finish to create the object store.

Note

The process might take a few minutes.

If a message states that the script is unresponsive, click OK to continue.

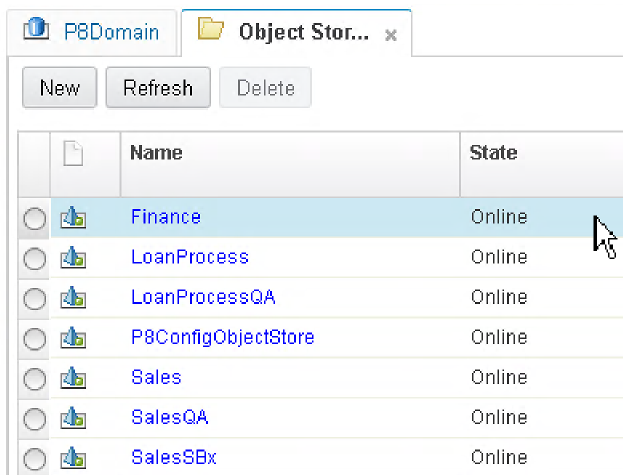
c. In the Success page, click Close.

Procedure 2: Verify the new object store

In this procedure, you verify that the object store has correct security settings.

1. In the Administration Console > Object Stores tab, click Refresh.

   a. Verify that the new object store is listed.



   b. Click to open the Finance object store.

   c. Open the Security tab.

   d. Verify the following access settings:

Name	Permission group
P8Admins	Full Control
P8Users	Use object store
P8Admin	Full Control

2. Log out of Administration Console for Content Platform Engine, and close the browser.

11.2. Modify Root Folder Security

Introduction

The initial security on the object store allows P8users to use the object store. However, you want to restrict who can add folders at the root level. This permission must be given only to Finance Administrators.

Scenario

You created an object store. The object store currently allows all P8 users default permission (Use object store). Any users can currently add documents and folders to the Root folder. In order to restrict the right to organize the top folders, you must remove this access. You must also create the folders in which Finance users can create subfolders.

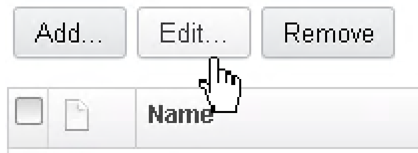
Procedures

Procedure 1: Edit Root Folder security

Restrict general Root Folder permissions but give special permissions to the Finance Admins group.

1. Use Firefox to log on to Administration Console for Content Platform Engine:
   - URL: http://emcedu01:9080/acce
   - User name: `p8admin`
   - Password: `IBMFileNetP8`
2. Open the Finance object store.
3. Expand the Browse node.
4. Open the properties page for the Root Folder.
5. Open the Security tab for Root Folder.
6. Edit the P8Users access control entry:
   a. Select the P8users entry.

b. Click Edit.



c. In the Permission group menu, select View Properties.

d. Click OK.

e. Click Save.

7. Provide Finance Admins with Root Folder access:

   a. Click Add.

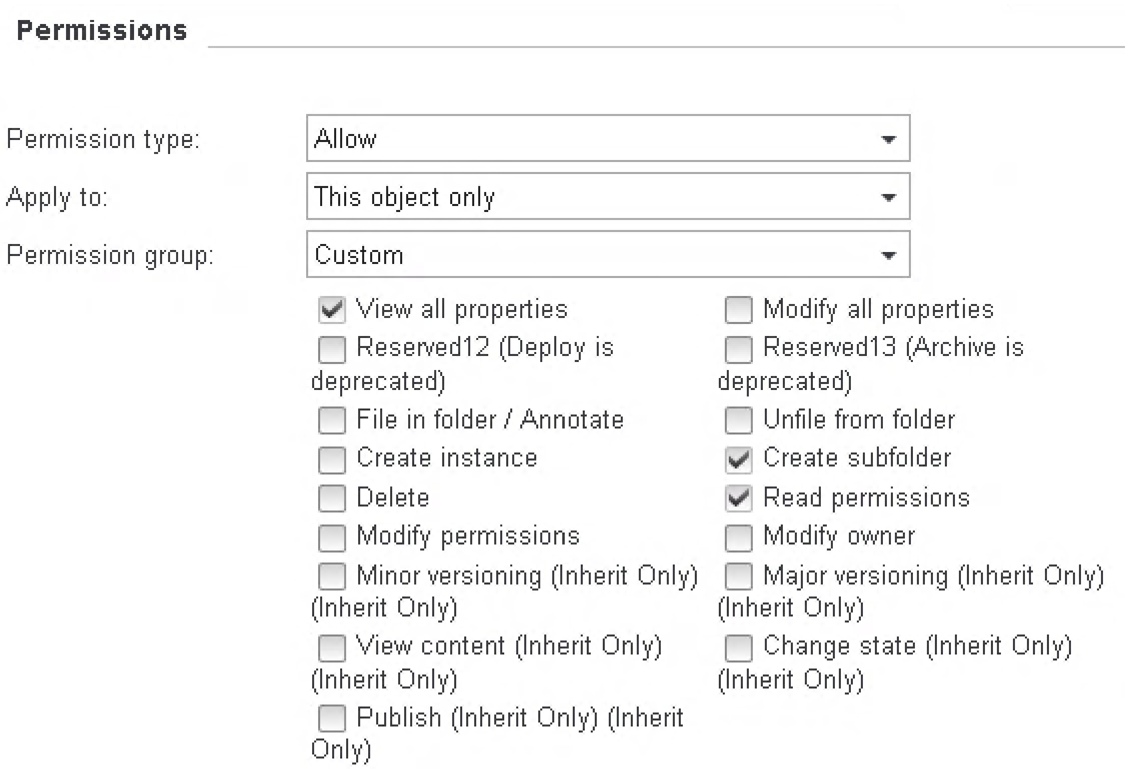
   b. Search for Finance Admins.

   c. Add Finance Admins group to the Selected Users and Groups.

   d. Select *This Object Only* from the *Apply To* field.

   e. Select the View Properties Permission group.

   f. Add the Create Subfolder custom permission.



   g. Click OK.

8. Click Save to save the changes on the Root Folder.

9. Log out of Administration Console for Content Platform Engine.

Information

Finance Admins are now allowed to add subfolders to the Root Folder. Finance Admins can then specify security on the folders that they create.

Procedure 2: Configure your repository

Users access and add content to your object store in IBM Content Navigator.

To access the content in an IBM FileNet P8 repository, you must first configure IBM Content Navigator to connect to that repository.

Then, you must associate this repository with a desktop to enable users to access the content.

In this procedure, you configure the repository that recently created.

1. Log in to IBM Content Navigator.

- `http://ecmedu01:9080/navigator/` (or use the Content Navigator shortcut).
- User name: `P8Admin`
- Password: `IBMFileNetP8`

2. On the Content Navigator desktop, click the Open Administration View icon in the leftmost pane.

3. Open the Repositories tab.

   a. In the Administration View page, click Repositories in the left pane.

   b. On the Repositories tab, a list of the repositories that are configured is shown.

4. Create a connection to your repository.

   a. Click New Repository and select FileNet Content Manager from the list.

   b. Enter the values shown in the table.

Table 3.

Property	Value
DIsplay Name	Finance
Server URL	iiop://ecmedu01:2809/FileNet/Engine

Table 3.

Property	Value
Object store symbolic name	Finance
Object store display name	Finance

Information

Your server name is ecmedu01.

5. Test the connection to the repository.
    a. Click Connect.
    b. In the Log In page, enter the credentials of a user with administrator access to the repository (User: `P8admin`; password: `IBMFileNetP8`).
    c. Click Log In.
6. Save the configuration settings for the new repository.
    a. Click Save and Close to save and close the New Repository tab.
7. Test the new repository.
    a. Verify that the new repository is listed on the Repositories tab. Click Refresh if you do not see it.
    b. This repository is now available to be used in the Content Navigator.
    c. Close the Repositories tab.

Procedure 3: Edit the desktop to add your repository

In this procedure, you associate your repository with a desktop.

1. In the Admin desktop page > Desktops tab, right-click Sample Desktop and click Edit.
    a. In the Sample Desktop tab, click the Repositories subtab.

2. Specify the repository for the desktop.

   a. In the Repositories tab, Select `Finance` repository from the Available Repositories pane and use the right arrow (Add) to move it to the Selected Repositories pane.

Note

You might have other repositories as well, depending on your prior activities.

---

   b. Click Save and Close.

   c. Click Close to close the message to refresh your browser.

3. Log out of IBM Content Navigator.

4. Close Firefox.

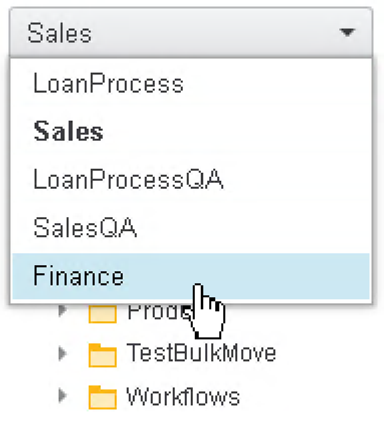
Procedure 4: Verify the repository

1. Start Firefox.

2. Sign in to IBM Content Navigator as Adam.

- `http://ecmedu01:9080/navigator/` (or use the Content Navigator shortcut).
- User name: `Adam`
- Password: `filenet`

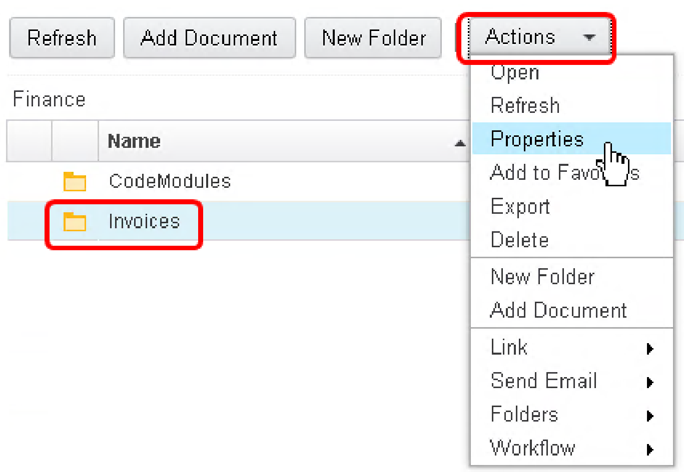
3. Open the Finance object store.



Procedure 5: Add a folder for Finance group

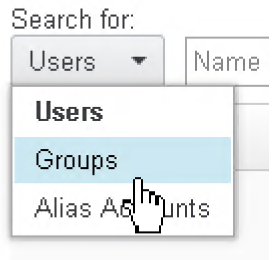
Users in the various Finance groups need to be able to add folders and documents, but they can be allowed to do this only in designated subfolders. As the P8 administrator, you gave the Finance Admin group permission to add subfolders to the Root Folder. You are logged in to IBM Content Navigator as Adam, a Finance Admin member. The Finance object store is open.

1. Create a subfolder that is named Invoices.
2. Add Finance groups to the folder permissions:
   a. Select the Invoices folder.
   b. Click Actions > Properties.



   c. Open the Security tab.
   d. Click Select.

e. Select Groups from the *Search For* menu.



f. Search for Finance groups.

g. Select all Finance groups by holding the shift key and selecting the first and last group.

h. Select Reader permissions and then use the arrow to move the groups to Selected Users and Groups.

i. Click Add.

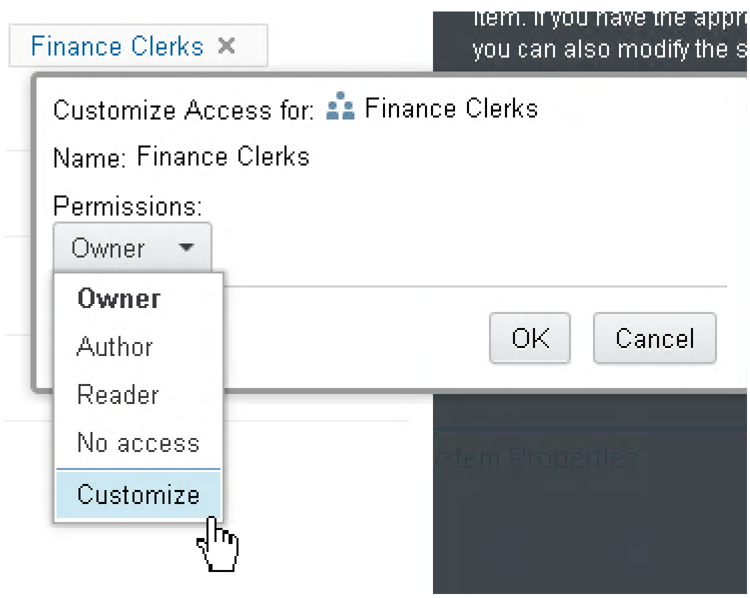
3. Edit the permissions for each group:

a. Click Finance Admins.

b. Select Owner and then click OK.

c. Click Finance Clerks.

d. Select Customize from the Permissions menu.

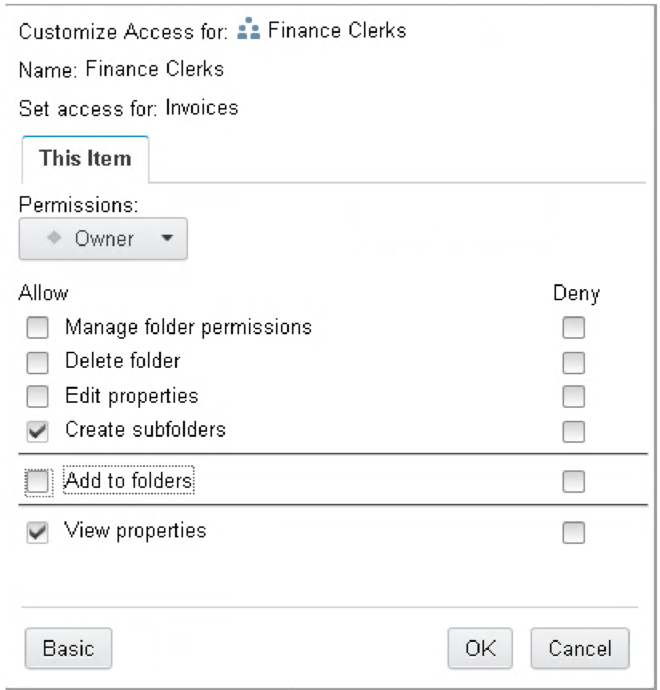


e. Click Advanced.

f. Select Create subfolders.

g. Clear the *Add to folders* permission.

h. Review the Finance Clerk permissions.



i. Click OK.

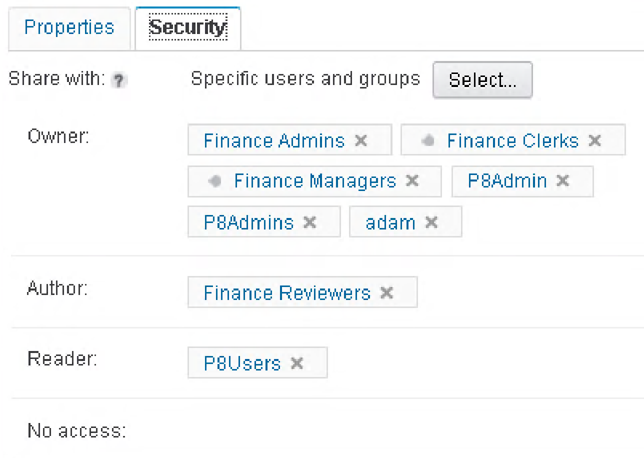
Note

The Owner button has a diamond icon to indicate that it has Advanced permissions.

j. Use this data to configure permissions for the remaining Finance groups:

Group	Permission type	Access Level or permissions
Finance Admins	Basic	Owner
Finance Clerks	Advanced	Create subfolders
Finance Managers	Advanced	Create Subfolders Add to folder
Finance Reviewers	Basic	Author

k. Verify the completed folder permissions:



l. Click Save.

4. Log out of IBM Content Navigator.

Procedure 6: Verify folder access

As an administrator, you can check the folder security settings in the Administration Console.

1. Log in to Administration Console:
   - http://ecmedu01:9080/acce/ (or use the ACCE bookmark).
   - User name: `p8admin`
   - Password: `IBMFileNetP8`
2. Open the Finance object store.
3. Expand Browse > Root Folder.
4. Select the Invoices folder.
5. Open the Security tab.
6. Inspect the Finance Admins permissions:
   a. Select security principal by checking the box, then click Edit.
   b. In the Edit Permissions window, inspect the permissions, then click Cancel.
   c. Clear the check box.

7. Inspect the permissions for the other Finance groups to verify that each group has the correct permissions.

Group	Permissions
Finance Admins	View all properties Reserved12 File in folder Create instance Delete Modify permissions Modify all properties Reserved 13 Unfile from folder Create subfolder Read permissions Modify owner Change state
Finance Clerks	View all properties Create subfolder Read permissions
Finance Managers	View all properties File in folder Unfile from folder Create subfolder Read permissions
Finance Reviewers	View all properties File in folder Unfile from folder Read permissions

8. If any group does not have the correct permissions, you can correct them here.
9. Log out of Administration Console.

11.3. Add groups to an object store by using a supergroup

Introduction

You might have to add group access to new groups that did not exist when you first created the object store. When you add groups to the object store when it is created, those groups have default access to all objects on the object store. Users who are added to the object store later do not automatically get the same permissions on existing objects. Therefore new users do not automatically have full access to the object store.

You can add groups to an existing object store in either of two ways:

- By using supergroups.
- By using the security script wizard.

In this lesson, you are going to practice both methods.

Procedures

Procedure 1: Test the accounts

Grouptester and Scriptester are two accounts in the LDAP directory. They belong to the Grouptest and Scriptest groups. Although they are authenticated users, they do not have access to any object store.

1. Use Firefox to try to log on to IBM Content Navigator as grouptester.
   - URL: http://ecmedu01:9080/navigator (or use the Content Navigator bookmark).
   - User name: `grouptester`
   - Password: `filenet`
2. Verify that you are not allowed to log on.

Note

IBM Content Navigator uses the Sales object store to authenticate, so users who do not have access to Sales receive an error.

3. Test the scriptester account as well. The password is filenet.
4. Log on to Administration Console as grouptester.
   - URL: http://ecmedu01:9080/acce (or use the ACCE bookmark).
   - User name: `grouptester`
   - Password: `filenet`
5. Explore Administration Console for Content Platform Engine.

Information

Although you can log in to the Administration Console, your actions and views are limited. P8ConfigObjectStore and SalesSBx object stores allow access to all authenticated users.

---

6. Log out of Administration Console for Content Platform Engine.
7. Close the browser.

Optional

You might think that by adding Grouptester to the Sales object store, you can solve your access problems. It is not that simple, however, because basic object store access does not provide any additional permissions on existing objects.

To see for yourself, you can try this experiment to see the results.

1. As P8admin, log into Administration Console.
2. Open the Sales object store.
3. Add Grouptester to the Sales object store with Use Object Store permission group.
4. Attempt to log into IBM Content Navigator as Grouptester.
5. Observe the effects.
6. When you are finished exploring, use the Administration Console to remove Grouptester from the Sales object store.

Procedure 2: Add a group to the P8Users group

The easiest way to add users and groups to an object store is to add them to an existing group that already has access. Several object stores are configured with the P8Users supergroup. By adding a group to the supergroup, you can instantly provide them default access to these object stores.

1. In Firefox, go to the Tivoli Directory Service Web Administration Tool.
   - http://localhost:9080/IDSWebApp/
   - User DN: `cn=root`
   - Password: `IBMFileNetP8`

2. In the navigation pane, expand Directory Management > Manage entries.
3. In the details area, expand o=sample by clicking the plus (+) sign.
4. Expand cn=groups.
5. Find the P8Users group.

Hint

To find P8Users, you might need to scroll down and advance to the next page by using the arrows.

---

6. Click the group title to open it.
7. Add the grouptest group:
   a. Click Multiple Values next to the uniqueMember field.

   b. In the uniqueMember field, type: `CN=grouptest,cn=groups,o=sample`

Hint

Entries are case-sensitive.

---

   c. Click Add.
   d. Click OK at the bottom of the page.
   e. Click Next on the Edit an entry page.
   f. Click Finish.
8. Log out of Tivoli Directory Service Web Administration Tool.

Procedure 3: Retest grouptester

1. Clear the Firefox browser cache.
   a. In the Tools bar, click History > Clear Recent History.
   b. Click Clear Now.
2. Use Firefox to log on to IBM Content Navigator as grouptester.
   - User name: `grouptester`
   - Password: `filenet`

3. Verify that you can see the following object stores:
   - LoanProcess
   - Sales
   - LoanProcessQA
   - SalesQA
   - Finance

Note

You might see extra object stores as well, depending on your prior activities.

Troubleshooting

If you cannot see these object stores, log out, wait about a minute and try again (The User Security Cache TTL needs time to refresh).

4. Log out of IBM Content Navigator.

11.4. Use the Security Script wizard

Introduction

If you need to add a group of users to an object store, and you do not have an established group to add them to, then you can use the Security Script Wizard. The Security Script wizard allows you to assign security roles to user and group accounts in order to create security principals for the objects in an object store. You must run the Security Script Wizard on each object store to which you are adding the accounts.

Important

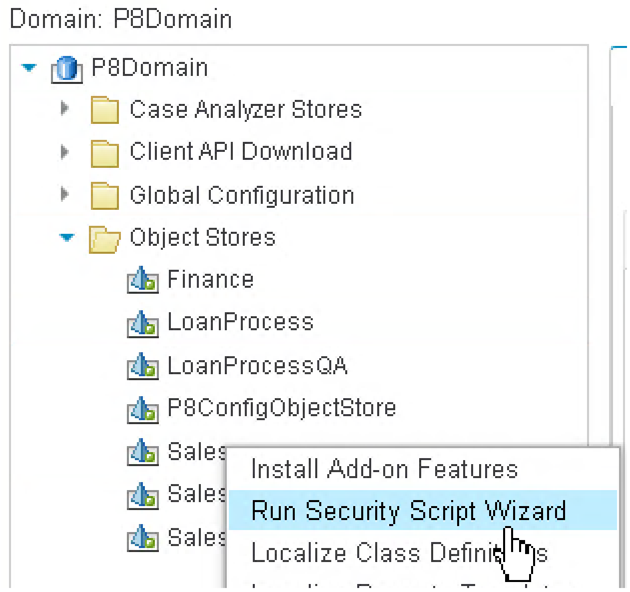
Be cautious about running the SecurityUpdate script. This script updates an object store's set of administrator groups and regular users. It makes wholesale changes to the Default Instance Permissions settings of many class definitions and also changes the security permissions of all folders. After running it you must remake your Default Instance Permissions changes and possibly redo the security for your folders.

Procedures

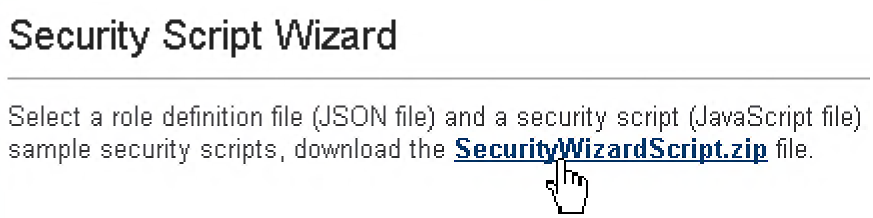
Procedure 1: Download the Security Wizard Script files

1. Log in to Administration Console:
   - http://ecmedu01:9080/acce/ (or use the ACCE bookmark).
   - User name: `p8admin`
   - Password: `IBMFileNetP8`

2. Right click Sales object store and then select Run Security Script Wizard.



3. Click the SecurityWizardScript.zip file.



4. Download the file.

Note

If you cannot download the file for any reason, the file is also available on your student system at this location: C:\Labs\FileNet Content Manager 5.2.1 Administration.

5. Cancel the Security Script Wizard.
6. Open the Downloads folder (C:\Users\Administrator\Downloads).
7. Extract the SecurityWizardScript.zip file with the standard Windows archive extraction tool.
8. Verify that you have the necessary files:
   - SecurityScript.js
   - UpdateOSSecurity.json

Procedure 2: Run the Security Script Wizard

Firefox is open. You are logged in to Administration Console as P8Admin.

1. In Firefox, restart the Security Script Wizard on the Sales object store.

2. Select a role definition file:
   a. Browse to and select the UpdateOSSecurity.json file that you recently downloaded.
3. Select a security script file:
   b. Browse to and select the SecurityScript.js file that you recently downloaded.
4. Click Next.
5. Select Role and Role Participants:
   a. Click Add.
   b. Search for group scriptest.
   c. Move scriptest to Selected Users and Groups.
   d. Click OK.
   e. Click Next.
   f. Click OK to close the message about unassigned participants.
6. Click Finish to complete the security script wizard.
7. Wait for the script to complete.
8. Click Close.
9. Log out of Administration Console.

Procedure 3: Test object store access

You ran the Security Script Wizard to provide default object store access to the scriptest group. You are now going to log on to IBM Content Navigator to verify that the security change was successful.

1. Log on to IBM Content Navigator as scriptester.
   - User name: `scriptester`
   - Password: `filenet`
2. Verify that you can see the object stores.
3. Verify that you cannot open any object store except Sales.
4. Log out of IBM Content Navigator.
5. Close the browser.

Information

To provide access to the other object stores, you must run the Security Script Wizard on each one.

Sales was chosen in this exercise because it is the object store that IBM Content Navigator uses for authentication.

End of exercise

Exercise review and wrap-up

In this exercise, you did the following tasks:

- Configured initial security on a new object store.
- Configured the security on the Root Folder of an object store.
- Provided access to an existing object store by adding a group to an established group.
- Provided access to an existing object store by using the Security Script Wizard.

Exercise 12. Configure class and property security

Estimated time

00:30

Overview

This exercise covers how to configure security on classes and properties for certain business use-cases.

Objectives

After completing this exercise, you should be able to:

- Configure default instance security.
- Configure property modification access.

Introduction

In this exercise, you configure default instance security on an object class. Afterward, you configure property modification access on a property definition.

Requirements

Your student system is already started. You have completed the previous exercises in this course.

Exercise Introduction

Why is this lesson important?

Your business solution requires specific group access to certain document classes. You must configure default instance security on those document classes.

A document class has a custom property that you want to make modifiable only by people who have permission to delete the object.

Activities

Configure Default Instance Security, on page 12-3

Configure property modification access, on page 12-6

User accounts

	Type	User ID	Password
	Operating system	Administrator	passw0rd
	P8 Domain	p8admin	IBMFileNetP8
	Finance Clerk	Carol	filenet

Note

Passwords are always case-sensitive.

12.1. Configure Default Instance Security

Introduction

In this activity, you configure default instance security on a document class. Whenever an instance of that class is created, its security is determined by the default instance security.

Procedures

Procedure 1: Set default instance security on a new document class

Create a document class that includes one custom property. The procedures for creating classes and properties are covered in the unit: Build an Object Store. You need for Finance Managers to have ownership and Finance Clerks to have Modify Properties permission. You also want the creator of the document to be unauthorized to delete the document after it is created.

1. Use Firefox to log on to Administration Console for Content Platform Engine:
   - URL: http://emcedu01:9080/acce
   - User name: `p8admin`
   - Password: `IBMFileNetP8`
2. Create the Invoice number property template:
   a. Go to Finance > Data Design > Property Templates.
   b. Select the Property Templates folder.
   c. Click New to create a property template with the following characteristics.

Page	Field	Value
Name and Describe the Property Template	Display name	InvoiceNumber
Select the Data Type	Data type	String
Single or Multi-value	Single or multi-value	Single

3. Create the Invoice document class:
   a. Go to Finance > Data Design > Classes > Document.
   b. Select the Document class.
   c. Click Actions > New Class to create a document subclass named Invoice.
4. Add the InvoiceNumber property to the Invoice document class.
   a. Click Open to edit the class.
   b. Open the Property Definitions tab.
   c. Add the InvoiceNumber property.
   d. Save the change to the Invoice document class.

5. Remove P8Users from default instance security on the class:
   a. Open the Default Instance Security tab.
   b. Select P8Users
   c. Click Remove.
6. Change the permission level of #CREATOR-OWNER to Major versioning.
7. Add the following principals with these Permission groups:

Group	Permission group
Finance Managers	Full Control
Finance Clerks	Modify properties

8. Verify your default instance security settings.

Name	Source	Permission Type	Permission Group
P8Admins	Direct	Allow	Full Control
#CREATOR-OWNER	Direct	Allow	Major versioning
P8Admin	Direct	Allow	Full Control
Finance Managers	Direct	Allow	Full Control
Finance Clerks	Direct	Allow	Modify properties

9. Click Save to save the Invoice class properties.

Hint

You might need to save after each change to ensure that your settings are saved.

10. Log out of Administration Client for Content Platform Engine.
11. Clear the browser cache.

Procedure 2: Verify default instance security

In this procedure, you create an Invoice document and verify the security settings.

1. Log on to IBM Content Navigator as Carol.
   - URL: http://ecmedu01:9080/Navigator
   - User name: `carol`
   - Password: `filenet`
2. Go to Finance > Invoices.
3. Add a subfolder to Invoices. Name the folder `Carol`.

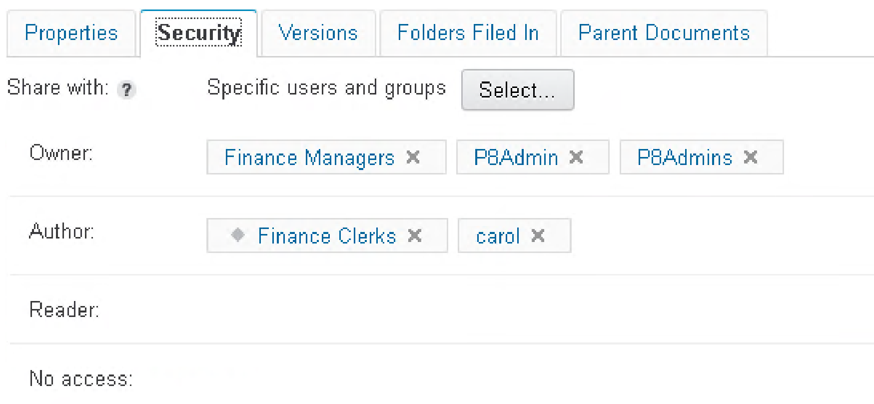
Note

Finance Clerks do not have permission to file documents directly into the Invoices folder, but they can add subfolders.

4. Open the Carol folder.
5. Add a document to the Carol folder:

Property	Value
File	Any file from Documents\sample documents
Class	Invoice
Document Title	Invoice 1
InvoiceNumber	1

6. Open the Security Information page for the new Invoice. Verify the following settings:



7. Click Cancel.
8. Log out of IBM Content Navigator.
9. Close the browser.

Troubleshooting

If the security settings are not correct, log in to Administration Console as P8admin and re-apply the default instance security settings.

12.2. Configure property modification access

Introduction

Finance clerks can currently edit the value of the InvoiceNumber property of any Invoice that they create. You want only users who have Full Access to the Invoice documents to be able to change this property. You can customize property modification access to accomplish this goal.

Information

Property modification access behavior is a feature primarily intended for the IBM Enterprise Records application, especially in connection with markings. It is available for use by non-records management applications that need granular control over user ability to modify properties.

Procedures

Procedure 1, "Set property modification access," on page 12-6

Procedure 2, "Verify property modification restriction," on page 12-6

Procedure 1: Set property modification access

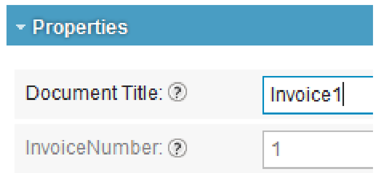
1. Use Firefox to log on to Administration Console for Content Platform Engine:
   - URL: http://emcedu01:9080/acce
   - User name: `p8admin`
   - Password: `IBMFileNetP8`
2. Go to Object Stores > Finance > Data Design > Classes > Document > Invoice.
3. Open the Property Definitions tab.
4. Click InvoiceNumber.
5. On the Property Definition page, open the Modification Access tab.
6. Select the Delete option.
7. Click OK.
8. Click Save on the Invoice class definition page.
9. Log out of Administration Console for Content Platform Engine.
10. Clear the browser cache.

Procedure 2: Verify property modification restriction

1. Log on to IBM Content Navigator as Carol.
   - URL: http://ecmedu01:9080/navigator
   - User name: `carol`

- Password: `filenet`

2. Go to Finance > Invoices > Carol.
3. Open the Properties page for the Invoice document that you added.
4. Verify that you cannot edit the value of the InvoiceNumber property, even though you can edit the Document Title.



5. Click Cancel.
6. Log out of IBM Content Navigator.
7. Close the browser.

Note

You changed the InvoiceNumber property definition on the Invoice document class, but you did not change the InvoiceNumber property template. If you create a new class and you use this property template, the property will have normal modification access.

End of exercise

Exercise review and wrap-up

In this lesson, you did the following tasks:

- Configured default instance security on a document class.
- Configured property modification access on a custom property.

Exercise 13. Configure security inheritance

Estimated time

00:40

Overview

This exercise covers how to configure security inheritance by using folders and object-valued properties.

Objectives

After completing this exercise, you should be able to:

- Configure folder inheritance.
- Configure a security parent by using a custom OVP.

Introduction

In this exercise, you configure security to be inherited from other objects. In the first part, you use a folder as the parent object. In the second part, you use a custom object-valued property.

Requirements

Your student system is already started. You have completed the previous exercises in this course.

Exercise introduction

Why is this lesson important?

The design for your business solution calls for some documents to have their security that is determined by the security of a folder or another object. As the solution builder, you must use security inheritance features to implement this functionality.

Activities

Configure folder inheritance, on page 13-3

Configure a security parent using a custom OVP, on page 13-6

User accounts

	Type	User ID	Password
	Operating system	Administrator	passw0rd
	P8 Domain	p8admin	IBMFileNetP8
	Finance Admin	Adam	filenet

Note

Passwords are always case-sensitive.

13.1. Configure folder inheritance

Introduction

In this exercise, you create a folder and use folder inheritance to secure documents.

Procedures

Procedure 1: Preparation: Create a document class

To have security that is completely controlled by inheritance, you must eliminate the default instance permissions. To set up the exercises for this lesson, you are going to create a document class that has no default instance permissions.

1. Use Firefox to log on to Administration Console for Content Platform Engine:
   - URL: http://emcedu01:9080/acce
   - User name: `p8admin`
   - Password: `IBMFileNetP8`
2. Create the Receipt document class:
   a. Go to Finance > Data Design > Classes > Document.
   b. Select the Document class.
   c. Click Actions > New Class to create a document subclass named `Receipt`.
   d. Open the document class definition page after you create the class.
3. Remove default instance security on the class:
   a. Open the Default Instance Security tab.
   b. Select all entries except P8Admins.
   c. Click Remove.
   d. Click Save.
   e. Close the Receipt tab.

Procedure 2: Create a parent folder

Create the folder from which receipts inherit permissions.

1. Go to Finance > Browse > Root folder.

2. Click Actions > New Folder.
3. Name the folder: `Receipts`.
4. Accept default values to complete the wizard.
5. Open the Security tab for the folder.
6. Add inheritable security settings:
    a. Click Add.
    b. Search for Finance groups.
    c. Add the Finance Admins and Finance Managers.
    d. From the Apply to menu, select *All children, but not this object*.
    e. From the Permission group menu, select Full Control.
    f. Click OK.
7. Save the changes to the folder.

Procedure 3: Create a receipt

1. On the Receipts tab, click Actions > New Document.
2. Define the new document object:
    a. Name the new document *Test receipt*.
    b. Select the Receipt class.
    c. Click Next.
3. Add document content:
    a. Browse to and add any document from Documents\sample documents.
    b. Click Next.
4. Use default settings to complete the add document wizard.
5. Click Open to open the Test receipt properties page.
6. Open the Security tab.
7. Verify that the only ACE is P8Admins.

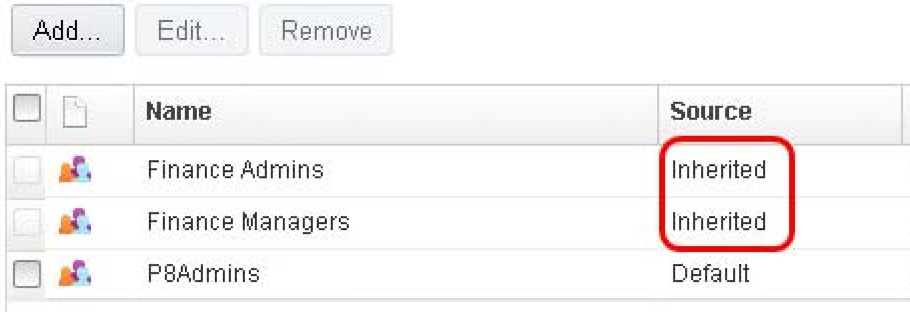
Procedure 4: Configure the document to inherit security

1. Open the General tab for the Test Receipt document.
2. Scroll down.
3. From the Inherit Security from folder, select Receipts.
4. Click Save.

Procedure 5: Verify security change

1. Open the Security tab of the Test receipt.

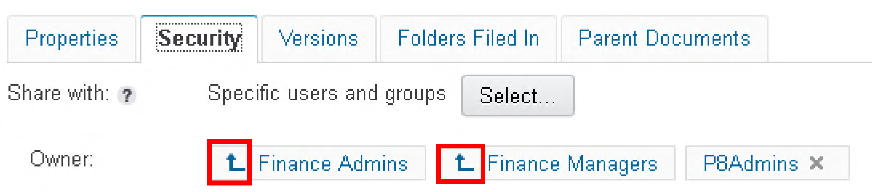
2. Verify that Finance Admins and Finance Managers have inherited permissions.



3. Verify that the inherited settings are not editable.
4. Log out of Administration Console for Content Platform Engine.

Procedure 6: (Optional) Test security inheritance

1. Use Firefox to log on to IBM Content Navigator as Adam:
   - URL: http://ecmedu01:9080/navigator
   - User name: adam
   - Password: `filenet`
2. Go to Finance > Receipts.
3. Open the properties page for the Test Receipt document.
4. Open the security tab.
5. Confirm the security settings:
   - Finance Manager, Finance Admins, and P8admins are all owners.
   - Finance Admins and Finance Manager permissions have an inheritance indicator.



6. Click Cancel.
7. Delete the Test Receipt document.
   a. Select the document.
   b. Click Actions > Delete.
8. Log out of IBM Content Navigator.

13.2. Configure a security parent using a custom OVP

Introduction

In this procedure, you create an object specifically to be a security parent. Documents that inherit security from this parent will be affected when you change security on the parent.

You use a custom object-valued property (OVP) to designate a security parent. You can set this property's default value on the class definition, so that all new documents of this class are created with the same default security parent.

Procedures

Procedure 1: Create a security parent folder

Create a folder to keep track of security parents.

1. If you are not already logged on to Administration Console for Content Platform Engine, use Firefox to log on as p8admin.
   - URL: http://emcedu01:9080/acce
   - User name: `p8admin`
   - Password: `IBMFileNetP8`
2. Go to Finance > Root Folder.
3. Create a folder named `Security Parents`.
4. Open the folder.

Procedure 2: Create a security parent

1. In the Security Parents folder, create a contentless document:
   a. From the Security Parents folder, click Action > New Document.

b. Name the document `Accounts Payable Access`.

c. Clear the With Content option.

d. Use default values to complete the wizard.

2. Open the Accounts Payable Access document.

3. Click Actions > Copy Object Reference.

Information

You are copying the object reference now, but you do not need to paste it until you edit the property definition for the document class that inherits security from this object. If for any reason your copy buffer gets erased before you edit the property definition, you must come back to this document to copy the object reference.

Procedure 3: Edit security of the security parent

The security parent must have at least one inheritable ACE. You are viewing the Accounts Payable Access document properties page.

1. On the Accounts Payable Access document, open the Security tab.

2. Remove P8users, and the P8admin entries. Do not remove the P8admins entry.

3. Save the changes to the document.

4. Add the following permissions.

Principal	Permission group	Apply To
Finance Admins	Full Control	All children, but not his object
Finance Managers	Full Control	All children, but not his object
Finance Reviewers	View Content	All children, but not his object
Finance Clerks	Major Versioning	All children, but not his object

5. Verify that the ACL for the Accounts Payable Access document has the correct permissions:

Troubleshooting

If the permissions are not what you expected after you save the document, try editing each ACE separately and saving between.

6. Save the changes to the document.

Procedure 4: Create a custom object valued property template

The custom object valued property assigns the security parent to the document. You must create the property template before you can add it to the document class. You are signed into Administration Console for Content Platform Engine as p8admin.

1. Go to Finance > Data Design > Property Templates.

2. Click New to create a property template.
3. Complete the property template using the following values.

Page	Property	Value
Name and describe the property template	Display name	Security parent OVP
Select the data type	Data type	Object
Single or Multi-value	Single or Multi-value	Single
	Set other attributes	Selected
Additional property template attributes	Security Proxy Type	Inherited

Information

The Security Proxy Type value of Inherited appears as the integer 2 when viewed in the document's property grid.

4. Use default values to complete the wizard.
5. Click Close.

Procedure 5: Create a document class

The new document class must include the object valued property that you created.

1. Go to Finance > Data Design > Classes > Document.
2. Click Actions > New Class.
3. Name the class Accounts Payable.
4. Complete the document class wizard.
5. Click Open.

Procedure 6: Change default instance security

You want all of the security to be inherited from the security parent. Therefore, you are going to remove the default instance permissions.

1. Open the Default Instance Security tab.
2. Remove all of the ACEs *except* for P8admins.
3. Save the changes to the Accounts Payable class.

Procedure 7: Add the custom OVP to the document class

You now add the custom OVP property to the Accounts Payable class. The Accounts Payable class definition is open.

1. Open the Property Definitions tab.
2. Click Add.

3. Select Security Parent OVP from the Add Properties menu.
4. Click OK.
5. Edit the property definition attributes:
   a. On the Property Definitions tab, click Security Parent OVP.
   b. Open the More tab.
   c. In the Required Class field, select Document.
   d. Click OK.
6. Click Save to save the changes to the class definition.

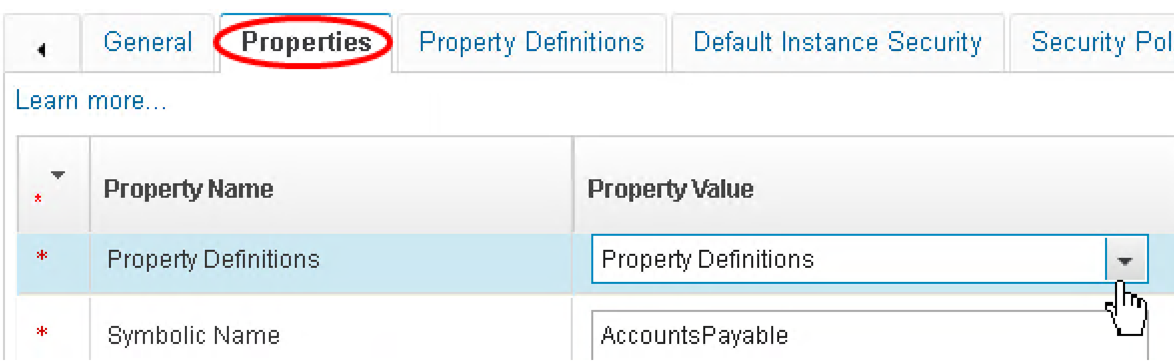
Information

For the Required Class property, you must select the exact class of the parent object.

Procedure 8: Configure the default value for the custom OVP

To save time when users add documents, you can configure the default value of Security Parent OVP property to point to the security parent. All new documents of this class automatically use the Accounts Payable Access document as a security parent by default. The Accounts Payable class definition is open.

1. Open the Properties tab.
2. Open the Property Definitions menu.



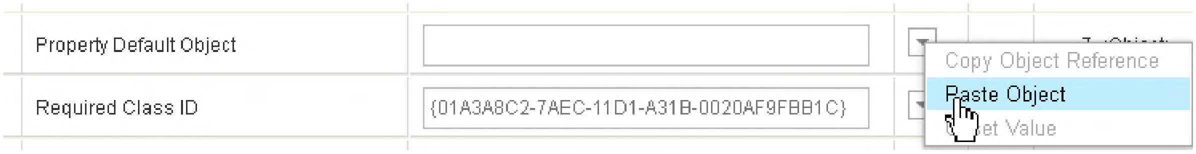
Hint

Be patient: this menu sometimes takes a couple minutes to load. Click the arrow one time and wait. If you are prompted to continue running scripts or stop, select Continue.

Information

The Property Definitions menu on the Properties tab is **not** the same as selecting the Property Definitions tab of the class definition.

3. Select Security Parent OVP from the list. Be sure to select Security Parent OVP, not Security Parent.
4. On the Security Parent OVP Properties page, do the following tasks:
   a. Scroll down to the Property Default Object property.
   b. Click the options arrow to the right of the field, and then select Paste Object.



Hint

If the Paste Object option is inactive, you need to copy the object reference of the Accounts Payable Access document.

   c. Verify that the Property Default Object Value is now *Accounts Payable Access*.

Note

You cannot save the values on the Security Parent OVP Properties page: you must save the changes to the class definition.

5. Select the Accounts Payable class definition tab.
6. Click Save.

Procedure 9: Create test document

With all the preparations in place, you can create a test instance of an accounts payable document and verify that the inherited security is correct. You are logged on to Administration Console for Content Platform Engine.

1. Create a folder in the Root Folder of Finance. Name the folder `Accounts Payable`.
2. Open the folder.
3. In the Accounts Payable folder, Create a document:
   a. Type a name for the document. The document name is unimportant.
   b. Select the Accounts Payable document class.

c. Use any document from Documents\sample documents for content.

d. Complete the wizard by using default values.

4. Click Open.

5. Select the Security tab.

6. Verify that the document has inherited the security settings from the security parent.

Name	Source	Permission Type	Permission Group
Finance Admins	Inherited	Allow	Full Control
Finance Clerks	Inherited	Allow	Major versioning
Finance Managers	Inherited	Allow	Full Control
P8Admins	Default	Allow	Full Control
P8Admin	Inherited	Allow	Major versioning

Procedure 10:(Optional) Observe inherited security changes

Imagine that you have several thousand documents in the accounts payable class. A change to business practices requires that Finance Reviewers must have Major Versioning access to Accounts Payables. You can change the parent document one time, and the security is changed on all child documents. You are signed in to Administration Console for Content Platform Engine as p8admin.

1. Go to Finance > Browse > Root Folder > Security Parents.

2. Open the Properties page of the Accounts Payable Access document.

Hint

If you do not see the document in this folder, click Refresh.

---

3. Change the ACL to give Reviewers the Major Versioning permission group. Be sure to apply this setting to all children, but not the current object.

4. Save your changes to the document.

5. Verify the inherited security changes:

   a. Go to Finance > Browse > Root Folder > Accounts Payable.

   b. Open the properties page for the document in this folder.

   c. On the Security tab, verify that Reviewers have Major Versioning permission. You might need to refresh to see the security update.

6. Log out of Administration Console for Content Platform Engine.

7. Close Firefox.

End of exercise

Exercise review and wrap-up

In this exercise, you completed the following tasks:

- Configure folder inheritance.
- Configure a security parent by using a custom OVP.

Part 5. Optimize Search Performance

Exercise 14. Use searches with bulk actions

Estimated time

00:30

Overview

In this exercise, you create a search with a bulk action to update multiple documents simultaneously. Later, you create a search and use batch operations to update multiple documents.

Objectives

After completing this exercise, you should be able to:

- Use bulk actions to modify multiple documents.

Introduction

Occasionally, you must perform administrative tasks on multiple documents that you can find by searching. You can use bulk actions to complete multiple operations on documents. You can also use batch operations if you already have several documents selected.

Important

Bulk actions are a powerful way to update multiple documents and should be used with caution.

Requirements

You must have access to a student system that is configured for these activities. If you are taking this course as a self-paced virtual course (SPVC), ensure that your student system is started.

System start

To start your system:

1. Open the WebSphere Admin folder on your desktop.
2. Double-click Start Server1.bat.
3. Wait for the command window to close.

For more information about starting, stopping, and verifying the system status, refer to Appendix A, "Start and Stop System Components," on page A-1.

Exercise introduction

Overview

Why is this lesson important?

Changing business needs require that you find and modify the security of many existing documents. For example, you must find many existing documents and file them in a specified folder.

You can use a bulk action that performs these tasks.

Activities

Use Bulk Actions to modify multiple documents, on page 14-3

Practice using bulk actions: Optional challenge, on page 14-10

User accounts

Type	User ID	Password
Operating system	administrator	passw0rd
Security administrator	cn=root	IBMFileNetP8
Marketing manager	Mark	filenet

Note

All passwords are case-sensitive.

14.1. Use Bulk Actions to modify multiple documents

Introduction

In this exercise, you use a search with a bulk action to modify security on existing documents.

Scenario

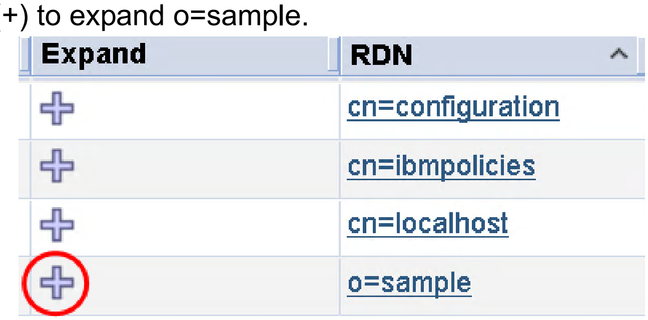
Your company was reorganized. You have a new Marketing team. You must create a new Marketing group and then modify security on marketing documents to provide group members special permissions.

Procedures

Procedure 1: Create the Marketing security group

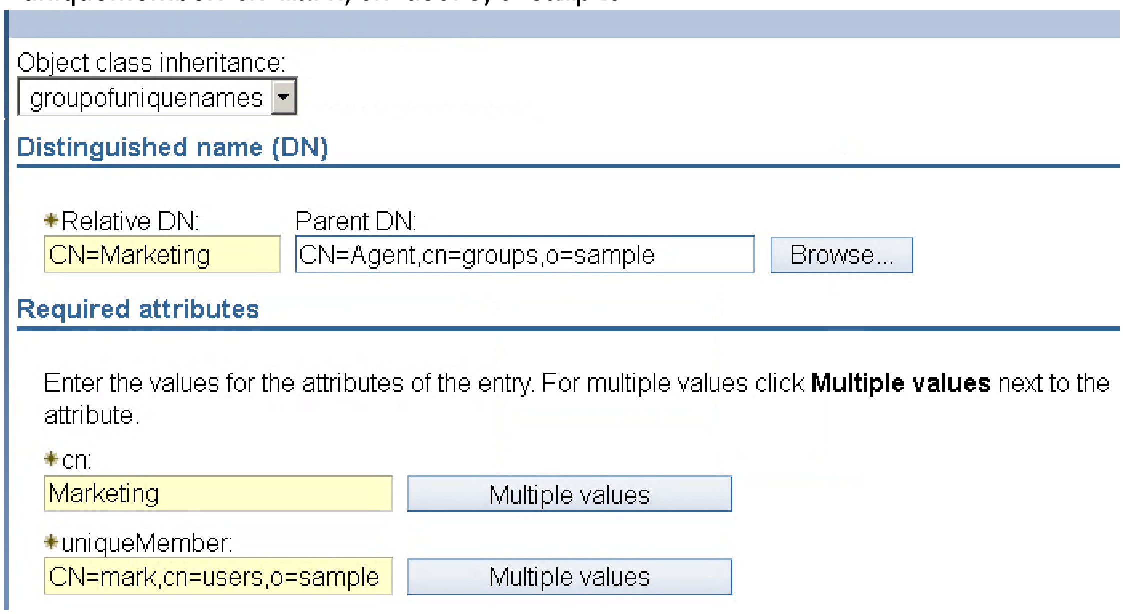
You can create the Marketing group by using Tivoli Directory Server.

1. Use Firefox to go to the Tivoli Directory Server Web Administration Tool:
   - http://localhost:9080/IDSWebApp
2. Sign in to Tivoli Directory Server as root:
   - User DN: `cn=root`
   - Password: `IBMFileNetP8`
3. Click Directory Management > Manage entries.
4. Click the plus sign (+) to expand o=sample.



5. Expand cn=groups.

6. Click Add to add a group.
7. On the Select object class page, do the following steps:
   a. Select groupOfUniqueNames from the Structural object classes menu.
   b. Click Next.
8. On the Select auxiliary object classes page, click Next.
9. On the Required attributes page, enter the following data:
   a. Relative DN: `CN=Marketing`
   b. cn: `Marketing`
   c. uniqueMember: `CN=mark,cn=users,o=sample`



10. Click Next.
11. On the Optional attributes page, click Finish.
12. Click **No** to add a similar entry.
13. Log out of Tivoli Directory Server Web Administration Tool.

Procedure 2: Create a search for marketing materials

1. Use Firefox to log on to Administration Console for Content Platform Engine:
   - URL: http://ecmedu01:9080/acce
   - User name: `p8admin`
   - Password: `IBMFileNetP8`
2. Open Object Stores > Sales.
3. Click Search.
4. Click New Object Store Search.
5. On the Simple View tab, create a search with the following criteria (do not run the search):

- Column: Document Title
- Condition: Starts With
- Value: `Marketing`

Procedure 3: Create and run bulk actions

The search is open. Bulk actions are currently disabled.

1. Click the Bulk Actions tab.
2. Select Enable to enable bulk actions.
3. Scroll down to the Security area.
4. Select the Update security option.
5. Click Add.
6. On the Add Users and Groups page, add the Marketing group:
   a. Type `Marketing` in the search field.
   b. Click Search.
   c. Select the Marketing group.
   d. Move the Marketing group to Selected Users and Groups by using the right arrow.
   e. Click OK.
7. Scroll down to the permissions area to select Add Allow for the following permissions:
   - View all properties
   - Modify all properties
   - View content
   - Link a document/annotate
   - Publish
   - Create an instance
   - Change state
   - Minor versioning
   - Major versioning
   - Read permissions
8. Click Run.

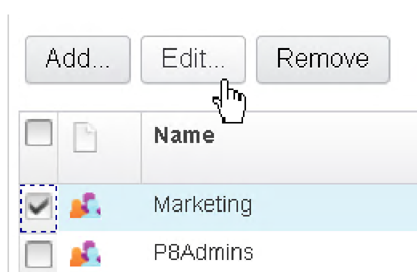
9. Verify that you see an Execute Actions window.

10. Click Close.

Procedure 4: Verify security change

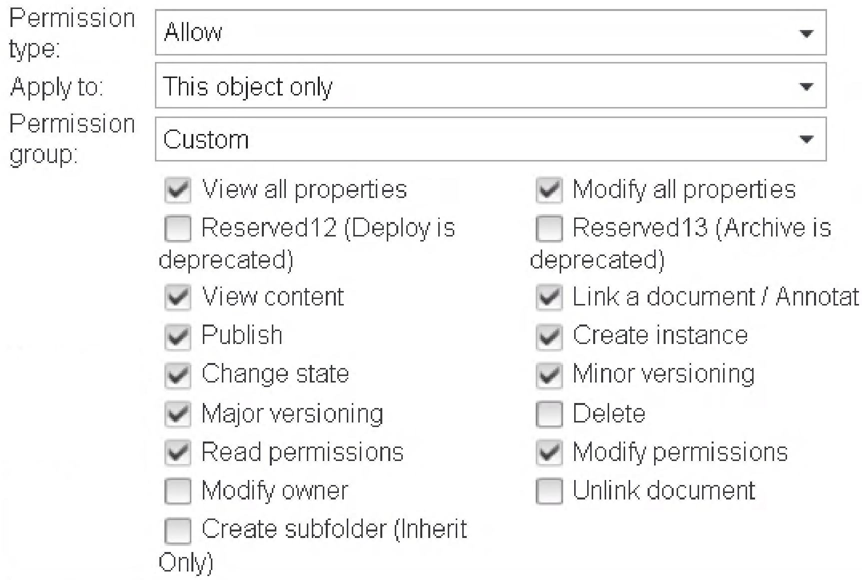
You ran a search that includes a bulk action. The action occurred as the search ran. Inspect one of the documents to ensure that the Marketing group was added to the document. The search tab is open, displaying the search that you recently ran.

1. On the Bulk Actions tab, clear the Enable check box to disable bulk actions.
2. Rerun the search to view the search results.
3. Click the title of one of the documents in the Search Results table.
4. On the document properties page, open the Security tab.
5. Verify that Marketing is now displayed in the Access Control List. If you do not see Marketing, click Refresh.
6. Select the Marketing row.



7. Click Edit.

8. Verify that the permissions match the permissions that you specified for this group in the bulk action.



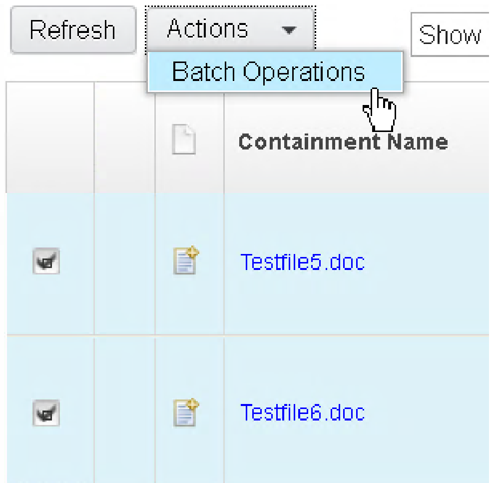
9. Click Cancel.
10. Click Close.

Procedure 5: Use a batch operation to modify security

The bulk action modified all of the documents that the search returned. However, some documents remain that the search did not return. You can use batch operations to provide the Marketing group permissions on the remaining documents. You are logged on to Administration Console for Content Platform Engine as P8admin.

1. In the Sales object store, go to Browse > Root Folder > Marketing.
2. Confirm that the folder contains several documents:
   - Documents that begin with “Marketing” which the bulk action updated.
   - Remaining documents that begin with “Testfile” that remain unchanged.
3. Select all of the documents in the Marketing folder that do not begin with “Marketing.”

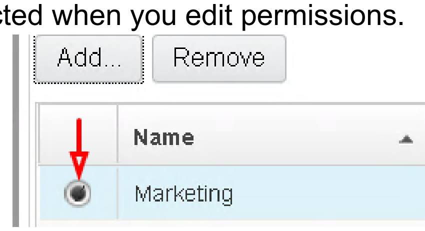
4. Select Actions > Batch Operations.



5. Open the Security tab.
6. Click Add to add the Marketing group.
7. Add the following permissions:
   - View all properties
   - Modify all properties
   - View content
   - Link a document/annotate
   - Publish
   - Create an instance
   - Change state
   - Minor versioning
   - Major versioning
   - Read permissions

Important

Ensure that the group is selected when you edit permissions.

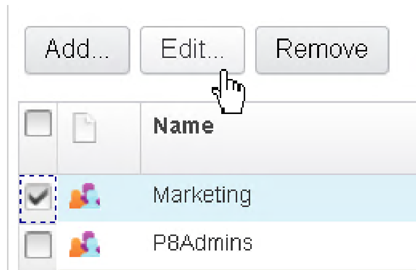


8. Scroll to the bottom to click OK.
9. Click Refresh.

Procedure 6: Verify the security change

You used a batch operation to give the Marketing group access to the remaining documents in the Sales > Marketing folder. You are now going to verify the change. You are logged on to Administration Console for Content Platform Engine as p8admin. The Sales > Marketing folder is open.

1. Click Testfile5.doc.
2. Open the Security tab.
3. Verify that the Marketing group has access to the document.



4. Select the Marketing row and then click Edit.
5. Verify that the Marketing group has the correct permissions.
6. Click Cancel.
7. Click Close.
8. Log out of Administration Console for Content Platform Engine.
9. Close Firefox.

14.2. Practice using bulk actions: Optional challenge

Introduction

Practice the procedures that you learned by completing this exercise.

Scenario

Mark, a member of the Marketing group, has left the company. He has left some documents that are checked out. You must cancel the checkout so that other users can edit these documents.

Challenge

- As the user, Mark, log on to IBM Content Navigator.
- Check out some documents from the Sales object store.
- Use a search with a bulk action that cancels checkout on all of the documents that Mark has left checked out.

Data

- The password for Mark: filenet.

Hints

- Mark can check out only documents to which the Marketing group has major and minor versioning permissions.
- Use the Last Modifier property in your search.
- Use the Version Status = Reservation as a criterion to confine the search to documents that are checked out.
- Refresh the view if you do not see the changes.

Verification

Verify that all of the documents that Mark checked out are no longer checked out.

End of exercise

Exercise review and wrap-up

In this exercise, you did the following tasks:

- Use bulk actions to modify multiple documents.

Exercise 15. Configure a text search server

Estimated time

00:20

Overview

In this exercise, you configure Content Platform Engine to use a text search server to run content-based searches.

Objectives

After completing this exercise, you should be able to:

- Configure a text search server

Introduction

IBM FileNet Content Manager uses a separate product to perform content-based retrieval (CBR) type searches. To enable this feature, you must first configure a text search server to work with the Content Platform Engine. You must also enable CBR searches on the object store and the document classes that you want to make searchable.

Requirements

You must have access to a student system that is configured for these activities. If you are taking this course as a self-paced virtual course (SPVC), ensure that your student system is started.

Exercise introduction

Why is this lesson important?

IBM Content Search Services manages content-based indexing and searching tasks. After IBM Content Search Services is installed, you must configure Content Platform Engine to use it.

Activities

Configure a Text Search Server, on page 15-3

User accounts

	Type	User ID	Password
	Operating system	administrator	passw0rd
	Content Platform Engine administrator	P8Admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

15.1. Configure a Text Search Server

Introduction

In this exercise, you learn how to obtain the Content Search Services authentication token, and then use that token to create a text search server.

Procedures

Procedure 1: Obtain the authentication token

The IBM Content Search Services server uses a security token to identify itself with Content Platform Engine. The authentication token is displayed on the last window of the IBM Content Search Services installation window. Because you did not perform the installation, you do not have that window open. You need to obtain the authentication token by using a command-line request.

1. Open a command prompt by clicking Start > Command Prompt.
2. Change directory to C:\Program Files\IBM\Content Search Services\CSS Server\bin
3. Enter the following command, exactly as shown:

```
configTool printToken -configPath “C:/Program Files/IBM/Content Search Services/CSS Server/config”
```

Note

Use forward slashes (/) in the path.

4. Copy the authentication token from the screen output (the authentication token that you need is indicated by the arrow).

   a. Right-click the command window.
   b. Click Select All.
   c. Press Enter to copy the text to the buffer.

Hint

Do not confuse the security token with the encryption key. The security token in this example is printed on line 5 of the output: `ISzPjZk=`.

The token is case-sensitive.

5. Create a text document on your desktop.
6. Paste the contents of the buffer into this document and save the document. You will use only the security token in the next procedure.
7. Close the command window.

Procedure 2: Create a text search server

You need to register the IBM Content Search Services server with the P8 Domain. You can register the server in Index mode, Server mode, or Index and Server mode. You are going to configure only one server, so it must perform both index and search operations.

1. Use Firefox to log on to Administration Console for Content Platform Engine:
   - URL: http://ecmedu01:9080/acce
   - User name: `p8admin`
   - Password: `IBMFileNetP8`
2. Select the following node: P8Domain > Global Configuration > Administration > Text Search Servers.
3. Click New to create a text search server entry.
4. Name the server:
   a. Enter a display name, such as `CBR Server.`
   b. Click Next.
5. Define the server,
   a. Complete the fields by using the following values:

Property	**Value**
Mode	Dual Index and Search
Status	Enabled
Host Name	ecmedu01
Port	8191
Authentication token	<authentication token>

   b. In the Authentication Token field, paste or type the authentication token that you obtained in the previous procedure.
   c. Click next.
6. Click Finish. Wait for the Success message.

7. Click Open.

Procedure 3: Inspect the text search server

The text search server that you configured in the previous procedure is open.

1. Inspect the text search server configuration.

Field	Notes
Display name	The name that you see in Administration Console for Content Platform Engine.
Description	Descriptive text
Mode	Dual mode runs both indexing and search services. If you have multiple search servers, you can dedicate them to a specific role.
Status	You can disable the status to prevent the submission of index or search requests to the server.
Host name	The computer that hosts the search server.
Port	The default is 8191.
Authentication token	The token is required for setup, but is not shown for security reasons.
Site	Corresponds to the physical location of connected resources.
Affinity Group	You can assign or reassign an affinity group when the server topology changes.

2. Click the Properties tab and review the information that the Properties page provides.

Note

On the Properties tab is a required Text Search Credential field. This property contains the value of the authentication token that you entered when you created the Text Search Server. The field is not actually blank, but the value is hidden.

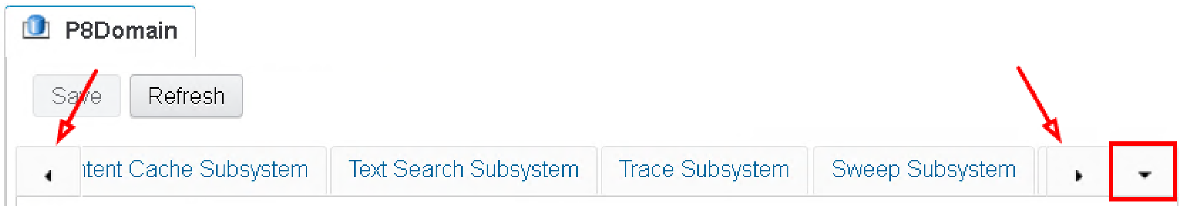
Procedure 4: Verify indexing on P8 Domain

You can configure parameters that govern the way that Content Platform Engine performs content-based retrieval functions at the domain and site levels. Unless otherwise specified, each site inherits the domain level settings.

1. In Administration Console for Content Platform Engine, select the P8 Domain node in the Navigation pane.
2. Open the Text Search Subsystem tab.

Hint

Use the left and right arrows to shift the tabs until you see the Text Search Subsystem tab. You can select the tab directly by using the menu button on the right end of the tab bar.



3. Verify that the Enable indexing check box is checked.
4. Inspect the Searching, Indexing, Extracting, and Schedule areas. These values can be customized to improve performance.

Procedure 5: Verify indexing at the site level

Indexing is enabled at the domain level, but you must ensure that indexing is also either inherited from the domain or configured separately.

1. In Administration Console for Content Platform Engine, go to Global Configuration > Administration > Sites > Initial Site.
2. Open the Text Search Subsystem tab.
3. Verify that the Configuration source has the P8 domain selected.

Note

The Searching, Indexing, Extracting areas have values that are disabled. These values are set at the domain level. If you choose to override them at the site level, they become editable.

4. Log out from Administration Console for Content Platform Engine.

End of exercise

Exercise review and wrap-up

In this lesson you did the following tasks:

- Obtained an authorization token for IBM Content Search Services to communicate with Content Platform Engine.
- Registered IBM Content Search Services with Content Platform Engine as a text search server.
- Inspected the text search server properties.
- Verified that indexing is enabled at the domain and site levels.

Exercise 16. Configure index partitions

Estimated time

00:20

Overview

You can use index partitions to reduce the amount of work that the system does when it searches the database. In this exercise, you select a property to use as an index partition, configure a string property as an index partition, and then configure a date property as an index partition.

Objectives

After completing this exercise, you should be able to:

- Select a property for an index partition.
- Configure a string index partition.
- Configure a date index partition.

Introduction

In this lesson, you configure a string property to be an index partition. In the first activity, you choose a candidate to be an index partition. Select the property for the index partition to optimize search efficiency. In the second activity, you configure a string property to be the partition.

Requirements

You must have access to a student system that is configured for these activities. If you are taking this course as a self-paced virtual course (SPVC), ensure that your student system is started.

Exercise introduction

Why is this lesson important?

Users need to be able to find documents in an object store according to text within the document. Many documents fall into a few categories that vary on a string property. You can make the searches more efficient by creating an index partition.

Activities

Select a property for an index partition, on page 16-3

Configure a string index partition, on page 16-5

Configure a date property index partition: Challenge, on page 16-7

User accounts

	Type	User ID	Password
	Operating system	administrator	passw0rd
	Content Platform Engine administrator	P8Admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

16.1. Select a property for an index partition

Introduction

Selecting a property for an index partition is not a trivial task. A good index partition can improve search efficiency for properties that are often used in searches, but has no effect otherwise. Plan to make the selection before you create the indexes: If you change the index partition later, you must reindex.

Scenario

Users are going to be searching mainly for Product Orders and Service Orders, which both belong to the Orders document class. Users often search by customer_name, customer_id, po_number, product_id (for product orders), and service date (for service orders).

Instructions

Read the notes for each property and then circle the property that would make best candidate for a string index partition. Answers are in Appendix C, "Answers to written exercises," on page C-1.

Property	Notes
Document title	Inherited from the Document class. String data type. Large number of values that are non-unique. Occasionally used in searches.
ID	System property. String data type. Globally unique identifier. Never used in searches.
customer_name	Custom property. String data type. Large number of values that are non-unique. Often used in searches.
customer_id	Custom property. String data type. Large number of values that are unique. Often used in searches.
po_number	Custom property. String data type. Small number of values that are non-unique. Often used in searches.
product_id	Custom property. String data type. Currently unused. Not used in searches.
service_date	Custom property. DateTime data type. Sometimes used in searches.

16.2. Configure a string index partition

Introduction

This procedure shows how to configure an index partition for a string property.

Procedures

Procedure 1, "Change the property settability option," on page 16-5

Procedure 2, "Create the index partition," on page 16-5

Procedure 1: Change the property settability option

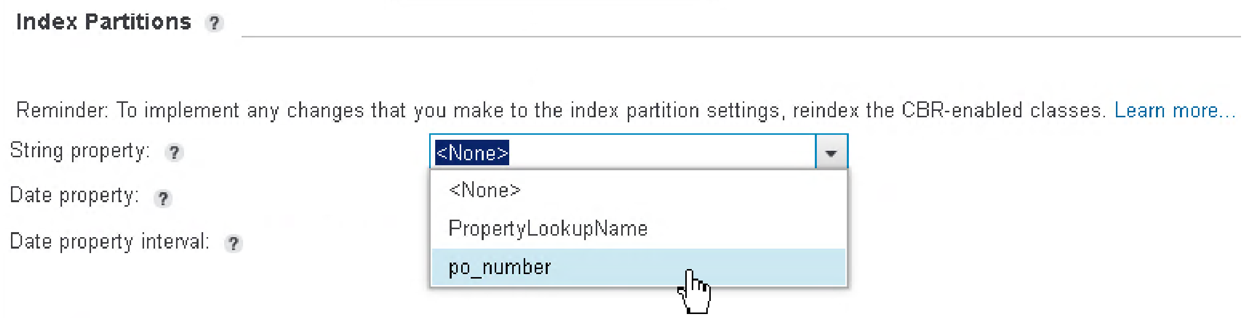
A property must be *Settable only on create* in order to be configured as an index partition. In Administration Console for Content Platform Engine, the *Settable only on create* option is represented by the value 2. You must set this attribute on the property template (not the property definition on a particular class). All classes that use this property template are indexed with this partition.

1. Use Firefox to log on to Administration Console for Content Platform Engine:
   - URL: http://ecmedu01:9080/acce
   - User name: `p8admin`
   - Password: `IBMFileNetP8`
2. Go to the Sales object store > Data Design > Property Templates.
3. Click the po_number property link to open the property template.
4. Open the Properties tab.
5. Change the Settability value to 2.
6. Click Save.
7. Close the po_number tab.
8. Close the Property Templates page. The Sales object store page is left open.

Procedure 2: Create the index partition

1. On the Sales object store page, open the Text Search tab.

2. In the Index Partitions area, select po_number for String property.



3. Click Save.
4. Log out of Administration Console for Content Platform Engine.
5. Close the browser.

16.3. Configure a date property index partition: Challenge

Introduction

In this exercise, you practice the steps to create an index partition. You can have only one string property partition and one date property partition for each object store. You must create a date property partition.

Scenario

Customer service representatives often search for service orders by using the service_date property.

Challenge

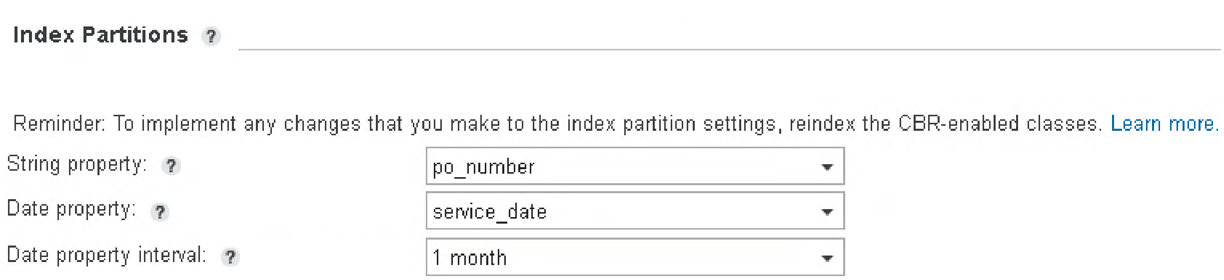
Create an index partition based on the service_date property. Set the Date property interval to 1 month.

Data

Property	Value
Object store	Sales
Property	service_date
settability	2
Date property interval	1 month

Verification

Your Text Search page Index Partitions section must show the following field values:



End of exercise

Exercise review and wrap-up

In this exercise, you did the following tasks:

- Select a property for an index partition.
- Configure a string index partition.
- Configure a date index partition.

Exercise 17. Create content-based indexes

Estimated time

00:40

Overview

In this exercise, you create an index area and then enable content-based searches on a document class. Afterward, you create an index job, which begins the process of indexing the content on the object store. You then optimize CBR queries by configuring the Dynamic Switching option.

Objectives

After completing this exercise, you should be able to:

- Configure CBR
- Configure an index area.
- Check indexing logs.
- Reindex.
- Optimize CBR queries.

Introduction

In this lesson, you learned how users can search the object store by creating searches based on words from within the content elements. These content-based retrieval searches require the content of all searchable documents to be indexed. You must create that index.

Requirements

You must have access to a student system that is configured for these activities. If you are taking this course as a self-paced virtual course (SPVC), ensure that your student system is started. A text search server must be installed and configured on the P8 Domain.

Exercise introduction

Overview

Why is this lesson important?

Users must be able to find documents in an object store by using text within the document. Many documents fall into a few categories that vary on a string property. You can make the searches more efficient by creating an index partition.

Activities

User accounts

	Type	User ID	Password
	Operating system	administrator	passw0rd
	Content Platform Engine administrator	P8Admin	IBMFileNetP8
	User	Charles	filenet

Note

Passwords are always case-sensitive.

17.1. Configure CBR

Introduction

In this exercise, you create and configure a content-based index area.

Procedures

Procedure 1: Create an index area

The index area must be created in a file system location. The folder location must exist before you can create the index area. The IBM Content Services Server user must have full access to the folder. The IBM Content Services Server user is P8Admin. If P8Admin has insufficient permissions on this folder, the index area creation process fails.

1. Create the following folder: `C:\Indexes`.
2. Ensure that the folder allows the CSS Server account user full access:
   a. Right-click C:\Indexes and select Properties.
   b. Open the Security tab.
   c. Click Edit.
   d. Click Add.
   e. Type P8Admin and then click Check Names. Verify that the name ECMEDU01\P8Admin is displayed.
   f. Click OK.
   g. Select the check box for to allow P8Admin Full control of this folder.
   h. Click OK to save your changes.
   i. Click OK to close the folder properties page.

3. Use Firefox to log on to Administration Console for Content Platform Engine:
   - URL: http://ecmedu01:9080/acce
   - User name: `p8admin`
   - Password: `IBMFileNetP8`
4. Go to Sales > Administrative > Index Areas.
5. Click New.
6. Name the Index Area
   a. Type `Sales Index Area` in the Display Name field. The name that you choose is unimportant but lesson activities refer to this name.
   b. Click Next.
7. Configure the Index Area:
   a. In the Root directory field, type `C:\Indexes`.
   b. Click Next.
8. On the Summary page, click Finish.
9. Wait for confirmation of success.
10. Click Open to inspect the values.

Note

The index area is currently in the Open state. You can change the state from here if you need to. You cannot change the state to Full. However, you can set the Maximum index count to some number greater than zero so that when that limit is reached, the index status changes to Full. You can have another index in Standby mode so that it can be opened when the previous index is full.

---

11. Close the Sales Index Area page.

Procedure 2: Enable IBM Content Search Services on the object store

You must enable IBM Content Search Services at the object store level before you can use it for indexing. The Sales object store is open in Administration Console for Content Platform Engine.

1. Open the Text Search tab for the Sales object store.
2. Select the Indexing Language:
   a. Scroll down the Available Languages list.
   b. Select en (for English).
   c. Click the arrow button to move the language to Selected Languages.
   d. Click Save.
3. Place a check mark in the *Enable IBM Content Search Services* option.
4. Click Save.

5. Click Refresh to ensure that the changes are saved.

Procedure 3: Enable CBR on the document class

You must enable content-based retrieval (CBR) on a document class. You can enable this option on the root Document class if you want, but if you can more selectively specify only subclasses that need to be indexed, you can shorten the indexing time.

The Sales object store page is open in Administration Console for Content Platform Engine.

1. Select Data Design > Classes > Document > Product.
2. On the General tab, scroll down the page until you see the *CBR enabled* check box.
3. Place a check mark in the *CBR enabled* check box.
4. Click Save to save your changes for the document class.

Procedure 4: Create an index job

Indexing is now configured on the Sales object store for the Product document class. The index does not exist until you initiate an index job. When you create an index job, the system creates the index.

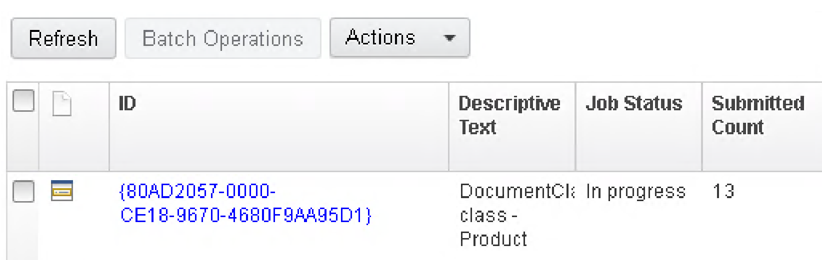
The Product document class definition is open in Administration Console for Content Platform Engine.

1. Click Actions > Index Class for Content Search (include subclasses).
2. Click OK to close the message that informs you that the system created an index job.

Procedure 5: View the index job progress

The index job is started. You can view the progress of the index job.

1. Go to Sales > Administrative > Index Jobs Manager.
2. Click Refresh if you see no index jobs.
3. Click Refresh until your index job status changes to *Terminated Normally*. If it is *Pending* or *In Progress*, wait a few minutes and then click Refresh again.



Note

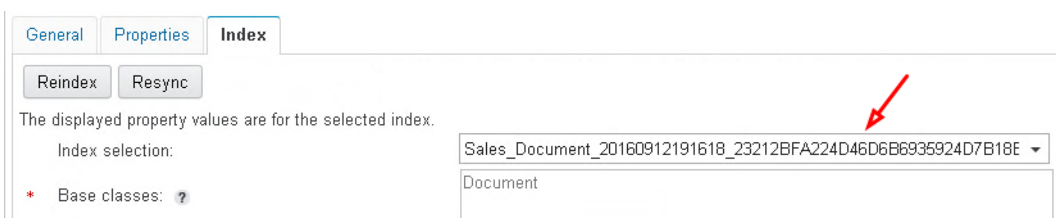
Indexing can take several minutes. On a production system, the index job might take several hours, so you must plan the index job to run when the system resources are not in high demand.

You might see a different submitted count number than what is shown in the screen capture.

Procedure 6: View the index properties

When the indexing job completes, the index area contains an index. You are going to view the index properties.

1. Go to Sales > Administrative > Index Areas > Sales Index Area.
2. Open the Index tab.
3. Verify that the Index Selection field contains a value:



Hint

If you do not see an index, click Refresh.

4. Log out of Administration Console for Content Platform Engine.
5. Close Firefox.

Procedure 7: View the index in the file system

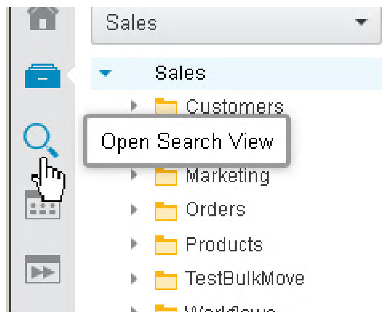
The index job created an index. You can view the index properties from the Index Area node. You can also verify the index area by going to the location in the file system.

1. Using Windows Explorer, open C:\Indexes
2. Verify that C:\Indexes contains a new subfolder that begins Sales_Document_XXX, where XXX is a long string of alphanumeric characters.
3. Explore the contents of this folder. Most of the files cannot be opened with standard viewing tools.

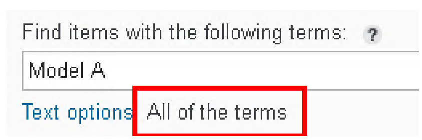
Procedure 8: Create a content-based search

Test content-based retrieval by creating a content-based search.

1. Use Firefox to log on to IBM Content Navigator as Charles
   - User name: `Charles`
   - Password: `filenet`
2. Open the Search page.



3. Click New Search.
4. Type `Model A` in the *Find items with the following terms* field.
5. Change the text options:
   a. Click Text options.
   b. Select the *All of the terms* option.
   c. Click OK.



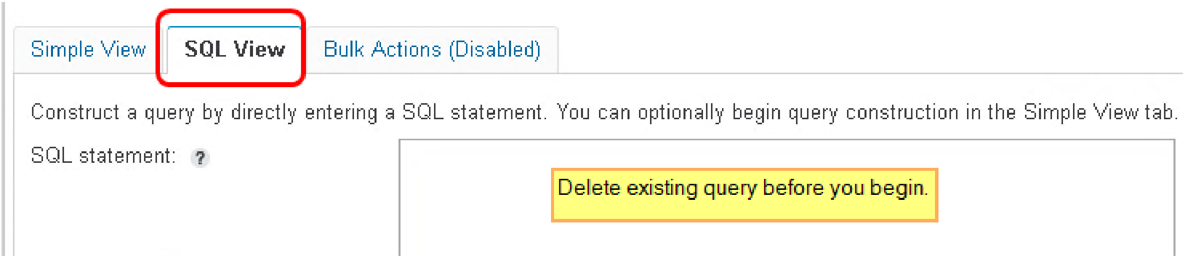
6. Click Search (you might need to scroll down to see the button).
7. Verify that the search returned a few documents.
8. Open one of the documents to verify that it contains the term *Model A*.
9. Log out from IBM Content Navigator.

Procedure 9: Create a search by using an SQL query

You might need to create an SQL query for administrative purposes.

1. Use Firefox to log on to Administration Console for Content Platform Engine:
   - URL: http://ecmedu01:9080/acce
   - User name: `p8admin`
   - Password: `IBMFileNetP8`
2. Go to Object Stores > Sales > Search.
3. Click New Object Store Search.
4. Open the SQL View tab.

5. Delete the contents of the SQL statement field.



6. Enter the following SQL statement exactly as shown:

```
SELECT d.This
FROM Document d
INNER JOIN ContentSearch c ON d.This =
c.QueriedObject
WHERE CONTAINS(d.*,'Model AND A')
```

7. Save the search:

   a. Click Save As.

   b. Save the search as `Model Content Search`.

   c. Click OK to save.

8. Click Run.

9. Review the results.

If the result is...	Then...
The query finds and displays objects.	Review the returned object names.
The query produces an error.	1. Read the error message carefully. 2. Correct any errors in your query syntax. 3. Save the query. 4. Rerun the query.

5. Log out of Administrative Console for Content Platform Engine.

6. Close Firefox.

17.2. Configure an index area: Optional challenge

Introduction

You created an index area and a full-text index using the procedures in this lesson. Now you are going to practice what you learned.

Scenario

Users must search for service orders. You need to index the ServiceOrder class so that users can find service orders based on their content.

Data

ServiceOrder is a subclass of the Order document class in the Sales object store.

Challenge

Enable the ServiceOrder class for CBR.

Create an index job for the ServiceOrder index.

Verification

Use the Index Jobs Manager to verify that the index job for the ServiceOrder class terminates normally.

17.3. Check indexing logs

Introduction

Index jobs sometimes generate errors when documents fail to be indexed. The error messages contain enough information for you to find the problem document and identify the cause of the error. When an index job completes, review the log file to see whether any problems occurred.

Procedures

Procedure 1, "Check indexing entries in the log file," on page 17-10

Procedure 1: Check indexing entries in the log file

1. Find the FileNet P8 server log files:
   a. Using Firefox, go to the Content Engine Ping Page: http://ecmedu01:9080/FileNet/Engine
   b. Find and then copy the Log File Location path.
   c. Use the Log File Location to find the p8_server_error.log.
2. Right-click to edit the p8_server_error.log file with Notepad++.
3. Scroll to the bottom of the log file.
4. Look for any errors or warnings.
   - If you find this log entry, read the entry and verify that you can identify the reason for the error.
   - If you do not find any errors or warnings, continue to the next exercise.

17.4. Reindex: Optional challenge

Introduction

You can change the status of an index area and an index itself by changing the options in the index area General and Index tabs. You can use these controls to recover from data corruption errors.

Important

You must have completed Configure an index area: Optional challenge, on page 17-9 in order to complete this challenge.

Scenario

The ServiceOrder class contains only images, not indexable documents. The attempt to index this class causes errors in the log file. You must disable CBR on this class in order to prevent indexing errors.

Additionally, data corruption occurred. The index in Sales Index Area is failing.

Challenge

- Disable CBR on the ServiceOrder class.
- Set the full-text index to Unavailable.
- Reindex the index area.

Hints

You can use the Reindex button on the Index tab to reindex.

You must shut down Content Platform Engine to delete the p8_server_error.log file.

Verification

After the index job completes, verify that the full-text index resource status is Open.

Review the P8_Server_error.log file. Verify that the reindex operation completed without errors.

17.5. Configure CBR query optimization options

Introduction

In this lesson, you configure the CBR Query Optimization option for dynamic switching between CBR-first searches and DB-first searches.

Procedures

Procedure 1, "Set the CBR Query Optimization options," on page 17-12

Procedure 1: Set the CBR Query Optimization options

1. Use Firefox to log on to Administration Console for Content Platform Engine:
   - URL: http://ecmedu01:9080/acce
   - User name: `p8admin`
   - Password: `IBMFileNetP8`
2. Open the Sales object store.
3. Open the Query tab.
4. In the CBR Query Optimization area, select the Dynamic Switching option.
5. Read the message, then click OK.
6. In the Excessive full-text search hits threshold, type `1000`.
7. Requests for ranked results, select *Grant never*.
8. Click Save.
9. Log out of Administration Console for Content Platform Engine.

End of exercise

Exercise review and wrap-up

In this lesson you did the following tasks:

- Configure CBR
- Configure an index area.
- Check indexing logs.
- Reindex.
- Optimize CBR queries.

Part 6. Migrate Applications

Exercise 18.Place holder

Estimated time

00:00

Overview

No hands on lab for this lesson.

Objectives

None

Exercise 19. Plan and prepare for application migration

Estimated time

00:55

Overview

In this exercise, you complete one-time configuration setup tasks to prepare the Sales application for migration and deployment to the destination environment.

Objectives

After completing this exercise, you should be able to:

- Verify object store Add-ons.
- Create a deployment tree.
- Create source and destination environments.
- Extract destination environment half maps.

Exercise Introduction

Introduction

In this exercise, you:

- Run one-time configuration tasks in FileNet Deployment Manager:
  - Verify that the object store Add-ons are compatible between the source and destination environment.
  - Create a deployment tree.
  - Create a source environment.
- Create a destination environment.
- Extract the destination environment half maps.

Activities

- "Run one-time configuration setup tasks" on page 19-4
- "Challenge: Create a destination environment" on page 19-10
- "Extract destination environment half maps" on page 19-11

User accounts

Type	User ID	Password
Administrator	p8admin	IBMFileNetP8

Before you begin

Important

You must complete these tasks before you start the lesson exercises.

Start the student system:

To log in to the student system.

- Username: `Administrator`
- Password: `passw0rd`

Follow the instructions in Procedure 1 and 2 of Appendix A to start the system components. "Start and Stop System Components" on page A-1.

Create an object store for the destination environment:

At a customer site, the development system and the UAT system would be two distinct FileNet P8 domains. Unfortunately the lab image is restricted to just one FileNet P8 domain. To demonstrate the deployment process, you create a new object store, Sales_UAT, to take the role of the destination environment.

1. Open the Administration Console for Content Platform Engine (ACCE).
   a. Open a Mozilla Firefox window.
   b. Go to the URL, `http://ecmedu01:9080/acce`.

Hint

A bookmark, ACCE is created for your convenience.

---

   c. Log in with an account that has administrative rights on the FileNet P8 domain:
      - User name: `P8Admin`
      - Password: `IBMFileNetP8`

2. On the left navigation pane, right-click Object Stores > New Object Store.
   a. Use the following data to complete the wizard. Click Next to advance to the next page. Accept defaults for values that are not specified in the table.

Page	Field	Value
Name the Object Store	Display Name	SalesUAT
Define the Database	Database connection	FNOSDS
	Schema name	SalesUAT
Select the Type of Storage Area for Content	Storage area type	Database
Grant Administrative Access	Administrators	p8admin Sysadmins
Grant Basic Access	basic users	Clerks
Select Add-ons	click Workplace/Workplace XT Configuration	

   b. Review the Summary window. Verify that you see 11 Add-ons listed.
   c. Click Finish.
   d. On the Success screen, click Close.

Hint

If you get an error that the database tables exist, repeat step 2 and make sure to enter the schema name on the Define the Database page.

---

3. Log out and close the browser window.

19.1. Run one-time configuration setup tasks

Introduction

In this activity, you run one-time configuration setup tasks that are required to prepare the Sales application for migration and deployment to the destination environment.

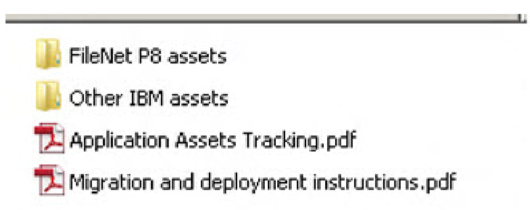
Procedures

Procedure 1: Explore the Sales Application package

The Solution Builder provided you with the Sales Application package. You need to extract the package and review the information included.

1. Use Windows Explore to locate the Sales Application package:
   a. Go to the path, `C:\Labs\FileNet Content Manager 5.2.1 Administration`
   b. Extract the file, Sales Application.zip, to:

   `C:\Labs\FileNet Content Manager 5.2.1 Administration`
2. Explore the contents of the Sales Application package:
   a. Change directories to the uncompressed folder.
   b. You see:



   c. The folder, FileNet P8 assets is empty. You add assets to this folder in a later exercise.
   d. The folder, Other IBM assets, contains the export of the, IBM Content Navigator, Sales desktop.
   e. The file, Application Assets Tracking.pdf, is a spreadsheet that lists the assets of the Sales Application. You explore the file in the next exercise.
   f. Explore the Migration and deployment instructions:
      - Open the file, Migration and deployment instructions.pdf.
      - Take a few minutes to read through the instructions. You do many of the steps listed in later exercises.

Procedure 2: Verify object store Add-ons

The object store add-on features must be compatible between the source environment and the destination environment. In other words, object store add-on features installed in the source object store that the application assets reference, must be installed in the destination environment.

1. Start Administration Console for Content Platform Engine (ACCE).
   a. Open a Mozilla Firefox window.
   b. Go to the URL, `http://ecmedu01:9080/acce`.

Hint

A bookmark, ACCE is created for your convenience.

---

   c. Log in with an account that has administrative rights on the FileNet P8 domain:
      - User name: `p8admin`
      - Password: `IBMFileNetP8`
2. Check object store add-on features for the source object store.
   a. On the left navigation pane, expand Object stores, if necessary.
   b. Right-click the object store, Sales, and select Install Add-on Features.
      - On the lower half of the display, the installed add-on features are listed.
      - You should see 8 listed:

Installed add-on features
`5.2.1 Base Content Engine Extensions`
`5.2.1 Process Engine Extensions`
`5.2.1 Base Application Extensions`
`5.2.1 Stored Search Extensions`
`5.2.1 Workplace Base Extensions`
`5.2.1 Workplace Template Extensions`
`5.2.1 Workplace XT Extensions`
`5.2.1 Teamspace Extensions`

   c. Click Cancel.

3. Check object store add-on features for the destination object store.
   a. On the left navigation pane, right-click the object store, SalesUAT, and select Install Add-on Features.
   b. Verify that 7 of the 8 Add-on features that are installed in the Sales object store, are installed in the SalesUAT object store.
      - The 5.2.1 Teamspace Extensions does not exist in SalesUAT.

        Since the Sales application assets do not include any teamspaces, you can leave this add-on feature uninstalled. For this exercise, you install the add-on feature.
   c. In the upper table of the Install- Add-on Features page, select the feature, 5.2.1 Teamspace Extensions.
   d. Click OK.
   e. Click OK on the success window.

Information

You can have more add-on features in the destination object store than the source object store.

---

4. Log out of the Administration Console and close the browser window.

Procedure 3: Create a deployment tree

In this procedure, you start FileNet Deployment Manager and create a deployment tree.

1. Start FileNet Deployment Manager.
   a. Start > All Programs > IBM FileNet P8 Platform > FileNet Deployment Manager.
   b. The Select Deployment Tree Location window displays (it can take a few seconds for the window to display).
2. Create a deployment tree:
   a. To the right of the Deployment Tree selection box, click Browse.
   b. Select Local Disk C:
   c. Click Make New Folder and name it, FDM-Deploy.
   d. Click Return.
   e. Click OK.
   f. Click Ok to close the Select Deployment Tree Location window.
   g. FileNet Deployment Manager opens. You see two nodes, **Environments** and **Source-Destination Pairs**.

3. Review the deployment tree folder structure.
   a. Open a Windows Explorer window and browse to C:\FDM-Deploy.
   b. Notice the folders that were created when you created the deployment tree.

Note

The folders are all empty since in a new deployment tree.

   c. Minimize the Windows Explorer window.
   d. Leave FileNet Deployment Manager open for the next procedure.

Procedure 4: Create a source environment

In this procedure, you create a source environment in FileNet Deployment Manager.

1. In FileNet Deployment Manager, on the left navigation pane, right-click the Environments node and select New > Environment.
2. Type `Sales_Dev` in the name field.
3. Click Finish.
4. Maximize the Windows Explorer window to explore the changes to the deployment tree, C:\FDM-Deploy.
   a. Expand the Environments folder.
   b. Select Sales_Dev.
   c. Notice the files created and the Assets folder.

Note

You work with these files in later exercises.

5. Open the file, C:\FDM-deploy\Environments\Sales_Dev\EnvironmentConfig.xml, with Notepad++. If you get a prompt that a newer version of Notepad++ is available, click Cancel.
   a. Notice the <Connection target = “p8” use = “yes”> tag, and note the series of empty tags contained.

Information

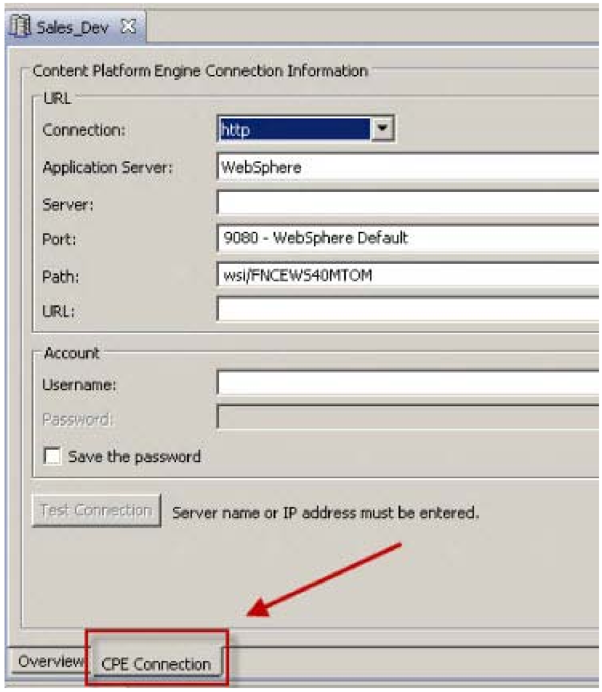
The environment exists, but it does not have any configuration data.

   b. Minimize Notepad++.
   c. Minimize the Windows Explorer window.

6. Configure the Content Platform Engine Connection.

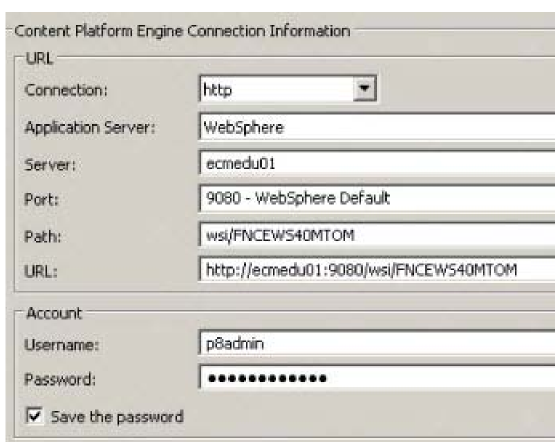
   a. In FileNet Deployment Manager, right-click the node, Sales_Dev, and select Open.

   b. FileNet Deployment Manager opens the environment to the CPE Connection tab because it detects that the connection is not configured.



   c. Complete the CPE Connection configuration.

      - In the Server field type: `ecmedu01`.
      - In the Account section, select the box, Save the password.
      - In the user name field, type `p8admin`.
      - In the Password field, type `IBMFileNetP8`.



   d. Save your entries.

      - File > Save.

e. Click Test Connection.

- You should see, Successfully Connected, to the right of Test Connection.

7. Maximize the Notepad++ window and click Yes to update the file, EnvironmentConfig.xml.

   a. Notice that the tags, under the <Connection target = “p8” use = “yes”> tag, are no longer empty, they contain the CPE connection information that you configured.

   b. Close the file, EnvironmentConfig.xml.

   c. Close Notepad++.

8. In FileNet Deployment Manager, close the Sales_Dev tab.

9. Leave FileNet Deployment Manager open for the next activity.

19.2. Challenge: Create a destination environment

Scenario

You are preparing to migrate the FileNet P8 assets of the Sales application. FileNet Deployment manager requires that you have a source and destination environment defined. You need to create a destination environment.

Typically, the source and destination environments are different FileNet P8 Domains. You do not have two domains on your student system. You use a second object store as the destination environment.

Important

You must complete this task to continue with the remaining exercises.

Data

Item	Value
Server	`ecmedu01`
Save the password	select
User name	`p8admin`
Password	`IBMFileNetP8`

Challenge

- Use FileNet Deployment Manager to create a destination environment, `Sales_UAT`, in the deployment tree, C:\FDM-Deploy.
- Use the data provided to Configure the CPE Connection.
- Close the Sales_UAT tab after you successfully test the connection.

Verification

- You should see two environment nodes listed under the node, Environments, in FileNet Deployment Manager, in the deployment tree, C:\FDM-Deploy.

- Explore the environment, Sales_UAT, folder structure with Windows Explorer.

19.3. Extract destination environment half maps

Introduction

In this activity, you extract the object store and security principal data half maps for the destination environment.

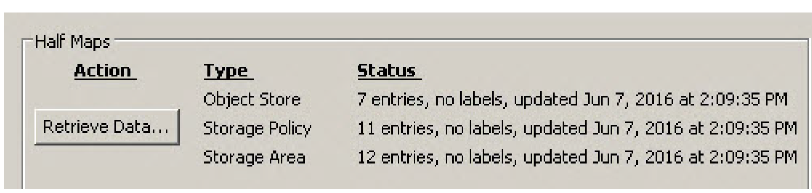
Procedures

Procedure 1, "Extract the object store data half map," on page 19-11

Procedure 2, "Extract the security principal data half map," on page 19-12

Procedure 1: Extract the object store data half map

1. Make sure you are in FileNet Deployment Manager. On the left navigation pane, double-click the Sales_UAT environment to open it.
   a. Make sure the **Overview** tab, at the bottom of the screen is selected.
2. Click the first Retrieve Data, to retrieve the object store data.
   a. Select, From Content Platform Engine, click Next.
   b. Select the two Options:
      - Retrieve storage policies for each object store.
      - Retrieve storage areas for each object store.
   c. For Mode, accept the default, **Merge retrieved data with existing half map**.
   d. Click Finish.
   e. Click OK to close the success confirmation window.
3. You should see:

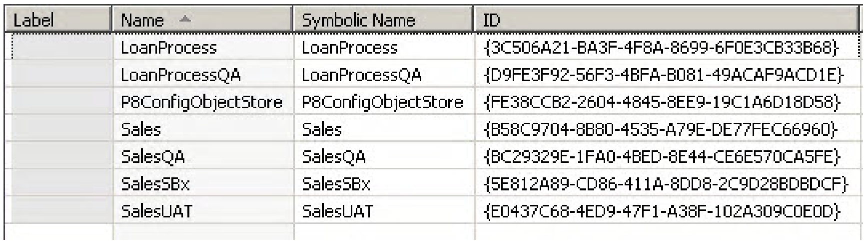


Note

You might have more entries than are shown in the screen capture.

4. Verify the object store data:
   a. Expand the Sales_UAT node in the navigation pane.
   b. Right-click the node, Object Store Data, select open.

c. You see a list of the object stores configured.



Label	Name	Symbolic Name	ID
	LoanProcess	LoanProcess	{3C506A21-BA3F-4F8A-8699-6F0E3CB33B68}
	LoanProcessQA	LoanProcessQA	{D9FE3F92-56F3-4BFA-B081-49ACAF9ACD1E}
	P8ConfigObjectStore	P8ConfigObjectStore	{FE38CCB2-2604-4845-8EE9-19C1A6D18D58}
	Sales	Sales	{B58C9704-8B80-4535-A79E-DE77FEC66960}
	SalesQA	SalesQA	{BC29329E-1FA0-4BED-8E44-CE6E570CA5FE}
	SalesSBx	SalesSBx	{5E812A89-CD86-411A-8DD8-2C9D28BDBDCF}
	SalesUAT	SalesUAT	{E0437C68-4ED9-47F1-A38F-102A309C0E0D}

Note

You might have more entries than are shown in the screen capture.

Procedure 2: Extract the security principal data half map

Before retrieving the users and groups for a destination environment, planning must take place to decide what users and groups are used in the destination environment.

For this procedure, the following table outlines the users and groups to be used for the two environments.

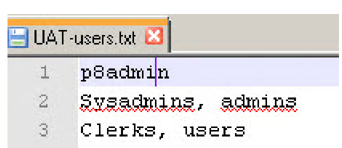
User and group accounts

Source Environment	Destination Environment	Label
p8admin	p8admin	
p8admins	Sysadmins	admins
p8users	Clerks	users

1. Create a filter Label File.

   a. Use Notepad or Notepad++ to create a text file, C:\FDM-Deploy\UAT-users.txt.

   b. Add the users and groups listed under the **Destination Environment** column, in the table. Add the corresponding label, separated by a comma. One entry per line.



   c. Save the file.

   d. Close the text editor.

2. Click the Sales_UAT tab to return to the Sales_UAT properties page.

3. Retrieve Security Principal Data:

   a. Click the second Retrieve Data.

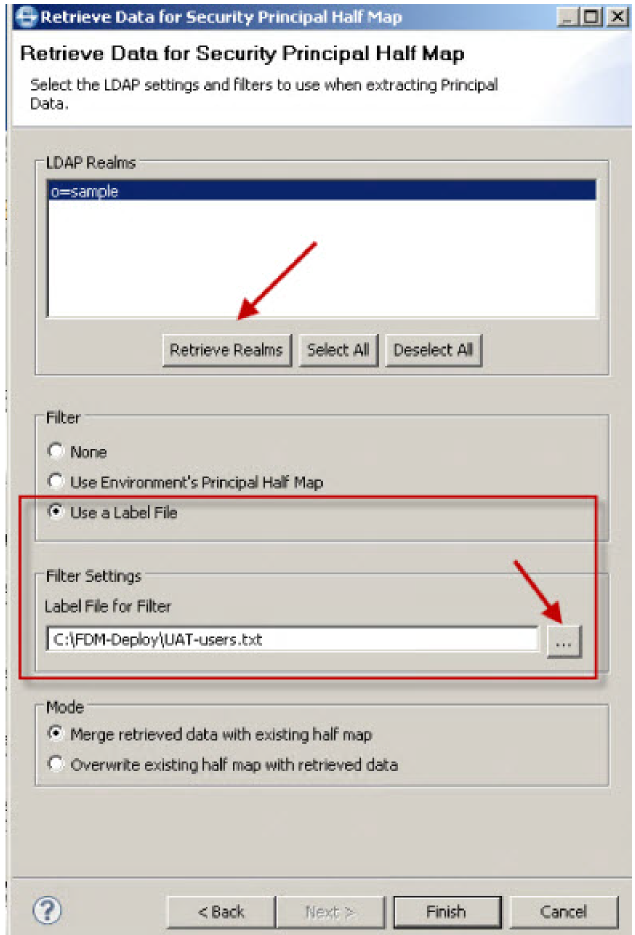
   b. Select the option **From Content Platform Engine's LDAP Provider**, click Next.

   c. Click **Retrieve Realms**.

- You see the realm, o=sample selected>

  All the LDAP realms that are configured in the FileNet P8 domain are listed. In this FileNet P8 domain, only one realm exists.

d. In the Filter section, select **Use a Label File**, browse to C:\FDM-Deploy\UAT-users.txt.



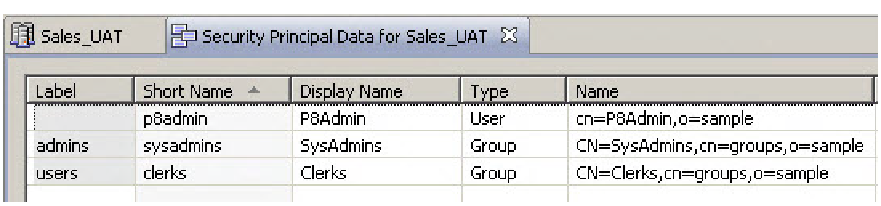
e. Click Finish.

f. Click OK to close the success confirmation window.

4. Verify the security principal data half map:

   a. On the navigation pane, under the Sales_UAT environment, double-click the node, Security Principal Data.

5. You see a list of security principals retrieved.



Label	Short Name	Display Name	Type	Name
	p8admin	P8Admin	User	cn=P8Admin,o=sample
admins	sysadmins	SysAdmins	Group	CN=SysAdmins,cn=groups,o=sample
users	clerks	Clerks	Group	CN=Clerks,cn=groups,o=sample

Note

Notice how the labels are automatically set, based on the entries in the label file.

6. Close FileNet Deployment Manager.

Exercise review and wrap-up

In this exercise, you completed the following tasks:

- Verify that the object store Add-ons are compatible between the source and destination environment.
- Run one-time configuration tasks in FileNet Deployment Manager:
  - Create a deployment tree.
  - Create a source environment.
  - Create a destination environment.
- Extract the destination environment half maps.

Information

The tasks to create the destination environment and extract the destination environment half maps, can be completed later, but they must be completed before converting the assets. If the tasks are run later, planning for the tasks, should be completed during the Planning and Preparation Phase.

Exercise 20. Export the application assets

Estimated time

00:65

Overview

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

Objectives

After completing this exercise, you should be able to:

- Export the FileNet P8 assets of the Sales Application.
- Export an IBM Content Navigator desktop.

Exercise Introduction

Introduction

In this exercise, you export the Sales application assets. You complete the activities to:

- Export the FileNet P8 assets of the Sales Application.
- Export an IBM Content Navigator desktop.

Activities

- "Export the FileNet P8 application assets" on page 20-3
- "Challenge: Extract the Service Data half map" on page 20-11
- "Challenge: Create a deploy package" on page 20-12
- "Export an IBM Content Navigator desktop" on page 20-14

User accounts

Type	User ID	Password
Administrator	p8admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

20.1. Export the FileNet P8 application assets

Introduction

In this activity, you export the FileNet P8 assets of the Sales Application. You:

- Explore the assets that comprise the Sales Application and review the Migration and Deployment documentation.
- Use FileNet Deployment Manager to create an export manifest, add the application assets, and export the data to a deploy data set.
- Create the source environment half maps by using the data in the deploy data set.

Procedures

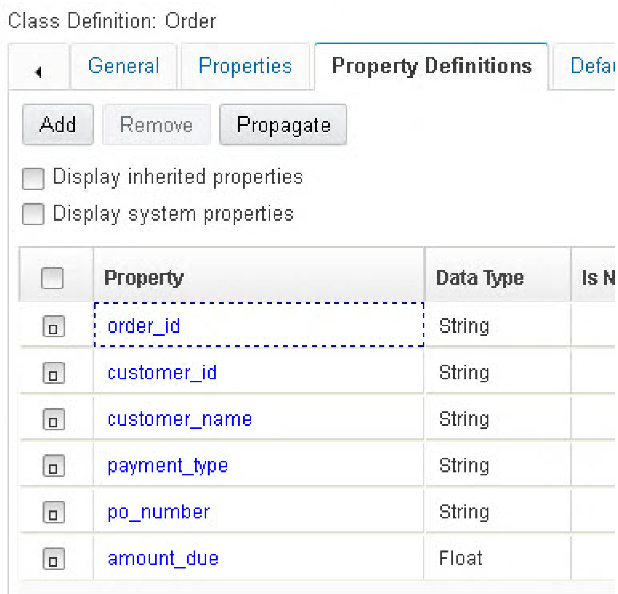
Procedure 1: Explore the Sales application assets

The Sales Application package includes an Application Assets Tracking spreadsheet for the Sales Application. You use the spreadsheet to explore the Sales Application assets that you need to export.

1. Open the Application Assets Tracking spreadsheet:
   a. Change directories to:

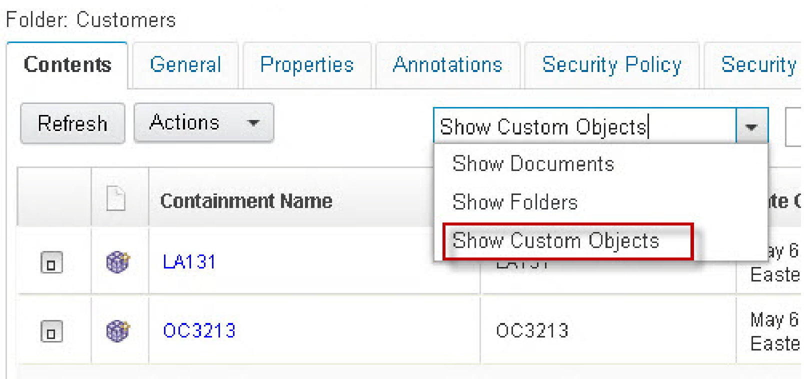
      `C:\Labs\FileNet Content Manager 5.2.1 Administration\Sales Application`
   b. Open the file, Application Assets Tracking.pdf.
   c. You see two types of FileNet P8 assets, Orders, and Customers.
   d. Read the description and dependencies for each row.
   e. Minimize the spreadsheet.
   f. In the next steps, you explore the FileNet P8 assets in the Sales object store.
2. Start the Administration Console for Content Platform Engine.
   a. In your browser, go to `http://ecmedu01:9080/acce`
   b. Log in as the `P8admin` user (password: `IBMFileNetP8`).
3. Open the Sales object store.

4. Explore the Orders folder
   a. In the left navigation pane, expand Browse > Root Folder.
   b. Select the Orders folder to open it.
   c. On the Contents tab, you should see a list of documents, of three different classes; Order, ProductOrder, and ServiceOrder.
5. Explore the Order Class.
   a. In the left navigation pane, expand Data Design > Classes > Document
   b. Select Order to open it.
   c. Select the Property Definitions tab, you should see six property definitions.



6. Explore the Order subclasses:
   a. On the navigation pane, expand the class, Order.
   b. Explore the two subclasses listed.
   c. Verify that ProductOrder contains one extra property definition defined.
   d. Verify that ServiceOrder contains two extra property definitions defined.
7. Explore the Customers folder
   a. Browse > Root Folder.
   b. Open the Customers folder.

c. On the Contents tab, change the default view of *Show Documents* to *Show Custom Objects*. Two objects should be listed.



d. Notice that both objects belong to the Class: Customer.

8. Explore the Custom Object, Customer:

e. In the left navigation pane, expand Data Design > Classes > Custom Object

f. Open Customer.

g. Select the Property Definitions tab, you see four property definitions.

Information

The Sales Application FileNet P8 assets include:

Asset name	Type	Comments
Orders	Folder	7 documents of class: Order 3 documents of class: ProductOrder 12 documents of class: ServiceOrder
Customers	Folder	2 custom objects of class: Customer
Order	Class: subclass of Document	6 property definitions
ProductOrder	Class: subclass of Order	1 extra property definition
ServiceOrder	Class: subclass of Order	2 extra property definitions
Customer	Class: Custom Object	4 property definitions

It is important to have this information so that when the data is exported, you can validate the number of assets.

---

9. Log out of the administration console.

10. Close the browser window.

Procedure 2: Create the export manifest

1. Open FileNet Deployment Manager.
   a. Double-click the icon on the desktop.
   b. Click OK to accept the deployment tree location.
2. Expand Environments > Sales_Dev
3. Right-click the node, Export Manifests, and select New > Export Manifest.
4. Name the export manifest: `Sales-app-assets`.
5. Click Finish. The export manifest is visible in the navigation pane.

Procedure 3: Add assets to the export manifest

1. Open the export manifest:
   a. On the left, double-click Sales-app-assets.xml.
2. Add items to the export manifest:
   a. Click the green plus icon, in the menu bar, to add Assets.
   b. In the tree view, expand Object Stores > Sales > Browse
   c. Select the Root Folder.
   d. In the right pane, select the following folders:
      - Click **Customers**.
      - Ctrl-click **Orders**.

   e. Click Add.
   f. Click Close to close the Add Assets window.
3. Configure the Include Options:
   a. The two rows are selected, click the pencil icon, next to the green plus sign icon, in the menu bar, to open the Include Options window.

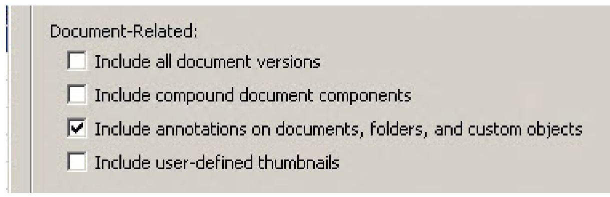
b. Go to the section labeled, Folders and Contained Objects and clear the option to Include parent folders (you do not want to include the parent folder, Root Folder, in the export).

Note

You are including, subfolders, contents of folders, and relationship to containing folders.

c. Go to the section labeled, Document-Related.

- Set the option, “Include annotations on documents, folders, and custom objects.

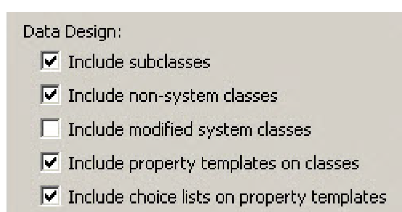


Information

For the Sales Application, only the current versions of the documents need to be exported. No compound documents exist, so it does not matter whether you select the option to Include compound document components. Selecting include options that do not apply to the asset in the export manifest, have no effect.

d. Go to the section labeled, Data Design.

- Select the option to Include subclasses.



Information

From the Application Asset Tracking spreadsheet, you know that the class Order, includes two subclasses. You can select the option to include subclasses or you can leave the option cleared and explicitly add the two subclasses to the export manifest.

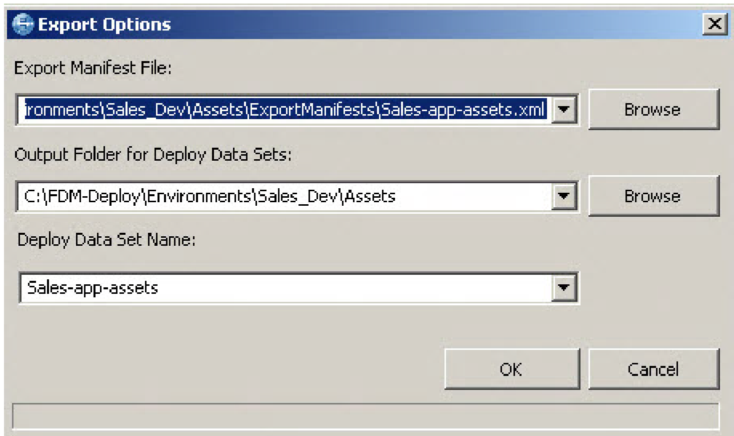
e. Click OK to close the Include Options window.

4. Click File > Save All to save your entries.

Procedure 4: Export the data

In this procedure, you export the assets that you added to the export manifest, and create a deploy data set.

1. Right-click Sales-app-assets.xml and select Export.
2. The Export Options window is displayed.



3. Accept the default values for the deploy data set output folder and the deploy data set name. Make note of the Output Folder for the deploy data set.

Note

You can change the values to whatever you want. However, it is easier if you leave the values that FileNet Deployment Manager creates.

---

4. Click OK.
5. You should see 86 items processed. Click OK to close the success notification.
6. Review the deployment.log to see what assets were exported.
   a. In Windows Explorer, open the C:\FDM-deploy\Temp\Run.<*timestamp*> folder for the latest run.
   b. Open the deployment.log with Notepad or Notepad++. In the bottom half of the file, you see details of the items that were exported.

      Notice how adding two items to the export manifest with appropriate include options results in many exported items.

Optional

You exported files from the Sales object store to a deploy data set. The deploy data set contains the exported assets. It is a folder, in the deployment tree, that contains a set of files. Inspect the files in the deploy data set.

- In Windows Explorer, Browse to C:\FDM-deploy\Environments\Sales_Dev\Assets.
- Examine the file, ExportManifests\Sales-app-assets.xml.
- Explore the deploy data set, Sales-app-assets.
    - Notice that it is a folder that contains several xml files and a Content folder.
    - Examine each of the files and the folder.

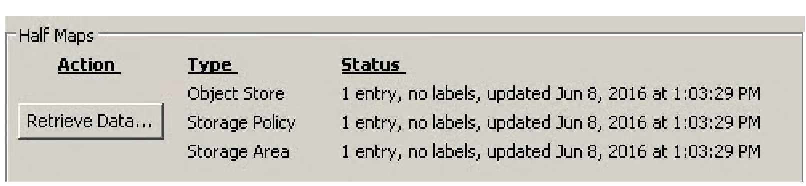
When you are done, close all open files.

Procedure 5: Extract the data half maps from the deploy data set

In this procedure, you use the deploy data set that you created in Procedure 4 to extract the data half maps for the source environment.

1. In FileNet Deployment Manager, double-click the Sales_Dev environment to open it.
2. Retrieve the object store half map:
    a. Click the first Retrieve Data to retrieve the object store data.
    b. Accept, From Deploy Data Set File, click Next.
    c. Under Select Deploy Data Set, ensure that the correct deploy data set is selected:

       C:\FDM-Deploy\Environments\Sales_Dev\Assets\Sales-app-assets
    d. Select the two Options:
        - Retrieve storage policies for each object store.
        - Retrieve storage areas for each object store.
    e. For Mode, accept the default, **Merge retrieved data with existing half map**.
    f. Click Finish.
    g. Click OK to close the success confirmation window.
    h. You should see:



i. Verify the object store data:

- Expand the Sales_Dev node in the tree view, if necessary.
- Right-click the node, Object Store Data, select open.

j. You see one object store listed, Sales.

3. Add a label to the object store half map:

a. In the label column, type: `SalesOS`.

b. Save your entries, File > Save.

c. Close the Object Store Data for Sales_Dev tab.

4. Retrieve Security Principal Data:

a. In the Sales_Dev tab, click the second Retrieve Data.

b. Accept, Deploy Data Set File, click Next.

c. Under Select Deploy Data Set, ensure that the correct deploy data set is selected.

d. For Mode, accept the default, **Merge retrieved data with existing half map**.

e. Click Finish.

f. Click OK to close the success confirmation window.

5. Verify the security principal data half map:

a. On the navigation pane, under the Sales_Dev environment, double-click the node, Security Principal Data.

b. You see a list of security principals retrieved.

c. Add labels to the entries:

- Label: `admins`, to **p8admins**.
- Label: `users`, to **p8users** and **scriptest**.

Label	Short Name	Display Name	Type	Name
	p8admin	P8Admin	User	cn=P8Admin,o=sample
admins	p8admins	P8Admins	Group	cn=P8Admins,o=sample
users	p8users	P8Users	Group	CN=P8Users,cn=groups,o=sample
users	scriptest	scriptest	Group	cn=scriptest,cn=groups,o=sample

Hint

To add a label, double-click the cell and type the value.

d. Save your entries, File > Save.

e. Close the Security Principal Data for Sales_Dev tab.

6. Close all the open tabs. File > Close All.

7. Leave FileNet Deployment Manager open for the next activity.

20.2. Challenge: Extract the Service Data half map

Scenario

You completed the export of the Sales Application FileNet P8 assets and created a deploy data set. You extracted the object store and security principal data half maps from the source environment.

You need to extract any service data that the deploy data set assets reference.

Data

Item	Value
Source for Service Data	From CPE Deploy Data Set
Select Deploy Data Set	C:\FDM-deploy\Environments\Sales_Dev\Assets\Sales-app-assets
Mode	Merge Retrieved data with existing half map (default)

Challenge

- Use FileNet Deployment Manager and the data that is provided to extract the service data half map for the source environment, Sales_Dev.

Verification

The assets in the deploy data set, Sales-app-assets, do not reference any service data. No service data entries are retrieved.

It is a good idea to always extract the service data to make sure that no service data is missed.

20.3. Challenge: Create a deploy package

Scenario

You completed the export of the Sales Application FileNet P8 assets and created a deploy data set. You used the deploy data set to extract the object store and security principal data half maps from the source environment.

You need to create a deploy package for the Sales Application. You save the deploy package and the export manifest, used to create it, in the Sales Application package folder. The Sales Application package can be put under change control and used to migrate and deploy the Sales Application to other environments.

Data

Item	Value
Deploy data set	C:\FDM-Deploy\Environments\Sales_Dev\Assets\Sales-app-assets
Source Environment	Sales_Dev
Deploy Package	C:\FDM-Deploy\Environments\Sales_Dev\Assets\Sales-app-assets.zip

Challenge

- Use FileNet Deployment Manager and the data that is provided to create a deploy package for the source environment, Sales_Dev.
  - File > Deploy Package > Create Deploy Package
- Save the deploy package to the Sales Application package folder.
  - Copy the deploy package and save it to:

    C:\Labs\FileNet Content Manager 5.2.1 Administration\Sales Application\FileNet P8 assets
- Save the export manifest to the Sales Application folder.
  - Create a folder to store the export manifest:

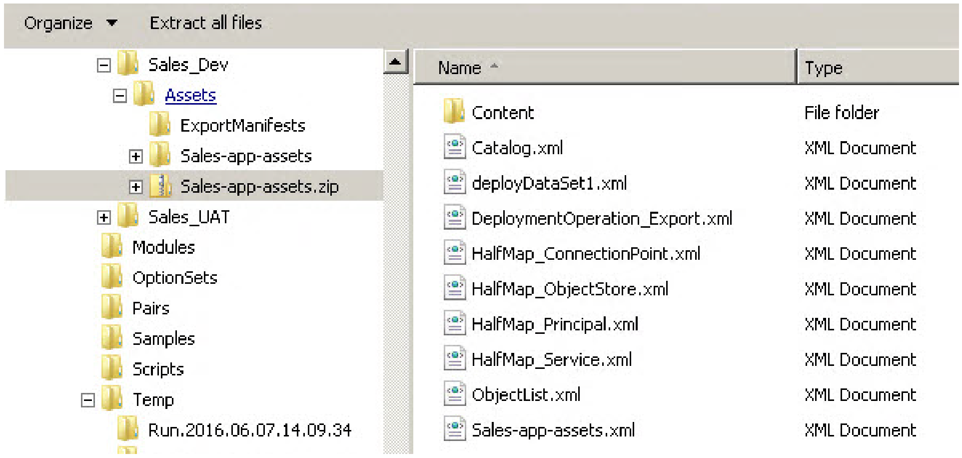
    <...>\Sales Application\FileNet P8 assets\Export Manifests
  - Copy and paste the export manifest, used to create the deploy data set, to the Export Manifests folder you created.

Verification

1. The deploy package compressed file, is listed under the folder:

   C:\FDM-deploy\Environments\Sales_Dev\Assets

2. The compressed file contains:



3. Close FileNet Deployment Manager.

Information

Creating the application package for an IBM FileNet Content Manager application is the responsibility of the Solution Builder that builds the application, and the administrators that migrate and deploy the application. The Solution Builder creates the initial draft and then hands it off to the administrators who add any necessary files and update the Deployment and Migration instructions.

20.4. Export an IBM Content Navigator desktop

Introduction

In this activity, you export the other IBM Assets of the Sales Application. Based on the information in the Application Assets Tracking spreadsheet, the only other asset you need to export is the Sales desktop.

On the student system, you have only one FileNet P8 domain and one instance of IBM Content Navigator. The Sales desktop does not exist yet so that you can import it in a later exercise. For this activity, you export the Sample desktop, which is almost identical to the Sales desktop.

Procedures

Procedure 1: Export a desktop

In this procedure, you use the IBM Content Navigator administration tool to export the Sample desktop.

1. Open IBM Content Navigator administration tool.
   a. Open a Mozilla Firefox window.
   b. Go to URL http://ecmedu01:9080/navigator/?desktop=admin
      - You can also use the bookmark, Content Navigator Administration.
   c. Log in with a Content Navigator administrator account.
      - User name: `P8Admin`
      - Password: `IBMFileNetP8`
   d. The administration tool opens to the Desktops tab.
2. Select the Sample Desktop and click Export.
3. Change the file name to a name that is more meaningful.

   For example: `SampleDesktop-export.properties`
4. Select the Repositories to export:
   a. Click the Repositories tab.
   b. Select the Sales repository only.

Hint

You can clear the top check box to clear all the repositories, then select Sales.

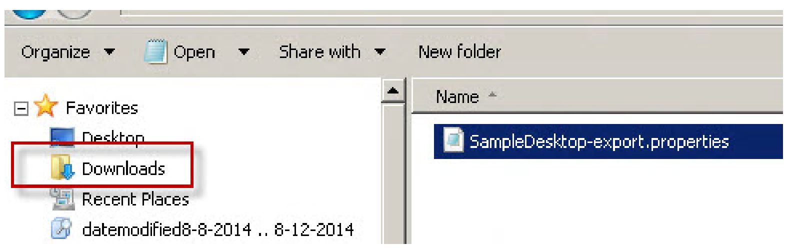
---

5. Select the plug-ins to export:
   a. Click the Plug-ins tab.
   b. Select the IBM Administration Console for Content Platform Engine plug-in only.
6. Select the Themes to export:
   a. Do not include any themes in the export.

Information

The Sample desktop does not have any custom themes. The themes that are listed are the standard themes that are created when a desktop is created, you do not need to export them.

7. Complete the Export:
   a. Click Export, on the lower right.
   b. Select, Save File and click OK.
8. Examine the exported desktop:
   a. In Windows Explorer, go to Favorites\Downloads.



Information

If this file was the export of the desktop for the Sales Application, you would copy the file to the folder, Other IBM assets, in the Sales Application package folder.

9. Log out of the IBM Content Navigator administration tool and close the browser window.

Exercise review and wrap-up

In this exercise, you completed the following tasks:

- Export the FileNet P8 assets of the Sales Application.
- Export an IBM Content Navigator desktop.

Exercise 21. Convert and analyze the FileNet P8 assets

Estimated time

00:15

Overview

In this unit, you use the source and destination environment half maps to create data maps that to facilitate the conversion of the FileNet P8 assets of the Sales Application and get them ready to import into the destination object store. You also run a change impact analysis to discover the impact of the import on the destination environment before running the import.

Objectives

After completing this exercise, you should be able to:

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

Exercise Introduction

Introduction

In this exercise, you:

- Define a source-destination pair.
- Create data maps to map object store and security principal data between the source and destination environments.
- Convert the exported assets to use the destination environment object store and security principals.
- Run a change impact analysis to create a report that lists the import impact to the destination object store.

Activities

- "Convert the FileNet P8 assets" on page 21-3
- "Run a pre-import analysis" on page 21-6

User accounts

Type	User ID	Password
Administrator	p8admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

21.1. Convert the FileNet P8 assets

Introduction

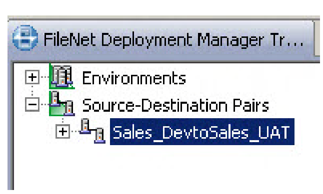
In this activity, you:

- Define a source-destination pair.
- Create data maps to map object store and security principal data between the source and destination environments.
- Convert the exported assets to use the destination environment object store and security principals.

Procedures

Procedure 1: Define a source-destination pair

1. Open FileNet Deployment Manager.
2. In the navigation pane, right-click Source-Destination pair and select, New > Source-Destination Pair.
3. Enter a name for the pair (pick a name that identifies the source and destination environments). For example: `Sales_DevtoSales_UAT`.
4. For the Source Environment, select Sales_Dev.
5. For the Destination Environment, select Sales_UAT.
6. Click Finish.
7. The new source-destination pair is listed in the navigation pane.



Procedure 2: Add a label to the destination half map

In this procedure, you add a label to the destination object store half map to facilitate mapping.

1. In the left navigation pane, expand Environments > Sales_UAT.
2. Double-click Object Store Data to open it.

3. In the row that contains the name, SalesUAT, type, `SalesOS`, in the label column.

Label	Name	Symbolic Name
	LoanProcess	LoanProcess
	LoanProcessQA	LoanProcessQA
	P8ConfigObjectStore	P8ConfigObjectStore
	Sales	Sales
	SalesQA	SalesQA
	SalesSBx	SalesSBx
SalesOS	SalesUAT	SalesUAT

4. Click File > Save.
5. Close the Object Store Data for Sales_UAT tab.

Procedure 3: Create the source-destination pair data maps

In this procedure, you use the source and destination environment half maps to create source-destination pair data maps.

1. Open the source-destination pair:
   a. In the navigation pane, double-click Sales_DevtoSales_UAT.
2. Create the object store data map:
   a. Click the first Map Data.
   b. Click OK to close the success confirmation window.
   c. The object store map opens. You see that the source name, Sales, is mapped to the destination name, SalesUAT.
   d. Close the tab.
3. Create the security principal data map:
   a. Click the second Map Data.
   b. Click OK to close the success confirmation window. A Warning opens.
   c. On the warning message: *More than one source principal is mapped to the same destination principal*, select the option not to perform the check next time, then Click OK.
   d. Click File > Save.
   e. The security principal map opens. You see three principals that are listed:

		Source Short Name	Destination Short Name	Source Display Name	Destination Display Name	Source Principal Type
		scriptest	clerks	scriptest	Clerks	Group
		p8users	clerks	P8Users	Clerks	Group
		p8admins	sysadmins	P8Admins	SysAdmins	Group
		p8admin	p8admin	P8Admin	P8Admin	User

   f. Close the tab.

Procedure 4: Convert the deploy data set

In this procedure, you use the source-destination pair data maps you created and the deploy data set that contains the exported FileNet P8 assets to convert the assets. The conversion process modifies the assets to use the destination environment object store and security principals.

1. On the navigation pane, right-click the source-destination pair, Sales_DevtoSales_UAT, and select Convert Assets.
2. Select the deploy data set. Usually you can accept the default, unless you changed the naming conventions that FileNet Deployment Manager uses (browse to the correct folder, if necessary).
3. Click Next.
4. On the Select Output Folder for Converted Deploy Data Set, accept the default values for the folder and the file name.

   Folder: `C:\FDM-deploy\Environments\Sales_UAT\Assets`

   File: `C:\FDM-deploy\Environments\Sales-Dev\Assets\Sales-app-assets.converted`
5. Click Finish.
6. The assets are successfully converted:

Information

The number of mappings can be much larger than the number of assets exported. Each asset can have multiple references. Depending on the include options, references might need to be mapped.

7. Click OK to close the window.
8. Leave FileNet Deployment Manager open for the next activity.

21.2. Run a pre-import analysis

Introduction

In this activity, you run a change impact analysis, which creates a report of how the import impacts the destination object store. The report also checks for failures and warnings so that you can resolve any potential issues before running the import.

Procedures

- Procedure 1, "Run a change impact analysis," on page 21-6
- Procedure 2, "Analyze the change impact analysis report," on page 21-7

Procedure 1: Run a change impact analysis

Before you attempt to import the converted FileNet P8 assets into the destination environment, you want to see how the destination object store is impacted. In this procedure, you use FileNet Deployment Manager to run a change impact analysis and create a report.

1. In FileNet Deployment Manager, right-click the source-destination pair, Sales_DevtoSales_UAT, and select Analyze.
2. Analyze Change Impact on Destination Environment window:
   a. Select the deploy data set (generally you can accept the default).
   `C:\FDM-deploy\Environments\Sales-UAT\Assets\Sales-app-assets.converted`
   b. Click Next.
3. Select Import Analysis Options window:
   a. Accept the default option.

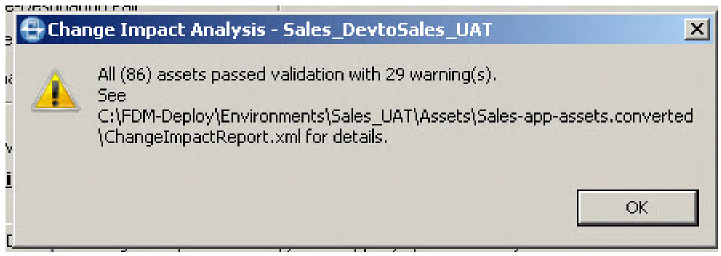
Information

No assets are imported yet, all the options result in updating all the objects. If it is not the first time that you run the import, then choose the appropriate option.

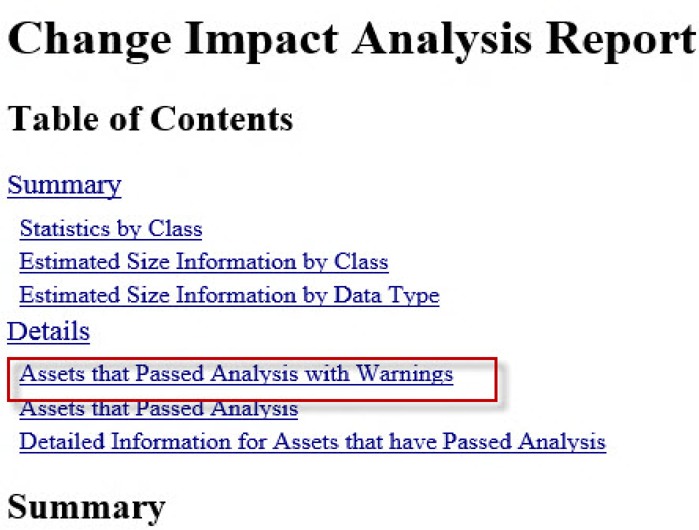
---

   b. Click Next.
4. Change Impact Report Options window:
   a. Accept the default path, but note the path for the Change Impact Report file.
   b. Click the option to Include details for all objects in report.
   c. Leave the option to view report after processing selected.
   d. Click Next.

5. Summary window.
    a. Review the options.
    b. Click Finish.
6. When the analysis is complete, you see get a message that all 86 assets passed validation with 29 warnings.



    a. When you are ready, click OK.
7. The Change Impact Analysis Report opens.



Procedure 2: Analyze the change impact analysis report

In this procedure, you learn how to read and interpret the change impact analysis report.

1. Review the summary section of the report:
    a. Click the Summary link on the report.
    b. Review the information included in the report.
    c. Note:
        - Total # of Assets Analyzed.
        - Total # of Failures.
        - Total # of Warnings.
        - Total # of Assets that would be created during Import.

- Total # of Assets that would be Skipped during Import.

d. Click the link, Back to Top, when you are ready to continue.

2. Click the link, Assets that Passed Analysis with Warnings.
3. Explore the first warning:

Name	Class	ID	Analysis Status	Import Operation	Estimated Size	Comments
Order Basic 200	Order	{278A72C7-FFE5-447A-A856-7A569824288C}	Warning	Create	0.00 KB	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. Related object: ID={000A8C36-3AF9-4167-AD23-EAC939A005CD}, Class=StorageArea

a. The first three columns provide, the display name, the class type, and the ID of the object to be created (Import Operation column).

b. The Comments column provides the details of the warning.

c. If you attempt to import the object, Order Basic 200, and use the storage policy or storage area from the exported object, the import fails. The cause is a related object of class, StorageArea, does not exist.

4. Find the missing object.

a. Copy the last object ID listed in the Comments column (include the braces).

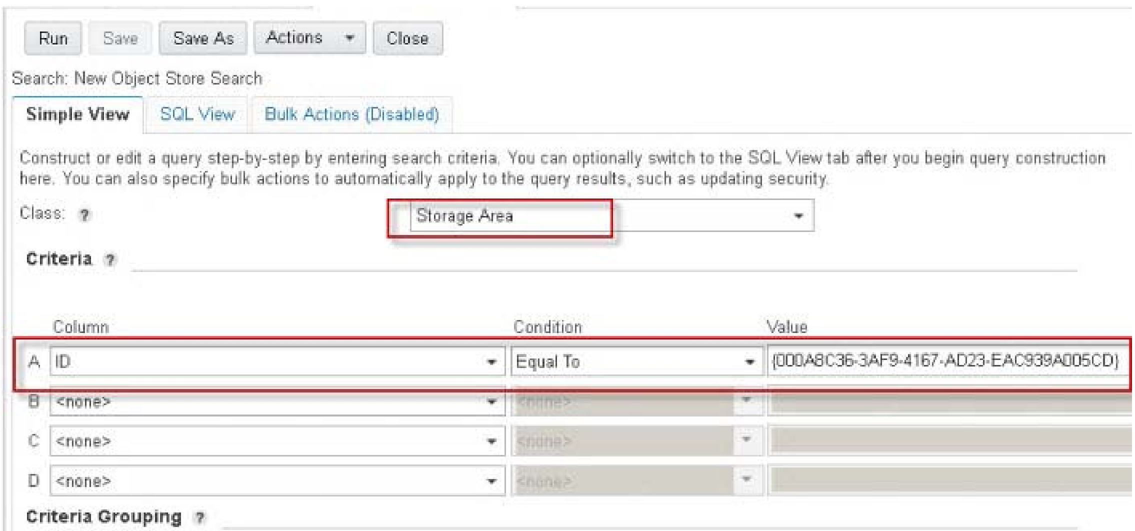
b. Open the Administration Console for Content Platform Engine (ACCE).

c. Open the Sales object store.

d. Click Search. On the right, click New Object Store Search.

e. Complete the search criteria:

- Class: **StorageArea**
- Criteria:
  - Column: **ID**
  - Condition: **Equal To**
  - Value: The ID you copied in Step 4.a.



f. Click Run.

g. The search results, show that the missing object is the File Storage Area, Sales.

h. You can ignore this warning. The Sales Application, FileNet P8 assets, use the default storage area that is defined for the destination object store.

Note

The same steps, which are outlined in Steps 3-4 can be used to investigate all warnings and failures.

5. Log out of the administration console and close the browser window.
6. Close the Change impact analysis report.
7. Exit FileNet Deployment Manager.

Exercise review and wrap-up

In this exercise, you completed the following tasks:

- Converted the Sales Application FileNet P8 assets.
- Analyzed the impact of the import on the destination environment.

Exercise 22. Import the application assets

Estimated time

00:30

Overview

In this unit you, complete the migration and deployment of the Sales Application into the destination environment. You import the application assets into the destination environment.

Objectives

After completing this exercise, you should be able to:

- Import the Sales Application assets into the destination environment.

Exercise Introduction

Introduction

In this exercise, you:

- Import the FileNet P8 assets into the destination object store.
- Import the Sales desktop into the destination environment.

Activities

- "Import FileNet P8 assets" on page 22-3
- "Import other IBM Assets" on page 22-7

User accounts

Type	User ID	Password
Administrator	p8admin	IBMFileNetP8
Sysadmin	Paula	filenet

Note

Passwords are always case-sensitive.

22.1. Import FileNet P8 assets

Introduction

In this activity, you import the FileNet P8 assets that you exported and converted in Units 3-4.

Procedures

Procedure 1: Import FileNet P8 assets into SalesUAT

1. Start FileNet Deployment Manager.
2. Expand the node, Source-Destination Pairs.
3. Right-click Sales_DevtoSales_UAT and select Import.
4. Options window:
   - Selected Environment: Sales_UAT
   - Select Deploy Data Set: `C:\FDM-deploy\Environments\Sales-UAT\Assets\Sales-app-assets.converted`
   - Selected Option Set: Click New

     `C:\FDM-Deploy\Sales-app-Import-options.xml`

     - Click Save.
5. Configure Import Options window:
   a. Leave all the default options.
   b. Click OK.
      - If prompted, save modifications to the options set.
6. Click Finish.
7. The import fails. In the next procedure, you investigate the cause of the failure.
   a. Click OK to close the message.

Procedure 2: Troubleshoot a failed import

1. Review the deployment.log.
   a. In Windows Explorer, open the folder, C:\FDM-Deploy\Temp.
   b. Open the latest Run.<*date and time stamp*> folder.
   c. Open the deployment.log with Notepad++.
   d. Search for the string, `run has started`.
   e. The next entry, flagged as WARN, states: The current import process is attempting to update system properties and the current user does not have the right, “modify certain system properties” on the object store, SalesUAT.

Information

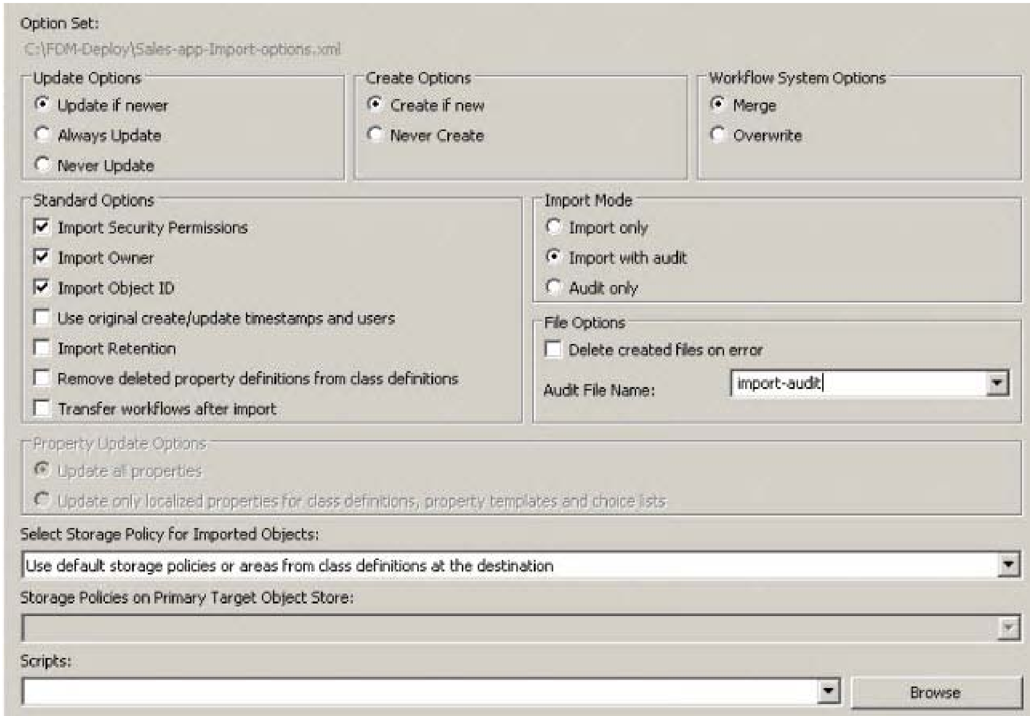
The import Options Set file includes the option to **Use original create/update timestamps and users** selected. The option requires that the user that is running the import, has the right, “modify certain system properties”. You have two options:

- Grant p8admin the right to modify certain system properties.
- Remove the option to Use original create/update timestamps, from the import Options Set.

---

2. Repeat the import and clear the option to Use original create/update timestamps, from the Options Set file:
   a. In FileNet Deployment Manager, right-click Sales_DevtoSales_UAT and select Import.
   b. Options window:
      - Selected Option Set: Click Configure.
   c. Configure Import Options window:
      - Standard Options: Clear the option to use original create/update timestamps.
      - Import Mode: select the option to Import with audit.
      - File Options: Clear the option to delete created files on error.

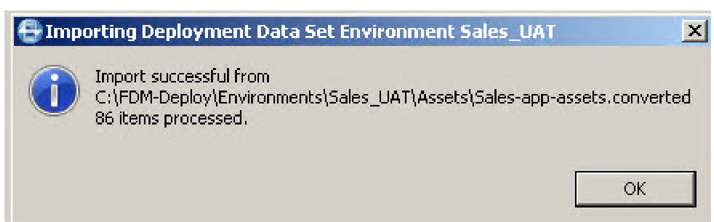
- Change the Audit file name. For example: `import-audit`.



- Click OK twice.
- Save the changes to the same Options Set file.

d. Click Finish.

3. The import completes successfully. You see:



4. Click OK to close the window.

Procedure 3: Generate an audit report

1. Right-click Sales_DevtoSales_UAT and select Generate Audit Report.
2. Generate Audit Report from Audit Files Window:
   a. Accept the defaults for all entries, except:
      - Select the option to Generate detailed report.
   b. Click Finish.
   c. In the success confirmation window that is displayed, you see, Successfully generated audit report.
   d. Click OK to close the window.

3. Examine the Audit Report.

   The report contains much information.

   a. Expand some of the objects under the Details section.
   b. When you are done examining the report, close the report and close the browser window.

4. Close FileNet Deployment Manager.

5. Close Notepad++.

Procedure 4: Verify the imported FileNet P8 assets

1. Log in to the Administration Console for the Content Platform Engine as a member of the Sysadmins group.

   - User name: `Paula`
   - Password: `filenet`

2. Open the SalesUAT object store.

3. Expand the Browse > Root Folder.

4. Verify that the Root Folder contains the two subfolders:

   - Customers
   - Orders

5. Open the folders and verify that they contain the expected documents.

6. Verify the class types and the property definitions.

7. Logout when you are done verifying the imported assets.

8. Close the browser window.

22.2. Import other IBM Assets

Introduction

In this activity, you import the Sales desktop that the Solution Builder provided in the Sales Application package.

Procedures

Procedure 1: Import the Sales desktop

In this procedure, you use the IBM Content Navigator administration tool to import the Sales desktop that the Solution Builder provided in the Sales Application package.

1. Start the IBM Content Navigator administration tool:
   a. Open a Mozilla Firefox window.
   b. Go to the bookmark, Content Navigator Administration.
   c. Log in with a Content Navigator administrator account.
      - User name: `P8Admin`
      - Password: `IBMFileNetP8`

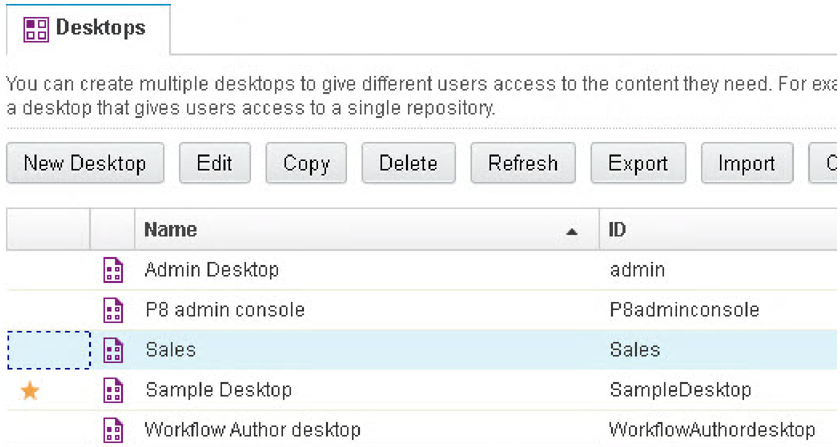
   d. The administration tool opens to the Desktops tab.
2. On the menu bar, click **Import**.
   a. Browse to:

   ```
   C:\Labs\FileNet Content Manager 5.2.1 Administration\Sales Application\Other IBM assets\
   SalesDesktopExport.properties
   ```

   b. Ignore the warning that items exist, and click **Import**, on the lower right (you might need to scroll down to see Import).
   c. The Desktop Import Summary is displayed.
      - If you want, you can choose to download the report.

   d. Click Close.

3. The desktop **Sales** is listed on the Desktops tab:



Procedure 2: Configure the imported Sales desktop

In this procedure, you modify the imported desktop configuration so that it works in the destination environment. Modifying the desktop configuration is an example of a post-deployment task that falls under the category of additional configuration tasks.

1. Modify the imported repository.
    a. In the IBM Content Navigator administration tool, open the Repositories node.
    b. Add a repository for the object store, SalesUAT:
        - Type: FileNet Content Manager
        - Display name: `SalesUAT`
        - Server URL: `iiop://ecmedu01:2809/FileNet/Engine`
        - Object store symbolic name: `SalesUAT`
        - Object store display name: `SalesUAT`
    c. Click Connect.
    d. Log in as:
        - User name: `Paula`
        - Password: `filenet`
    e. Click Save and Close.
    f. Close the Repositories tab.
2. Modify the imported desktop.
    a. On the Desktop tab, select the desktop, **Sales**, and click Edit.
    b. Under Authentication > Repository, use the menu to select, SalesUAT.
    c. Select the Layout tab. Clear the Teamspaces feature.
    d. Click Save and Close.
3. Log out of the IBM Content Navigator administration tool.
    a. Leave the browser window open for the next procedure.

Procedure 3: Test the desktop and validate the Sales Application

1. Open the Sales desktop.
   a. In the browser window that is open, change the last part of the URL:
      - From: ?desktop=admin
      - To: `?desktop=Sales` (Note: The desktop name is case-sensitive).
      - Click return.
   b. Note the change in the theme colors. The Sales desktop contains a custom theme.
   c. Log in with an account that is a member of the group, Sysadmins.
      - User name: `Paula`
      - Password: `filenet`
2. On the left, select the repository, SalesUAT.
3. Under SalesUAT, click Orders to open the folder.
4. On the right, select one of the Orders. For example, Order Basic 200.
   a. Look at the Properties pane on the right.
   b. Verify that the class is, Order.
   c. Verify that six properties are listed after Document Title.
5. Select one of the Service Orders. For example, SO21345.
   a. Look at the Properties pane on the right.
   b. Verify that the class is, ServiceOrder.
   c. Verify that eight properties are listed after Document Title.
6. Add a document of class, Product Order.
   a. Click Add Document.
      - File name: Libraries\Documents\sample documents\claim form.jpg
      - Class: Order > ProductOrder
      - If you want, add values for the properties.
      - Click Add.
7. Verify that the document is added with the class, ProductOrder.
8. Log out of the Sales desktop and close the browser window.

Exercise review and wrap-up

In this exercise, you completed the following tasks:

- Import the FileNet P8 assets into the destination object store.
- Import the Sales desktop into the destination environment.

Exercise 23. Automate FileNet P8 asset migration

Estimated time

00:35

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 of an IBM FileNet Content Manager application.

Objectives

After completing this exercise, you should be able to:

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

Exercise Introduction

Introduction

In this exercise, you use the FileNet Deployment Manager command line interface to:

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

Activities

- "Run a change impact analysis" on page 23-3
- "Expand a deploy package to a new environment" on page 23-7

User accounts

Type	User ID	Password
Administrator	p8admin	IBMFileNetP8

23.1. Run a change impact analysis

Introduction

In this activity, you run an AnalyzeDeployDataSet operation with the command line interface. You repeat the operation that you ran in Exercise 4.2, but you use the command line interface instead of the GUI.

Procedures

Procedure 1: Find for the deployment operation file

In this procedure, you find the Change Impact Analysis report, that you created in Exercise 4, activity 4.2. You use the date and time stamp of the report to locate the folder, C:\FDM-Deploy\Temp\Run<*date+time*>, and find the correct DeploymentOperation.xml file.

1. Search for the AnalyzeDeployDataSet operation:
   a. In Windows Explorer, go to the deployment tree, open the Sales_UAT environment, and go to where the converted assets are stored:

      `-Sales_UAT\Assets\Sales-app-asset.converted`

   b. Get the date and time stamp of the file, ChangeImpactReport.xml.
2. Get the DeploymentOperation.xml file for the Run<*date+time*> folder with the matching date and time stamp:
   a. In another Windows Explorer window, go to C:\FDM-Deploy\Temp\Run<*date+time*>, where the date and time matches the date and time of the file, ChangeImpactReport.xml. The hours and minutes match, but the seconds might be slightly different.
   b. Verify that you have the correct DeploymentOperation.xml file:
      - Edit DeploymentOperation.xml with a text editor.
      - Make sure that you see the tag, <AnalyzeDeployDataSet>.

```
<DeploymentOperation deploymentTreeLocation="C:\FDM-Deploy" version="5.2.1">
    <AnalyzeDeployDataSet>
        <Environment>Sales_UAT</Environment>
```

   c. Close the text editor.

d. Copy the file, DeploymentOperation.xml, to a new folder, for example:

```
C:\scripts
```

Information

If you choose a path that includes spaces, you need to specify the path in quotes when you run the command.

e. Rename the file to Analyze_DeploymentOperation.xml

f. Leave the Windows Explorer windows open for the next procedure.

Procedure 2: Run the operation

In this procedure, you run the analyze deployment operation with the command line.

1. Open a command prompt window and change the Layout properties to a larger Window size, for example, Width: 100, Height: 50.
2. Change directories to the <*FDM_Install_Path*>:

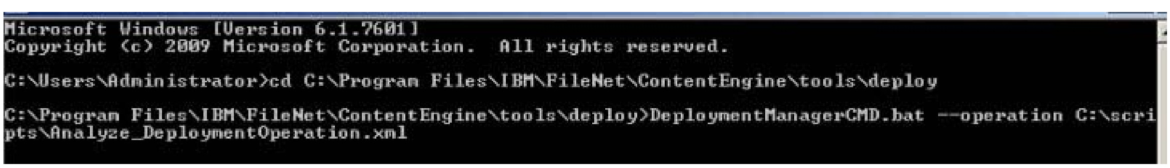
```
C:\Program Files\IBM\FileNet\ContentEngine\tools\deploy
```

Hint

You can open a Windows Explorer window and browse to the path. In the command prompt window, type cd, then copy and paste the path.

3. Run the command:

```
DeploymentManagerCMD.bat --operation C:\scripts\Analyze_DeploymentOperation.xml
```



a. The information that is normally written to the deployment.log is displayed in the command window and also saved in the deployment.log.

b. Minimize the command window.

Note

You can disregard errors that relate to performance counters or Java Listeners.

Procedure 3: Verify the operation

In this procedure, you verify that the command line operation ran successfully.

1. In Windows Explorer, go to the path where you stored the Analyze_DeploymentOperation.xml file.

   c. Notice that a deployment.log is created in that directory.

   d. Edit the deployment.log with a text editor and scroll to the bottom of the file. You should see, **Validation for import started** and **All (86) assets passed validation**.

```
-----------------------------------------
2016-06-13 13:05:34,050  INFO [main] com.filenet.deployment.common.operations.AnalyzeDeployDataSet  - Validation for
import started.  Scanning Workflow System config file...
2016-06-13 13:05:34,050  INFO [main] com.filenet.deployment.common.operations.AnalyzeDeployDataSet  - All (86) assets
passed validation.
2016-06-13 13:05:34,081  INFO [main] com.filenet.deployment.common.Util  - Done extracting the resource file:
ChangeImpactReport.xsl
2016-06-13 13:05:34,081  INFO [main] com.filenet.deployment.common.Executor  - VALIDATE_FOR_IMPORT completed
successfully.  86 items processed.
```

   e. Close the text editor.

2. Open the Change Impact Analysis Report.

   a. In Windows Explorer, go to the path:

   `C:\FDM-Deploy\Environments\SalesUAT\Assets\Sales-app-assets.converted`

   b. Notice the files ChangeImpactReport.xml ChangeImpactReport.xsl are modified. The date and time stamp is the time that you ran the operation in Procedure 2.

   c. Open the ChangeImpactReport.xml file with Internet Explorer.

   d. Review the report.

   e. Close the report when you are finished.

Procedure 4: Compare deployment operation files

In this procedure, you use FileNet Deployment Manager to create sample deployment files and you compare the sample AnalyzeDeployDataSet.xml with the Analyze_DeploymentOperation.xml file you created in Procedure 1.

1. Run the command to create the sample files.

   a. Maximize the command prompt window and run the command:

   `DeploymentManagerCMD.bat --samples`

2. Examine the sample files created.

   b. In Windows Explorer, go to the path:

   `C:\Program Files\IBM\FileNet\ContentEngine\tools\deploy\Samples`

   c. Examine the files created.

   d. Open the file, **DeploymentOperation_AnalyzeDeployDataSet.xml** with Notepad++.

   e. Compare the sample file with the Analyze_DeploymentOperation.xml that you created in Procedure 1.

- Note the values that are updated in the deployment operation file that you created.

3. Close all the files in Notepad++.
4. Exit Notepad++.
5. Leave the Windows Explorer windows open for the next activity.

23.2. Expand a deploy package to a new environment

Introduction

In this activity, you use the command line interface to run the operation, ExpandDeployPackage, to expand the deploy package to a new environment.

Important

This activity requires that you successfully complete Exercise 3.

Procedures

Procedure 1: Create the deployment operation file from a sample

In this procedure, you copy the sample file, DeploymentOperation_ExpandDeployPackage, and edit it.

1. Copy the sample file, DeploymentOperation_ExpandDeployPackage:
   a. Open the Windows Explorer window that is open to the path:

      `C:\Program Files\IBM\FileNet\ContentEngine\tools\deploy\Samples`

   b. Copy the file, DeploymentOperation_ExpandDeployPackage.xml, to the folder you created in activity 6.1. For example, C:\scripts.
2. Edit the file, DeploymentOperation_ExpandDeployPackage.xml, in Notepad++.
3. Use the data in the table to update the file:

Item	Value
deploymentTreeLocation	"C:\FDM-Deploy"
createEnvironment	"true"
Environment	Sales_test
DeployDataSet	\FDM-Deploy\Environments\Sales_test\Assets\Sales-app-assets
DeployPackage	\FDM-Deploy\Environments\Sales_Dev\Assets\Sales-app-assets.zip

4. Save the file.

5. The edited file should look like:

```
The parameters in this operation file are documented in the "Deployment operation formats" topic in the g

For information on valid syntax, please refer to the XML schema in DeploymentOperation.xsd.

-->
<DeploymentOperation deploymentTreeLocation="C:\FDM-Deploy" version="5.2.0">
    <ExpandDeployPackage createEnvironment="true" halfMapMode="merge">
        <Environment>Sales_test</Environment>
        <DeployDataSet>C:\FDM-Deploy\Environments\Sales_test\Assets\Sales-app-assets</DeployDataSet>
        <DeployPackage>C:\FDM-Deploy\Environments\Sales_Dev\Assets\Sales-app-assets.zip</DeployPackage>
    </ExpandDeployPackage>
</DeploymentOperation>
```

Hint

The DeployDataSet tag uses the new environment that you create. The DeployPackage tag uses the source environment.

Procedure 2: Run the operation

1. Maximize the command prompt window and run the command. For example:

```
DeploymentManagerCMD.bat --operation
C:\scripts\DeploymentOperation_ExpandDeployPackage.xml
```

```
C:\Program Files\IBM\FileNet\ContentEngine\tools\deploy>DeploymentManagerCMD.bat --operation C:\scri
pts\DeploymentOperation_ExpandDeployPackage.xml
```

Important

If you created a different folder, then replace the path, C:\scripts\DeploymentOperation_ExpandDeployPackage.xml with the correct path.

   a. Click return.

2. Verify that the environment, Sales_test was created:

   a. Open FileNet Deployment Manager.

   b. Expand environments. Make sure that you see the new environment listed, Sales_test.

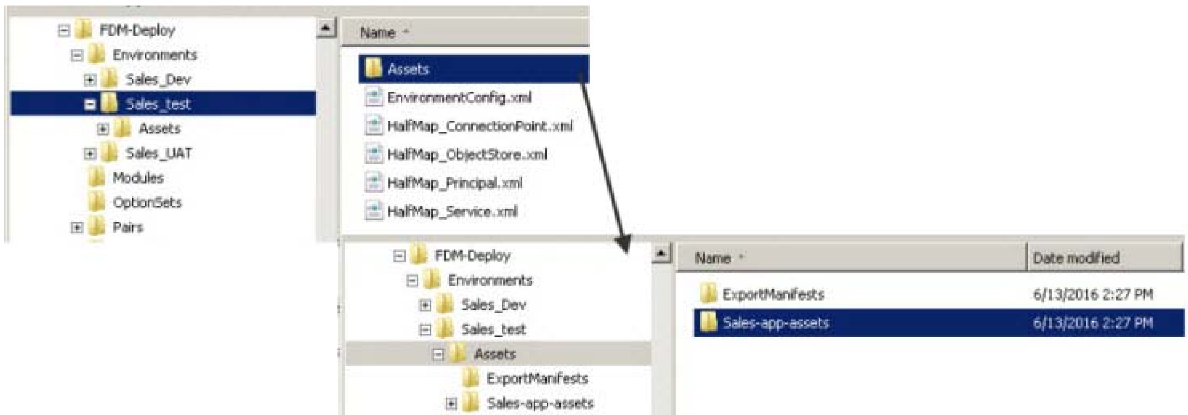
3. Verify the object store and security principal half maps.

   a. Expand the environment, Sales_test.

   b. Open the Object Store Data. It should match the object store data for the environment, Sales_Dev.

   c. Open the Security Principal Data. It should match the security principal data for the environment, Sales_Dev.

4. Verify the deploy data set:
   a. In Windows Explorer, browse to the path:
      `C:\FDM-Deploy\Environments\Sales_test\Assets`
   b. You should see the folder, Sales-app-assets:



5. Close all Windows Explorer windows.
6. Close FileNet Deployment Manager.
7. Close the command prompt window.
8. Close Notepad++ and the command window.

Information

In this activity, you created the DeploymentOperation file from the sample files that FileNet Deployment Manager created. You can also use the FileNet Deployment Manager GUI to expand the deploy package then save the DeploymentOperation file created by FileNet Deployment Manager.

Exercise review and wrap-up

In this exercise, you Used the command line interface to complete the following tasks:

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

Part 7. Manage Sweep Jobs

Exercise 24.Configure a sweep job

Estimated time

00:30

Overview

In this exercise, you configure a Bulk Move Content Job to move documents from one storage area to another.

Objectives

After completing this exercise, you should be able to:

- Move documents from one storage area to another with a Bulk Move Content job.

Exercise Introduction

Introduction

In this exercise, you create and configure a Bulk Move Content Job to move documents from one storage area to another.

Activities

- "Configure a bulk move content job" on page 24-3
- "Challenge: Configure a bulk move content job:" on page 24-11

User accounts

Type	User ID	Password
Administrator	p8admin	IBMFileNetP8

Before you begin

Important

You must complete these tasks before you start the lesson exercises.

Start the student system:

To log in to the student system.

- Username: `Administrator`
- Password: `passw0rd`

Follow the instructions in Procedure 1 and 2 of Appendix A to start the system components.Appendix A, "Start and Stop System Components," on page A-1.

24.1. Configure a bulk move content job

Introduction

In this activity, you configure a sweep job to do a bulk move of document content. You specify a document class to examine only the documents of that particular class. You also specify a file storage area, in the filter expression, to filter the documents so that only the documents in that storage area are moved. The storage policy determines the destination storage area. You test the sweep job execution by comparing file count and content in the file storage areas.

Storage areas, storage policy, document classes, and the documents to be moved are already configured on the student system for this activity.

Procedures

Procedure 1: Examine the file storage areas

In this procedure, you examine the file storage areas for their file count before running the Bulk Move Content Job. You are going to compare these values after running the job.

1. Start the Administration Console for Content Platform Engine.
   a. In your browser, go to `http://ecmedu01:9080/acce`.

Hint

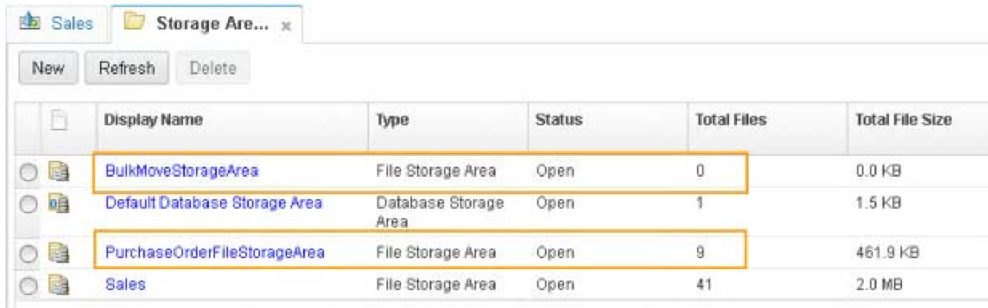
For your convenience, a bookmark, ACCE, is defined in Mozilla Firefox.

---

   b. Log in as the `P8admin` user (password: `IBMFileNetP8`).
2. In the Administration Console, expand the P8Domain > Object Stores node on the left pane and click the Sales object store.
3. Open the Storage Areas:
   a. In the navigation pane, expand Sales > Administrative > Storage, and select Storage Areas.
      - A Storage Area tab opens on the right, and all the available storage areas are listed.

4. Examine the file storage areas.

   a. Verify that the **PurchaseOrderFileStorageArea** contains nine files.(This is the storage area that you want to move the content from).



   b. Note the destination storage area, **BulkMoveStorageArea**, contains 0 files.

Note

The BulkMoveStorageArea is associated with the Bulk Move Storage Policy. You configure this Storage Policy as the destination in the Sweep Job that you create.

   c. In the Storage Areas tab, click the BulkMoveStorage Area to open its properties.

   d. Click the Storage Policies tab to view the policy that is associated with this storage area.

5. Examine the Document Class for the files:

   a. In the navigation pane, expand Sales > Browse > RootFolder. Click the TestBulkMove folder.

   b. In the TestBulkMove tab, on the right, observe that nine documents are listed.

      - In the Class column, verify that five documents belong to PurchaseOrder and four documents belong to PriceQuote.

   c. Both document classes use PurchaseOrderFileStorageArea for storage.

Hint

To verify the storage area for a class, you first need to find the default storage policy. Expand Sales > Data Design > Classes > Document. Open the wanted class. In the General tab, scroll down and look for the field, Default storage area. When you have the default storage policy, expand Sales > Administrative > Storage > Storage Policies. Open the storage policy. The associated storage areas are listed.

6. On the right, close all the open tabs.
7. In the navigation pane, collapse all the expanded nodes.

Procedure 2: Create a bulk move content job

1. Start the New Bulk Move Content Job wizard.
   a. In the navigation pane, expand **Sales > Sweep Management > Job Sweeps** and select Bulk Move Content Jobs.
   b. In the right pane, click New.
      - A New Bulk Move Content Job tab opens.
2. Define a Bulk Move Content Job:
   a. Enter a value for the field, **Display name** (Example: BMCJob).
   b. For the field, **Sweep mode**, select **Normal** from the list. (You might need to scroll down to see the sweep mode field).

Information

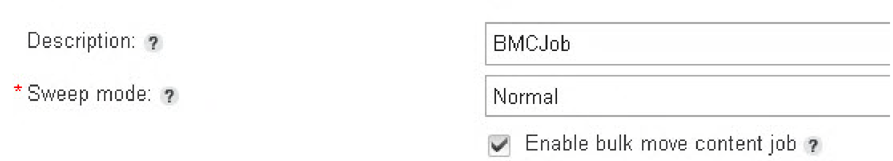
Sweep mode can have the values:

- Normal
- Preview
- Preview only counters

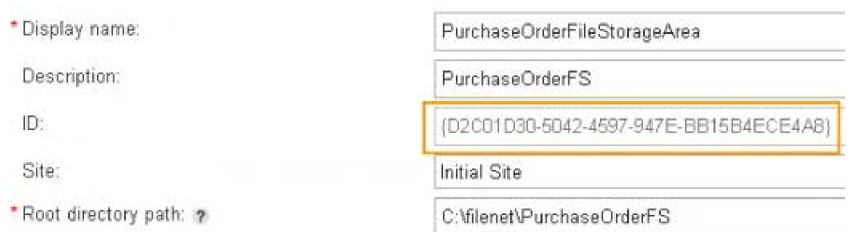
The Preview mode is useful for testing the filtering expression criteria without running any actions on the selected objects.

You are going to use the Preview setting in the next challenge activity.

   c. Click the Enable bulk move content job option and click Next.



3. Define Sweep Targets - Target class:
   a. For the field, **Target class**, select PurchaseOrder.
4. Define Sweep Targets - Filter expression:
   a. For the Filter expression field, copy the GUID by completing the following step 5. Then, continue with step 6.
5. Copy the GUID value:
   a. In the navigation pane, expand **Sales > Administrative > Storage > Storage Areas**.
   b. Click PurchaseOrderFileStorageArea.
   c. In the PurchaseOrderFileStorageArea tab on the right, in the General subtab, copy the GUID value in the ID field.



6. In the New Bulk Move Content Job tab, build the Filter expression field and paste the GUID in the expression. Example: StorageArea=OBJECT('{GUID}') (no spaces)

Important

Verify that no typing errors are in the filter expression statement. Type the value exactly as shown. It is case-sensitive and extra spaces are not allowed. Make sure to use single quotation marks not double quotation marks.

7. For the field, Storage policy names, select **BulkMove Storage Policy**.

8. Set other options:
   - Include subclasses: Not Enabled
   - End replication after move: Not Enabled
   - Record Failures: Enabled

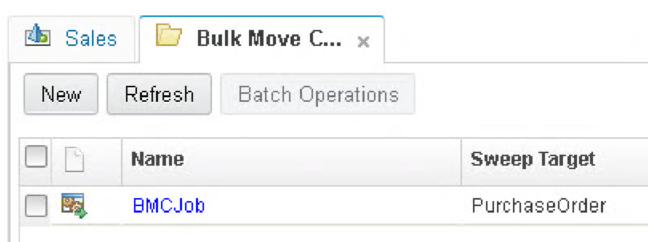
   a. Click Next.

9. Define Bulk Move Content Job Dates.
   a. Enter today's date for the Effective start date. For example, `8/4/2016`. (Click in the next field, or outside of the current field, for the system to automatically format the date).
   b. Enter tomorrow's date for the Effective end date field. (Example: `8/5/2016`)
   c. Edit the start time to the current time of the image + 2 minutes (make sure to change AM to PM if necessary).
   d. Edit the stop time, change AM to PM.

   e. Click Next.

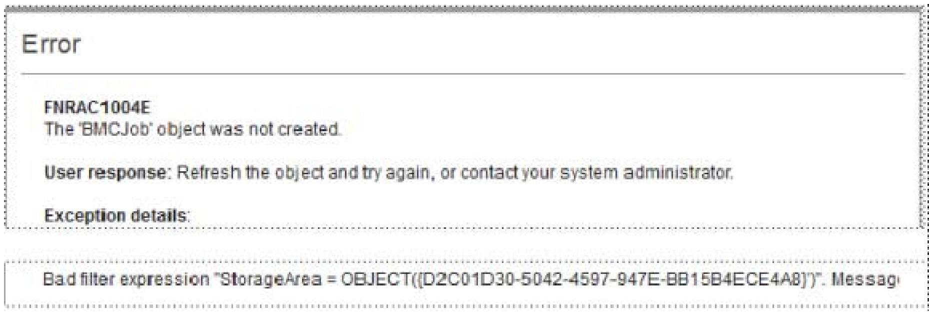
10. In the Summary page, review the information and click **Finish**.
    a. In the Success page, click **Close** to close the tab.

11. In the Bulk Move Content Jobs tab, click Refresh.
    a. Verify that the new sweep job is listed.



Troubleshooting

If the Filter expression value has an error, the wizard does not create the Job. You get an error similar to the one in the screen capture. In this example, notice that the expression is missing a single quotation mark before the GUID # starts.



Fix the format:

- Click OK to close the Error window.

Click Back in the wizard, correct the Filter expression value, and complete the wizard.

Procedure 3: Test the bulk move content job

In this procedure, you examine the properties of the bulk move content job you created. You also examine the file storage areas for their file count after running the bulk move content job. You compare these values with the ones before running the job.

1. In the tab, Bulk Move Content Jobs, click Refresh.

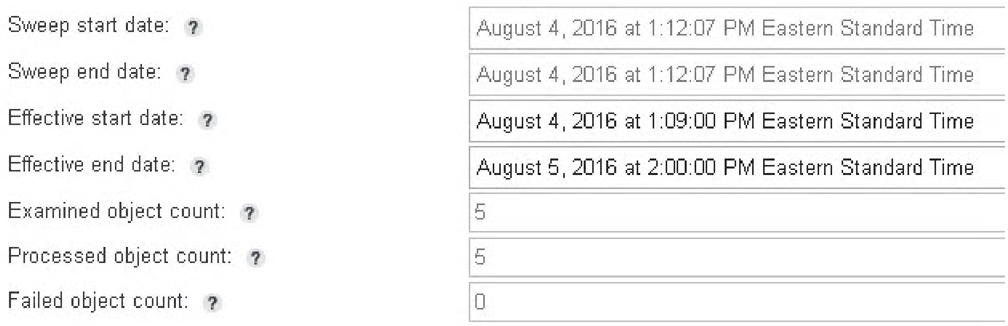
Important

It might take a couple minutes for the Sweep Job to complete. If you do not see the expected results, wait a couple minutes and click Refresh again.

2. Examine the bulk move content job properties.

   a. In the Bulk Move Content Jobs tab, open the job that you created. For example, click BMCJob.

3. In the General tab, scroll down and observe the values for the start and end dates. Verify that five objects were examined and processed. The Failed object count is 0.



Sweep start date:	August 4, 2016 at 1:12:07 PM Eastern Standard Time
Sweep end date:	August 4, 2016 at 1:12:07 PM Eastern Standard Time
Effective start date:	August 4, 2016 at 1:09:00 PM Eastern Standard Time
Effective end date:	August 5, 2016 at 2:00:00 PM Eastern Standard Time
Examined object count:	5
Processed object count:	5
Failed object count:	0

Information

If you do not see the expected results, wait a few more minutes and click Refresh again (it can take up to 5 minutes after the Effective start date to run).

- If after ten minutes the Sweep start and end date fields are blank (the sweep job did not run), verify that the Effective start and end dates are correct.
- If the Sweep start and end dates are not blank, but the Processed object count=0, verify that the filter expression is correct.

4. Open the Storage Areas.

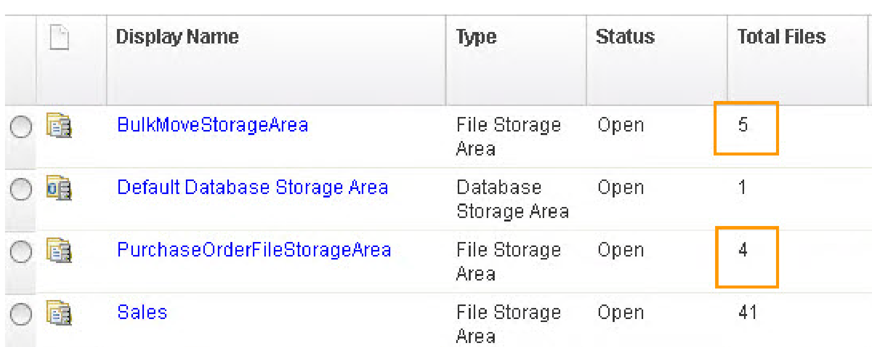
   a. In Sales tab, expand Sales > Administrative and click Storage Areas.

      Storage Area tab opens and all the available storage areas are listed.

5. Examine the File Storage Areas.

   a. Verify that the target storage area (PurchaseOrderFileStorageArea) contains only four files.

   b. Observe that the destination storage area (BulkMoveStorageArea) contains five files.



Display Name	Type	Status	Total Files
BulkMoveStorageArea	File Storage Area	Open	5
Default Database Storage Area	Database Storage Area	Open	1
PurchaseOrderFileStorageArea	File Storage Area	Open	4
Sales	File Storage Area	Open	41

When you run the Bulk Move Content Job, *BMCJob*, the content for the five documents of the PurchaseOrder class is moved from the PurchaseOrderFileStorageArea to the BulkMoveStorageArea.

The four documents of the PriceQuote class are not moved and are still in the storage area, PurchaseOrderFileStorageArea.

6. Log out of the Administration Console for Content Platform Engine and close the browser.

Information

You can also search for the documents of the target class, PurchaseOrder, that is used for the bulk move content job, and verify that their Storage area value is changed.

24.2. Challenge: Configure a bulk move content job:

Complete the following exercise scenario to practice the procedures that you learned in this lesson.

Scenario: Product Department

The Sales Department sends a request to archive the Price Quote documents that are not active. As an Administrator, you complete this task by creating a bulk move content job with the data in the table to move the content to another file storage.

Challenge

- Use the data in the table to create a Bulk Move Content Job in the Sales object store.
- Use the age of the document as the filter expression in this job. You used the file storage area for the filter in the previous activity.
- Use `Preview` for the Sweep mode.
- Test the Bulk Move Content Job.

Data

Item	Value
Display name	MyBulkMoveJob
Sweep mode	Preview
Enable bulk move content	True
Target class	PriceQuote
Filter expression	`DateCreated < NOW() - TimeSpan(2,'Days')`
Storage policy names	Bulk Move Storage Policy
Include Subclasses	False
End replication after move	True
Record Failures	True
Effective Start date	Today’s date (Example: 08/8/2016) adjust the time to a few minutes after the current time.
Effective End date	Tomorrow’s date (Example: 08/9/2016) adjust the time, change AM to PM.

Hint

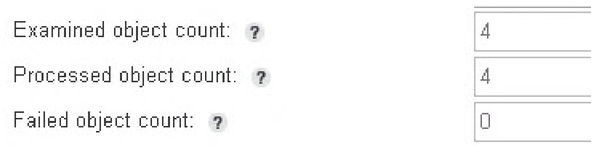
Set the age of the document for the Filter expression field.

- Example: `DateCreated < NOW() - TimeSpan(2,'Days')`
- This filter moves any documents that were created at least two days ago.
- Type the value as shown in the table. It is case-sensitive and extra spaces are not allowed.

In a production system, the age of the documents might be in months or years, but for this lab exercise, you use days.

Verification

- Examine the MyBulkMoveJob properties > General tab.
- Verify that four objects were examined and processed. The failed object count is 0 (it can take up to 5 minutes after the Effective start date).



- Since you chose the Sweep mode value as `Preview`, verify that the Sweep Results tab contains a list of objects that the sweep processed.

	Source Object	Date Created	Type
	{B9673C9A-F538-44AE-96AD-26B42E6E1EE1}	2016-08-04T18:08:33.914Z	Preview
	{E6954061-F009-4C02-AF7C-BBA86B669174}	2016-08-04T18:08:33.914Z	Preview
	{C3B7BA7C-2076-4F3D-ABCA-3D6AC9F3B86C}	2016-08-04T18:08:33.914Z	Preview
	{0437A455-D6FF-4C0B-9721-5C5D24791186}	2016-08-04T18:08:33.914Z	Preview

- The Preview mode helps to test the filtering expression criteria without running any actions on the selected objects.
- When you are finished with the challenge, log out of the administration console and close the browser window.

Exercise review and wrap-up

In this exercise, you completed the following tasks:

- Configure Bulk Content Move jobs to:
  - Move documents from one storage area to another based on the target class and the current file storage area.
  - Move documents from one storage area to another based on the target class and the age of the documents.

Exercise 25.Work with sweep policies

Estimated time

00:40

Overview

In this unit, you create two sweep policies:

- A disposal policy to regularly delete documents of a specific class that satisfy certain filter criteria.
- A content migration policy to move content from one storage area to another.

Objectives

After completing this exercise, you should be able to:

- Create a disposal policy.
- Create a content migration policy.

Exercise Introduction

Introduction

As a system administrator, you need to know how to run sweep policies to complete maintenance tasks, such as deleting old documents or moving content.

Activities

- "Create a disposal policy" on page 25-3
- "Create a content migration policy" on page 25-8

User accounts

Type	User ID	Password
Administrator	p8admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

25.1. Create a disposal policy

Introduction

In this activity, you create and configure a disposal policy to delete certain objects. You specify a target class and a filter expression so that only documents of that particular class that satisfy the filter expression are deleted. You test the disposal policy by verifying the processed object count and the documents in the folders.

Procedures

Procedure 1: Examine documents and file storage areas

In this procedure, you examine the number of documents in the object store folder before running the disposal policy. You also examine the file storage area, PurchaseOrderFileStorageArea, for its file count. You are going to compare the documents and the file count after running the policy.

1. Start the Administration Console for Content Platform Engine.
   a. Log in as the `P8admin` user (password: `IBMFileNetP8`)
2. In the administration console, open the Sales object store and browse to the folder, TestBulkMove.
   a. On the navigation pane, expand Sales > Browse> RootFolder and click TestBulkMove to open it.
   b. In the TestBulkMove tab, observe that nine documents are listed. In the Class column, verify that four documents belong to the class, PriceQuote.

	Containment Name	Document Name	Date Created	Created By	Class
	TestPriceQuote1	TestPriceQuote	2:26:25 PM Eastern Standard Time	P8Admin	PriceQuote
	TestPriceQuote2	TestPriceQuote	June 19, 2013 at 2:30:05 PM Eastern Standard Time	P8Admin	PriceQuote
	TestPriceQuote3	TestPriceQuote	June 19, 2013 at 3:11:52 PM Eastern Standard Time	P8Admin	PriceQuote
	TestPriceQuote4	TestPriceQuote	June 19, 2013 at 3:13:46 PM Eastern Standard	P8Admin	PriceQuote

c. The four documents are stored in the storage area, PurchaseOrderFileStorageArea.

3. Examine the File Storage Area.

   a. In the navigation pane, expand Sales > Administrative > Storage and click Storage Areas.

   b. On the right, verify that the PurchaseOrderFileStorageArea (from where you want to delete the files) contains four files.

Procedure 2: Create a disposal policy

1. Open the New Disposal Policy wizard.

   a. In the navigation pane, select the Sweep Management > Sweep Policies, and click Disposal Policies.

   b. In the Disposal Policies tab on the right pane, click New.

   The New Disposal Policy wizard opens.

2. Define a Disposal Policy.

   a. In the New Disposal Policy tab, enter a value for the Display name field (Example: `MyDisposalPolicy`).

   b. For the Sweep mode, select Normal.

   c. Select the option, Enable disposal policy.

   d. Click Next.

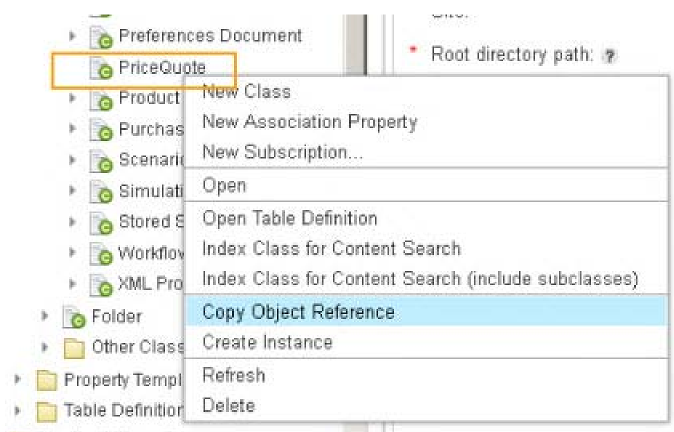
3. Define Sweep Targets - Target class:

   a. For the Target class field, copy the object reference by completing the following step 4. Then, continue on the New Disposal Policy wizard in step 5.

4. Copy the object reference.

   a. In the navigation pane, expand Sales > Data Design > Classes > Document.

   b. Right-click **PriceQuote**, and click Copy Object Reference from the list.



5. Paste Object.

   a. Back in the New Disposal Policy tab, click Paste Object.

   b. Verify that the Target class field now has the `PriceQuote` value.

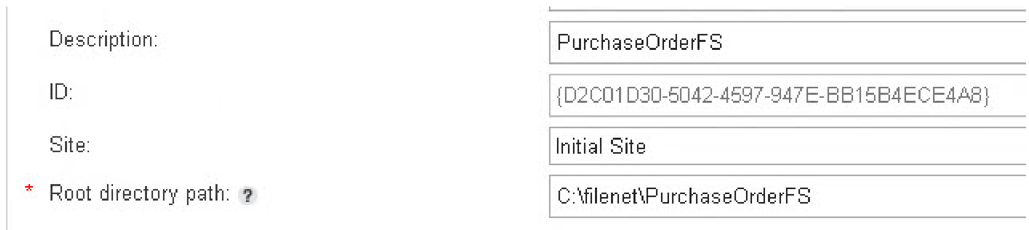
6. Define Sweep Targets - Filter expression:

   a. For the Filter expression field, copy the GUID by completing the following step 7. Then, continue on the New Disposal Policy wizard in step 8.

7. Copy the GUID value.

   a. In the navigation pane, expand Sales > Administrative > Storage > Storage Areas.

   b. Click PurchaseOrderFileStorageArea.



   c. On the right pane, in the PurchaseOrderFileStorageArea tab > General subtab, copy the GUID value in the ID field.

8. In the New Disposal Policy tab, build the Filter expression field and paste the GUID in the expression. Example: `StorageArea = OBJECT('{GUID}')`

Important

Verify that no typing errors are in the Filter expression statement. Type the value exactly as shown. It is case-sensitive and extra spaces are not allowed.

9. Set other options:

   - Include subclasses - Not Enabled
   - Number of sweep iterations- 10 (Leave the default value)

   a. Click Next.

10. Define Policy Dates:

    a. Leave the date fields blank so the sweep policy starts immediately.

    b. Click Next.

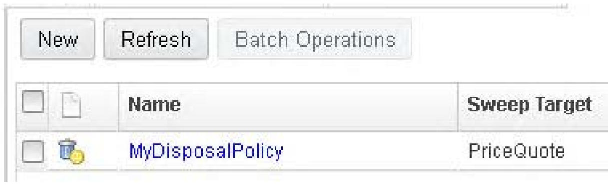
11. In the Summary page, verify the details and click Finish.

    a. In the Success page, click Close to close the tab.

12. Verify that the policy is created.

    a. In the Disposal Policies tab, click Refresh.

b. Verify that the policy that you created is displayed.

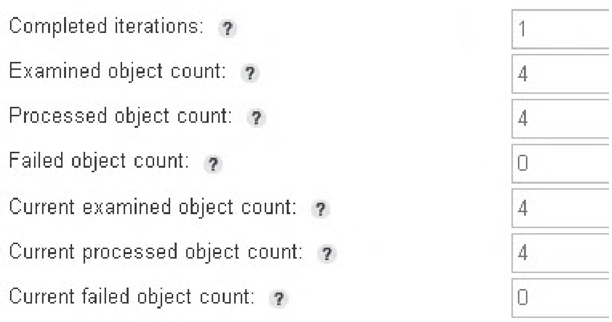


Procedure 3: Test the disposal policy

1. Verify the properties of the policy that you created:

   a. In the Disposal Policies tab, click MyDisposalPolicy to open it.

   b. In MyDisposalPolicy tab, > General sub tab, observe the object counts.



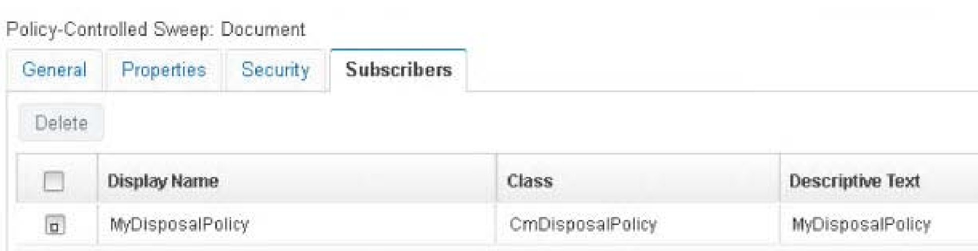
2. Verify that Policy Controlled Sweeps is created automatically.

   a. In the navigation pane, select the Sweep Management > Policy-Controlled Sweeps folder.

   b. In the Policy Controlled Sweeps tab in the right pane, verify that an item is listed.

   c. Click the item to open it.

   d. In the Subscribers tab, verify that the policy that you created is listed.



3. Examine the documents:

   a. In the navigation pane, expand Sales > Browse> RootFolder and click TestBulkMove.

   b. In the TestBulkMove tab, verify that the four documents that belong to the class, PriceQuote, are deleted from the folder. You might need to click Refresh.

      The four documents of class, PriceQuote, are no longer listed.

4. Examine the File Storage Area.
   a. In the right pane, click the Storage Areas tab. Click Refresh.
   b. Verify that the PurchaseOrderFileStorageArea (from where you deleted the files) shows a file count of zero.

BulkMoveStorageArea	File Storage Area	Open	5
Default Database Storage Area	Database Storage Area	Open	1
PurchaseOrderFileStorageArea	File Storage Area	Open	0
Sales	File Storage Area	Open	41

Information

You can also search for the documents of class, PriceQuote, and verify that they are deleted.

5. Log out of the Administration Console for Content Platform Engine and close the browser.

25.2. Create a content migration policy

Introduction

In this activity, you configure a content migration policy to move documents from one file storage area to another.

- You specify a target class and a filter expression so that only documents of the specified class that satisfy the filter expression are moved.
- You configure a time slot to control when the sweep policy runs.
- You test the content migration policy by verifying the counters and the file counts of the storage areas.

Note

When you start the activity, the file storage area that you want to move documents from, has zero documents. You create the content migration policy. You add at least one document of the target class, and observe how the content migration policy sweep moves the document from one storage area to another. You are repeating Exercise 1.1 with a policy sweep instead of a sweep job and configuring a time slot.

Procedures

Procedure 1: Examine file storage areas

In this procedure, you examine the file storage area, PurchaseOrderFileStorageArea, for its file count.

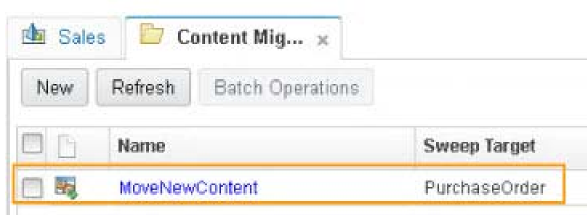
1. Start the Administration Console for Content Platform Engine.
   a. Log in as the `P8admin` user (password: `IBMFileNetP8`)
2. Examine the file storage area.
   a. In the navigation pane, open the Sales object store.
   b. In the navigation pane, expand Sales > Administrative > Storage, and click Storage Areas.
   c. On the right, verify that the PurchaseOrderFileStorageArea (from where you want to migrate the files) contains zero files.

Procedure 2: Create a content migration policy

1. Open the New Content Migration Policy wizard.
   a. In the navigation pane, expand S**weep Management > Sweep Policies**, and click Content Migration Policies.
   b. In the Content Migration Policies tab on the right pane, click New.
2. Use the data in the table to complete the wizard.

Item	Value
Display name	`MoveNewContent`
Sweep mode	Preview
Enabled	Select
Target class	PurchaseOrder
Filter expression	`StorageArea=OBJECT('{GUID}') (no spaces)` Where GUID = the ID for the storage area, PurchaseOrderFileStorageArea
Storage policy names	Bulk Move Storage Policy
Include Subclasses	Do not select
End replication after move	Select
Result retention	2 sweep iterations
Effective Start date	Today's date (Example: 08/8/2016) adjust the time to 3 minutes after the current time.
Effective End date	Tomorrow's date (Example: 08/9/2016) adjust the time, change AM to PM.

3. On the Summary page, verify the details and click Finish.
   a. On the Success page, click Close to close the tab.
4. Verify that the policy is created.
   a. In the Content Migration Policies tab, click Refresh.
   b. Verify that the policy that you created is displayed.

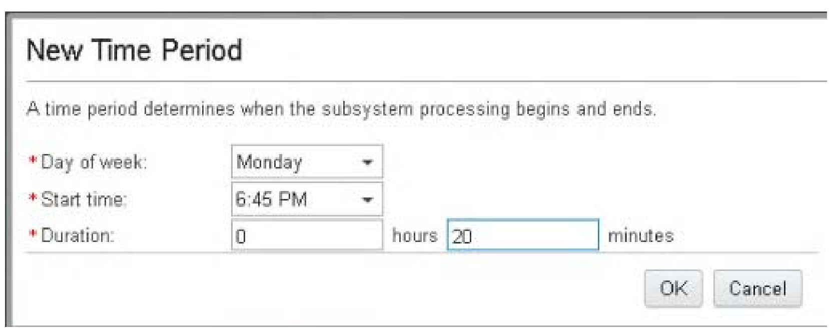


Procedure 3: Add time slots to the policy-controlled sweep

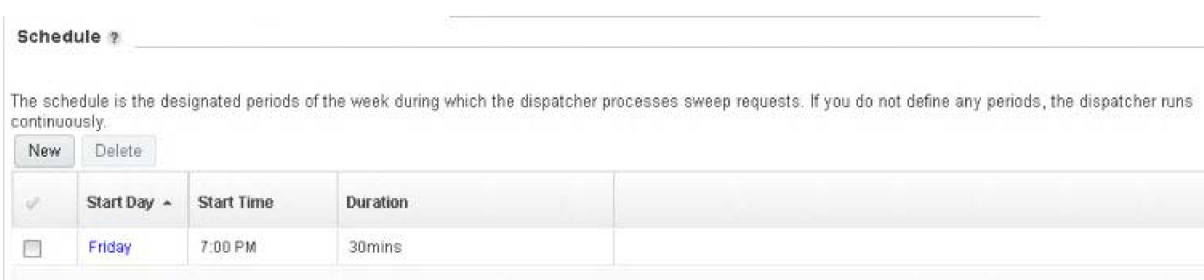
In this procedure, you add a time slot to control when the policy sweep runs.

1. Determine the policy-controlled sweep that is associated with the policy sweep you created.
   a. Open the content migration policy that you created.
   b. Find the field, Policy-controlled sweep.

2. Add a time slot.
   a. In the navigation pane, expand the Sweep Management > Policy-Controlled Sweeps, and click Document to open it.
   b. Under Schedule, click New.
      - Day of the week: Select today's day of the week.
      - Start time: Select a time slot that at least 5 minutes later than the time you specified for the Effective start.
      - Duration: Set to 20. For example,



      - Click OK.

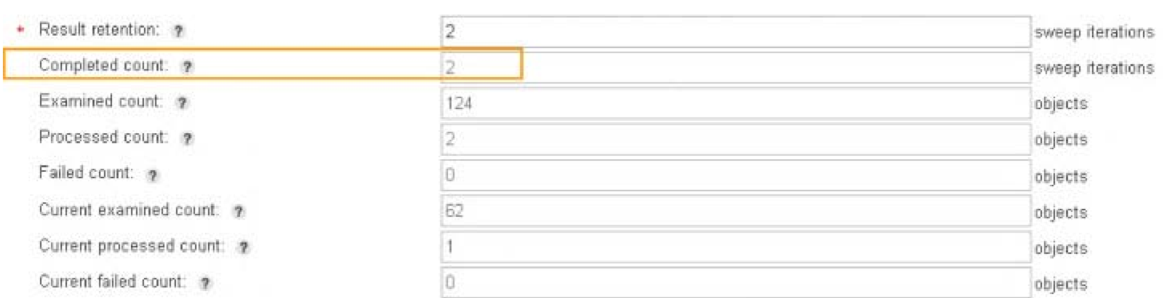


   c. Click Save.
   d. Close the Document tab.

Procedure 4: Test the content migration policy

1. Verify the properties of the policy that you created:
   a. Back in the MoveNewContent tab, click Refresh.
   b. In General sub tab, observe the object counts.
2. Add a document of class, PurchaseOrder.
   a. On the navigation pane, expand Sales > Browse> RootFolder and click TestBulkMove to open it.
   b. Click Actions > New Document.

      Accept defaults for anything not specified.
      - Document title: P01
      - Class: PurchaseOrder
      - With content: selected
      - Content Elements: Add, Desktop\Libraries\Doucments\\accounts.txt
      - Properties: You can leave them blank
      - Click Next until you get to Advanced Features.
      - Storage area: PurchaseOrderFileStorageArea
      - On the summary page, verify the details and click Finish.
      - On the success page, click Close.
3. Verify the storage area counts.
   a. In the navigation pane, expand Sales > Administrative > Storage, and click Storage Areas.
   b. Click Refresh.
   c. On the right, verify that the PurchaseOrderFileStorageArea contains one file.
4. Verify the counters of the content migration policy.
   a. Back in the MoveNewContent tab, click Refresh.
   b. Wait a few minutes after the time slot that you created.
   c. Click Refresh again.
5. Wait a few minutes and click Refresh again (it takes approximately 5 minutes to run each iteration after the time slot start time).
   a. When Completed Count shows 2, note the updated counters.



Note

Your counts may vary from the example.

- Completed count - shows the number of times the sweep policy ran.
- Examined Count: (Processed count) multiplied by (Current examined count):
  - 2 * 62 = 124 (in this example).
- Processed count: 2 (iterations). (Running total number of the objects that are processed in all the iterations).
- Failed count - Running total number of failures in all the iterations.
- Current examined count: 62 (the number of examined objects in the current iteration).
  - The objects refer to rows in a database table that are examined.
- Current processed count: 1 (current iteration).
- Current failed count - Number of failures in the most recent iteration.

b. Click the tab, Sweep Results.

c. Two items are listed, but they are the same source object. The iteration column shows you which iterations each row results from.

d. After a few minutes, click Refresh.

6. Wait until the duration time expires.

   a. Note the value of the field, Completed count (the number of iterations run).

   b. Make sure that no more than two sweep results are listed.

7. Log out of the administration console and close the browser window.

Exercise review and wrap-up

In this exercise, you completed the following tasks:

- Create a disposal policy to delete documents of a specified target class and storage area.
- Create a content migration content policy with a time slot to control when the policy sweep runs.

Part 8. Auditing and Logging

Exercise 26.Work with system logs

Estimated time

00:30

Overview

In this exercise you, archive and view the system logs, and enable/disable trace logging.

Objectives

After completing this exercise, you should be able to:

- Archive and view system logs
- Configure trace logging

Exercise Introduction

Introduction

This exercise includes two activities:

- Archive and view system logs
- Configure trace logging

In this exercise, you archive and view the Content Platform Engine and WebSphere Application Server logs.

Activities

- "Archive and view system logs" on page 26-3
- "Configure trace logging" on page 26-8

User accounts

Type	User ID	Password
Administrator	p8admin	IBMFileNetP8
Business user	Carol	filenet

Before you begin

Important

You must complete these tasks before you start the lesson exercises.

Start the student system:

To log in to the student system.

- User name: `Administrator`
- Password: `passw0rd`

Follow the instructions in Procedure 1 and 2 of Appendix A, "Start and Stop System Components," on page A-1.

26.1. Archive and view system logs

Introduction

In this activity, you locate the Content Platform Engine logs and the WebSphere Application Server logs. You shut down the web application server to archive the logs. You restart the web application server and examine the new logs created.

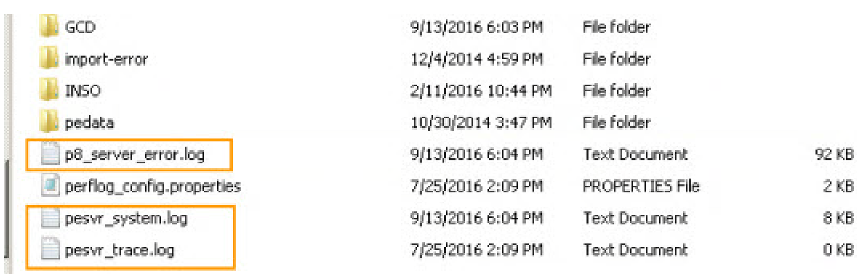
Procedures

Procedure 1: Locate the logs

In this procedure, you locate the Content Platform Engine logs and the WebSphere Application Server logs.

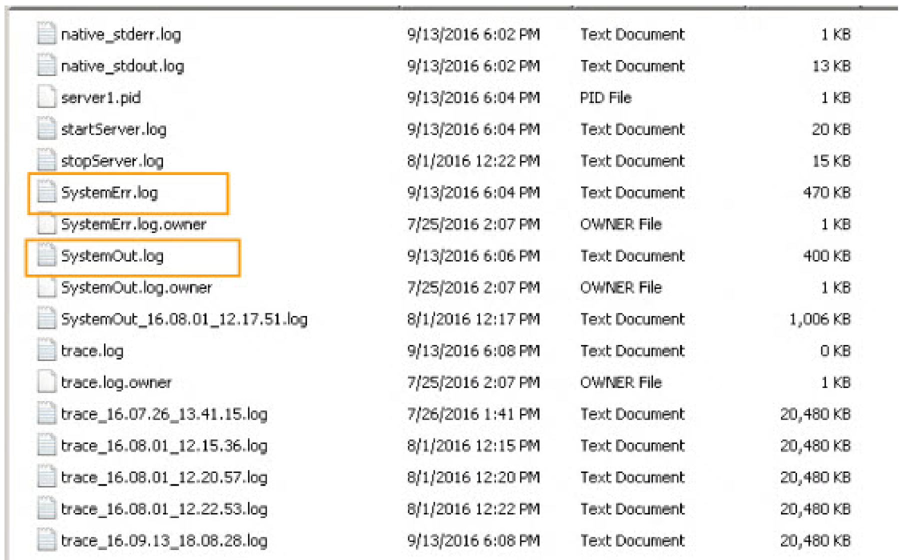
1. Locate the Content Platform Engine logs.
   a. Get the log file location:
      - Open a Mozilla Firefox browser window and go to the Content Engine Startup Context (Ping Page).

        Use the bookmark: System Health > CE ping.
      - Copy the Log File Location path.
      - Open a Windows Explorer window and go to that path.
      - You should see 3 log files:



      - Minimize the Windows Explorer window.

2. Locate the WebSphere Application Server logs.
   a. Open the folder, WebSphere Admin, on the desktop.
   b. Right-click the link, **server 1 WAS logs**, and select, **Open in new window**.
   c. You should see:



native_stderr.log	9/13/2016 6:02 PM	Text Document	1 KB
native_stdout.log	9/13/2016 6:02 PM	Text Document	13 KB
server1.pid	9/13/2016 6:04 PM	PID File	1 KB
startServer.log	9/13/2016 6:04 PM	Text Document	20 KB
stopServer.log	8/1/2016 12:22 PM	Text Document	15 KB
SystemErr.log	9/13/2016 6:04 PM	Text Document	470 KB
SystemErr.log.owner	7/25/2016 2:07 PM	OWNER File	1 KB
SystemOut.log	9/13/2016 6:06 PM	Text Document	400 KB
SystemOut.log.owner	7/25/2016 2:07 PM	OWNER File	1 KB
SystemOut_16.08.01_12.17.51.log	8/1/2016 12:17 PM	Text Document	1,006 KB
trace.log	9/13/2016 6:08 PM	Text Document	0 KB
trace.log.owner	7/25/2016 2:07 PM	OWNER File	1 KB
trace_16.07.26_13.41.15.log	7/26/2016 1:41 PM	Text Document	20,480 KB
trace_16.08.01_12.15.36.log	8/1/2016 12:15 PM	Text Document	20,480 KB
trace_16.08.01_12.20.57.log	8/1/2016 12:20 PM	Text Document	20,480 KB
trace_16.08.01_12.22.53.log	8/1/2016 12:22 PM	Text Document	20,480 KB
trace_16.09.13_18.08.28.log	9/13/2016 6:08 PM	Text Document	20,480 KB

   The two files that are highlighted are the files that are most often referenced.

   d. Minimize the Windows Explorer window.

Procedure 2: Disable WebSphere Application Server trace logging

In this procedure, you disable trace logging for the WebSphere Application Server. The image was configured with trace logging enabled.

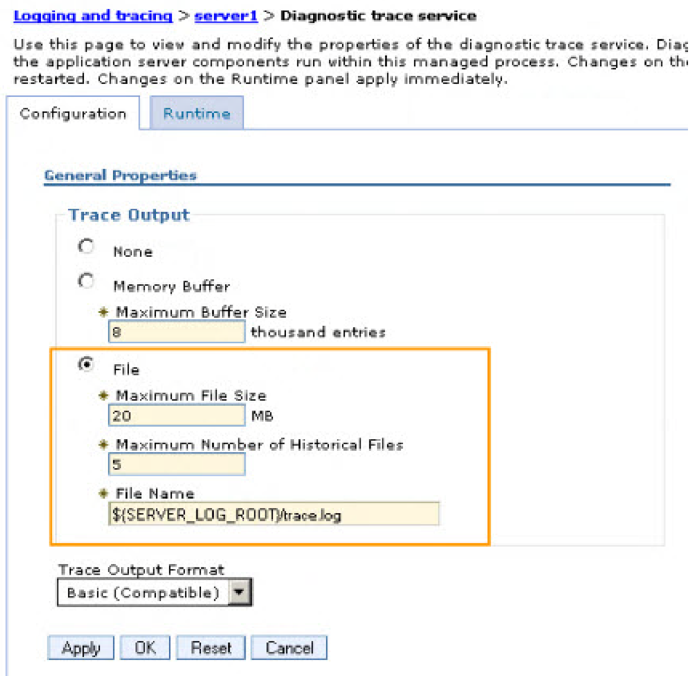
1. Start the WebSphere Integrated Solutions Console.
   a. In the WebSphere Admin folder, on the desktop, double-click, **Administrative console server1**.
   b. Accept the p8admin credentials, and click **Log in**.

2. Turn off the trace output:

   a. In the left navigation pane, select Troubleshooting > Logs and trace.

   b. On the right, click the link, **server1**.

   c. Click Diagnostic Trace. You see:



   - The highlighted box in the screen capture, shows you how to control the maximum file size, the number of historical files to keep before overwriting, and the location of the trace log.

   d. Select **None** to disable the trace output.

   e. Click OK.

   f. Click Save to save the configuration.

   g. Log out of the WebSphere Integrated Solutions Console.

   h. Close the browser window and tabs.

Note

The change does not take effect until WebSphere Application Server is restarted. You restart WebSphere Application Server in the next procedure.

Procedure 3: Archive old log files

In this procedure you, stop the WebSphere Application Server and archive the WebSphere Application Server and Content Platform Engine logs.

1. Stop WebSphere Application Server:
   a. In the WebSphere Admin folder, on the desktop, double-click, **Stop the Server1.bat**.
   b. Wait for the operation to complete (the command window disappears).
   c. Minimize the WebSphere Admin folder window.
2. Archive the Content Platform Engine log files:
   a. Maximize the Windows Explorer window where you viewed the Content Platform Engine log files in Procedure 1.
   b. Create a folder in this directory to store the archived logs (example, **Archived Logs**).
   c. Move all of the *.log files to the folder that you created.
   d. Minimize the Windows Explorer window.
3. Archive the WebSphere Application Server log files:
   a. Maximize the Windows Explorer window where you viewed the WebSphere Application Server log files in Procedure 1.
   b. Create a folder in this directory to store the archived logs (example, **Archived Logs**).
   c. Move all of the files to the folder that you created.
   d. Minimize the Windows Explorer window.
4. Start WebSphere Application Server:
   a. Maximize the WebSphere Admin folder.
   b. Double-click, **Start Server1.bat**.
   c. Wait for the operation to complete (the command window disappears).

Procedure 4: Examine the new log files

If no log files exist, the Content Platform Engine and the WebSphere Application Server create new logs at startup.

1. Examine the Content Platform Engine log files:
   a. Maximize the Windows Explorer window where you viewed the Content Platform Engine log files.
   b. Notice the 3 log files that are created with the current date and time.
   c. Right-click the file, **p8_server_error.log**, and select, **Edit with Notepad++**. (Cancel any prompts to update to the version).
      - Examine the log entries that are created during startup.

2. Examine the WebSphere Application Server log files:

   a. Maximize the Windows Explorer window where you viewed the WebSphere Application Server log files.

   b. Notice the log files that are created with the current date and time.

   c. Open SystemOut.log with Notepad++.

      - Examine the log entries that are created during startup.
      - Scroll down the log file until you see:

```
O ================================================================================
O P8 Content Platform Engine Startup:  5.2.1.3 dap521.003.172   Copyright IBM Corp.
O ================================================================================
```

        ○ Which indicates the Content Platform Engine startup.

Information

Errors are logged as Java stack traces. You see a couple of errors:

- Error binding CNMailSession
- Error in load config file cmis.properties

These errors can be ignored because the components are not being used. However, it is important that you monitor your organization's log files regularly and learn to recognize errors that might indicate a serious issue.

   d. Open SystemErr.log with Notepad++.

      - Notice that this log file does not have as many entries as the SystemOut.log.
      - Only the CNMailSession error is logged.

   e. Open startServer.log with Notepad++.

      - Notice the last entry that includes, ***Server server 1 open for e-business***.
      - This log entry indicates that the WebSphere Application Server started successfully.

   f. When you are done examining the log files, click File > Close All.

   g. Close Notepad++.

3. Minimize the Windows Explorer windows.

26.2. Configure trace logging

Introduction

In this activity, you:

- Configure trace logging on the Content Platform Engine at the domain level and site level.
- Log in to an IBM Content Navigator desktop to created security entries in the trace log.
- Examine the entries in the trace log.

Procedures

Procedure 1: View trace configuration

Trace logging options can be set on the domain or at the site level. If the settings are configured on the site, they override the settings on the domain. On your student system, trace logging is configured at the site level. In this procedure, you are going to verify these settings.

1. Start the Administration Console for Content Platform Engine.
   a. In a browser window, go to `http://ecmedu01:9080/acce`.

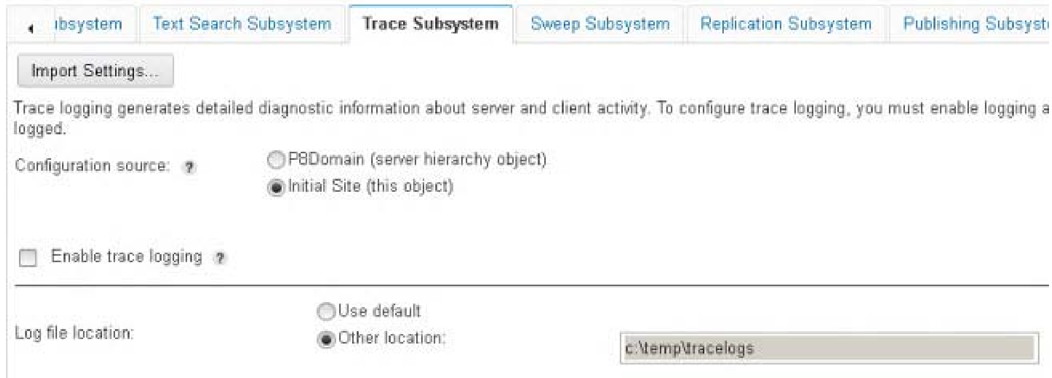
Hint

For your convenience, a bookmark, **ACCE**, is defined in Mozilla Firefox.

---

   b. Log in as the `P8admin` user (password: `IBMFileNetP8`).
2. On the right, select the **Trace Subsystem** tab (you might need to click the right arrow to scroll to the right).
3. Verify that trace logging is not enabled.
4. In the left navigation pane, go to **Global Configuration > Administration > Sites > Initial Site (Default)**.
5. On the right, select the **Trace Subsystem** tab.

6. Verify that the configuration settings look like:



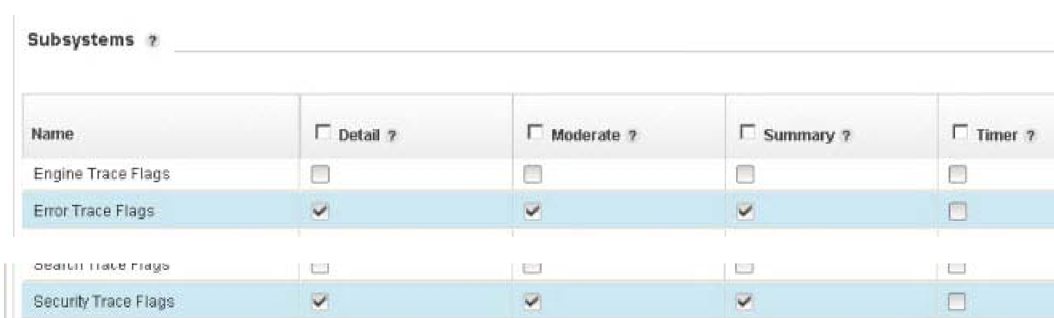
7. Leave the Administration Console open for the next procedure.

Procedure 2: Configure trace logging on the domain

Trace logging is configured at both the site level and the domain level. In this procedure, you are going to configure trace logging at the domain level, and then configure the site to inherit these settings.

1. In the Administration Console for Content Platform Engine, select the P8Domain tab on the right.
2. On the Trace Subsystem tab, select the option, **Enable trace logging**.
3. On the Log file location, select the option, **Use default** (the trace log is saved in the same folder as the Content Platform Engine log files).

4. In the Subsystems section, select the Detail level trace options for the following subsystems:
    - Error trace flags
    - Security trace flags



Important

Log files at the Detail level grow quickly. Enable only the subsystems that you need. Remember to disable trace logging when you no longer need it.

5. Click Save to save the P8Domain configuration.
6. Check to see whether any trace logs are created:
   a. Maximize the Windows Explorer window where you viewed the Content Platform Engine log files.
      - You don’t see any trace logs because the site level configuration is overriding the domain level configuration.
   b. Minimize the Windows Explorer window.
7. Leave the Administration Console open for the next procedure.

Procedure 3: Configure trace logging at the site

You enabled trace logging on the domain, but no trace logs exist because the settings are overridden at the site level. In this procedure, you configure the site to inherit the domain settings.

1. In the Administration Console for Content Platform Engine, select the Initial Site tab.
2. Click Refresh to pick up the changes you saved in the previous procedure.
3. For Configuration source, select **P8Domain**.
   a. Read the message that displays and click OK.
4. Click Save to save the site settings.
5. Log out of the Administration Console.
6. Minimize the browser window.

Procedure 4: Inspect the trace log files.

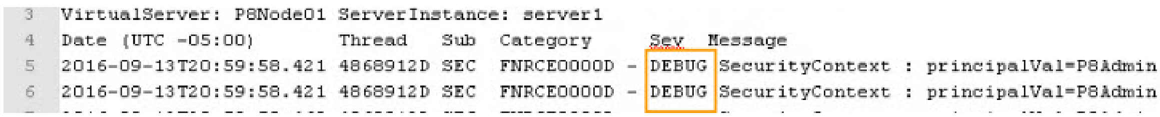
By default, trace logs are generated in the same location as the Content Platform Engine log files. With trace options enabled, the log files are already being generated.

1. Maximize the Windows Explorer window where you viewed the Content Platform Engine log files.
2. Refresh the window.
3. Verify that **p8_server_trace.log** exists.

Note

The size of the file is already large compared to the other log files.

4. Right-click the file, p8_server_trace.log, and select Edit with Notepad++.
5. Verify that the file contains DEBUG level entries.



```
3  VirtualServer: P8Node01 ServerInstance: server1
4  Date (UTC -05:00)       Thread   Sub  Category      Sev   Message
5  2016-09-13T20:59:58.421 4868912D SEC  FNRCE0000D - DEBUG SecurityContext : principalVal=P8Admin
6  2016-09-13T20:59:58.421 4868912D SEC  FNRCE0000D - DEBUG SecurityContext : principalVal=P8Admin
```

6. Leave the trace log open for the next procedure.
7. Minimize the Notepad++ window.

Procedure 5: Create trace log entries

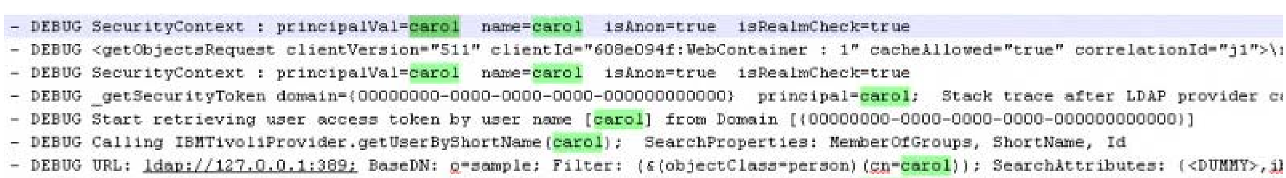
You enabled security trace logging. You are going to log in to IBM Content Navigator as Carol and then check the trace log file for this entry.

1. Open an IBM Content Navigator desktop:
   a. Maximize the browser window and open a new tab.
   b. Go to `http://ecmedu01:9080/navigator`.

Hint

For your convenience, a bookmark, **Content Navigator**, is defined in Mozilla Firefox. If you have issues, refer to Appendix B, "Troubleshooting," on page B-1

   c. Log in as:
      - User name: `Carol`
      - Password: `filenet`
2. Maximize the Notepad++ window. If prompted, click **Yes**, to reload the file.
3. Search for the word “Carol.”
4. Review the log entry. Several log entries show Carol’s login event.



```
- DEBUG SecurityContext : principalVal=carol  name=carol  isAnon=true  isRealmCheck=true
- DEBUG <getObjectsRequest clientVersion="511" clientId="608e094f:WebContainer : 1" cacheAllowed="true" correlationId="j1">\
- DEBUG SecurityContext : principalVal=carol  name=carol  isAnon=true  isRealmCheck=true
- DEBUG _getSecurityToken domain={00000000-0000-0000-0000-000000000000}  principal=carol;  Stack trace after LDAP provider c
- DEBUG Start retrieving user access token by user name [carol] from Domain [{00000000-0000-0000-0000-000000000000}]
- DEBUG Calling IBMTivoliProvider.getUserByShortName(carol);  SearchProperties: MemberOfGroups, ShortName, Id
- DEBUG URL: ldap://127.0.0.1:389; BaseDN: o=sample; Filter: (&(objectClass=person)(cn=carol)); SearchAttributes: (<DUMMY>,j
```

5. Close the trace log.
6. Close Notepad++.
7. Log out of the IBM Content Navigator desktop.

Procedure 6: Disable trace logging

Never leave trace logging enabled for long periods of time. Trace logging affects system performance and uses disk space.

1. In the Administration Console for Content Platform Engine window, log in as the `P8admin` user (password: `IBMFileNetP8`).

Hint

You might see this error:

Click OK. The login screen is refreshed, so you can log in. This situation occurs because you logging in to two different applications in the same browser window.

---

2. Open the Trace Subsystem tab on the right.
3. Clear the Enable trace logging option.
4. Click Save.
5. Log out of the Administration Console.
6. Close the browser windows.
7. Close the open Windows Explorer windows.

Exercise review and wrap-up

In this exercise, you completed the following tasks:

- Locate the Content Platform Engine logs and the WebSphere Application Server logs.
- Archive the existing Content Platform Engine logs and the WebSphere Application Server logs.
- Restart the WebSphere Application Server to generate new logs files.
- Examine the new Content Platform Engine logs and the WebSphere Application Server logs.
- Configure trace logging at the domain level and site level.
- Inspect the trace log files.
- Create trace log entries.
- Disable trace logging.

Exercise 27.Work with audit logs

Estimated time

00:50

Overview

In this exercise, you learn:

- How to configure auditing on document class objects.
- How to view the audit history and query the audit log.
- How to create an audit disposition policy to automatically prune the audit log.

Objectives

After completing this exercise, you should be able to:

- Create audit definitions
- Prune audit entries

Exercise Introduction

Introduction

In this exercise, you learn how to:

- Define audit definitions to create audit entries in the audit log.
- Create audit disposition policies to automatically prune the audit log.

Activities

- "Create audit definitions" on page 27-3
- "Prune audit entries" on page 27-8

User accounts

Type	User ID	Password
Administrator	p8admin	IBMFileNetP8

27.1. Create audit definitions

Introduction

In this activity, you add an audit definition to a custom document class. You update a document and then observe the audit history.

Procedures

Procedure 1: Enable auditing on the Sales object store

You can enable and disable auditing at the object store level. Auditing is disabled by default.

1. Open a browser window and start the Administration Console for Content Platform Engine.
   a. Log in as the `P8admin` user (password: `IBMFileNetP8`).
2. Enable auditing on the Sales object store:
   a. Open the object store, **Sales**
   b. In the General tab, on the right, locate, **Enable auditing** (three rows from the bottom).
   c. Click the down arrow and select, **Yes**.
   d. Click Save.
   e. Leave the Administration Console open for the next procedure.

Procedure 2: Create audit definitions

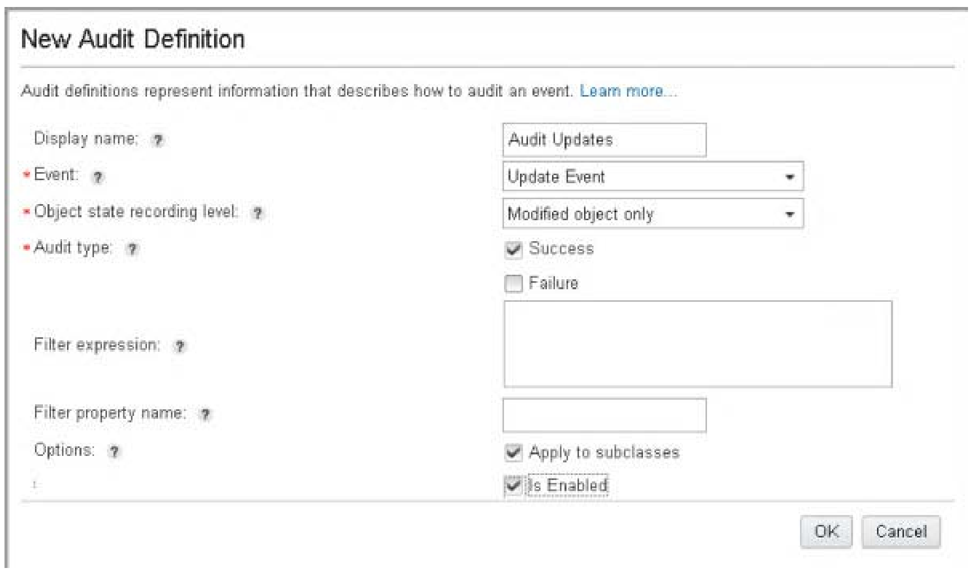
In this procedure, you create audit definitions on the document subclass, Order. The Order class has two subclasses.

1. Open the document subclass, **Order**:
   a. On the left navigation pane of the Sales object store, go to **Data Design > Classes > Document > Order**.
2. On the right, select the **Audit Definitions** tab (you might need scroll to the right).
3. Click **New**.

4. On the New Audit Definition page, enter the following information:

Item	Value
Display name	`Audit Updates`
Event	Update Event
Object State Recording Level	Modified object only
Audit type	Success
Apply to subclasses	Checked
Is Enabled	Checked

- You see:



5. Click OK to create the Audit Definition.
6. Repeat Steps 3-5 to create another audit definition. Use the following information:

Item	Value
Display name	`Audit Deletions`
Event	Deletion Event
Object State Recording Level	None
Audit type	Success
Apply to subclasses	Checked
Is Enabled	Checked

7. Click **Save** to save the changes to the Order class definition.
8. Log out of the Administration Console.

Procedure 3: Create audit entries

In this procedure, you create audit entries by updating a document of class, Order.

1. Log on to IBM Content Navigator:
   a. Open a new Firefox browser tab, and go to the bookmark, **Content Navigator**.
   b. Log in as the `P8admin` user (password: `IBMFileNetP8`).
2. From the Sales object store, open the folder, **Orders**.
3. Select a document (Example: Order Basic A).
4. Right-click Properties.
5. Change a property value (Example: Amount_due).
6. Click **Save**.
7. Log out of IBM Content Navigator.

Procedure 4: View the audit history

When auditing is enabled, you can view the audit history of an object to see which audited events took place. The audit log entries include when the change was made, and the user that made the change.

1. Log on to Administration Console for Content Platform Engine:
   a. Switch back to the tab in the Firefox browser, already open to the Administration Console.
   b. Log in as the `P8admin` user (password: `IBMFileNetP8`).

Troubleshooting

If you do not get a login screen, close the browser window and open a new browser window. Launch the Administration Console.

2. Go to **Sales > Browse> Root Folder > Orders**.
3. Open the document that you changed in the previous procedure.
4. Open the **Audit History** tab (you might need to scroll to the right to find it).
5. Verify that you can see at least one audit log entry.

Audit history

	Event	Date Created	Event Status	Creator	Id
	Update	September 14, 2016 at 12:54:18 PM Eastern Standard Time	Succeeded	P8Admin	{A81F2506-4EF7-46D5-803C-19560B8C7541}

6. Examine the information that is provided in the audit entry.
7. Click the Update link to open the audit entry.

8. Verify that you can see which properties were modified:

9. Close the Update tab.
10. Leave the Administration Console open.

Procedure 5: Create more audit entries

In this procedure, you check out and download a document to save a local copy, then you delete the document from the object store.

1. Go to IBM Content Navigator:
   a. Switch to the Firefox browser tab that is open to the IBM Content Navigator Sample Desktop.
   b. Click the browser refresh icon.
2. From the Sales object store, open the Orders folder.
3. Right-click a document and select, **Check Out > Check Out and Download** (Example: PO 3411.tif).
   a. Save the file (saved to Downloads).
4. Cancel the checkout.
5. Right-click the same document and select, **Delete**.
6. Log out of the IBM Content Navigator desktop.

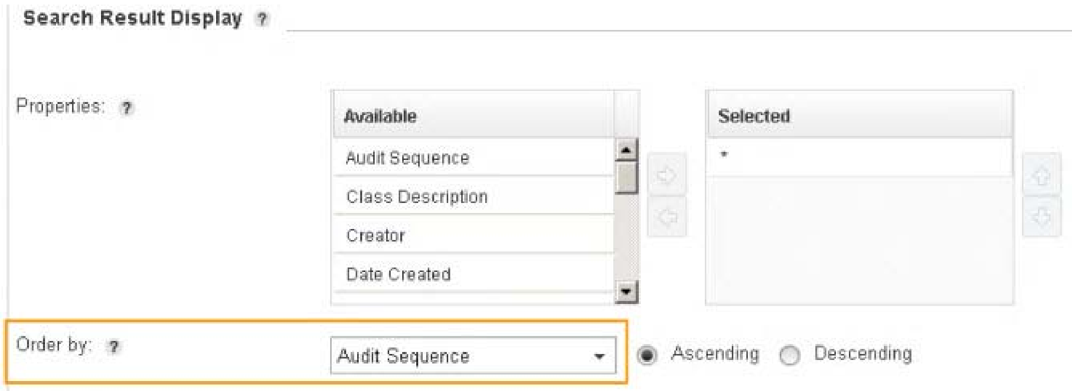
Procedure 6: Query the audit log

In this procedure, you use the Administration Console Search page to find audit log entries.

1. Log on to Administration Console for Content Platform Engine:
   a. Switch back to the tab in the Firefox browser, already open to the Administration Console.
   b. Log in as the `P8admin` user (password: `IBMFileNetP8`).
2. Open the Sales object store and click the Search icon.
3. Create an object store search. Use the following criteria:

Item	Value
Class	Object Change Event
Column A	Date Created
Condition	Less than
Value	Tomorrow’s date and any time

4. In the Search Result Display section, for Order By, select **Audit Sequence**.



5. Run the search.
6. Review the search results.
   - Verify that you see audit entries returned.
   - Verify that you see two types of audit entries, Update Event and Deletion Event.
   - Note the Audit Sequence values.
7. Save the Search:
   a. Click Save As.
      - Document Title: `Object Change Event Query`
   b. Click OK.

Note

You can also search for the class, **Event**, which will return more results.

---

8. Close the search tab.
   - Click **No**, in the message window.
9. Log out of the Administration Console.
10. Close the browser window.

27.2. Prune audit entries

Introduction

Audit logs can grow quickly and use up storage space. You can prune the audit logs manually, by using a search template, or automatically by using an audit disposition policy. In this activity, you create an audit disposition policy.

Procedures

Procedure 1: Create an audit disposition policy

In this procedure, you create an audit disposition policy that deletes audit entries that are older than 7 minutes.

1. Open a browser window and start the Administration Console for Content Platform Engine.
    a. Log in as the `P8admin` user (password: `IBMFileNetP8`).
2. Open Object Stores > Sales > Administrative > Audit Disposition > Audit Disposition Policies.
3. Click **New**.
4. Use the data in the table to complete the wizard:

Item	**Value**
Name	`Prune Audit Logs`
Disposition rule	`DateCreated < Now () - TimeSpan(7, 'Minutes')`
Duration between completed sweeps	`300` seconds
Enable audit disposition policy	Checked

5. On the Summary page, click **Finish**.
6. On the Success page, click **Close**.
7. In the Audit Disposition Policies tab, click **Refresh**.
    a. The new audit disposition policy is listed.

Display Name	Is Enabled	Disposition Rule	Completion Wait Interval
Prune Audit Logs	True	DateCreated < Now () - TimeSpan(7,'Minutes')	300

Procedure 2: Configure the audit subsystem

The audit subsystem controls the pruning of the audit entries from the audit log. In this procedure, you enable the audit subsystem so that the auto disposition policy, that you defined in the previous procedure, can run.

1. In the Administration Console for Content Platform Engine, open the P8Domain tab on the upper left.
2. Select the Audit Subsystem tab.
3. Check the option, **Enable audit pruning**.
4. Click **Save**.

Procedure 3: Verify that the audit logs are deleted

You enabled the audit subsystem. You configured the audit disposition policy to delete audit logs that are older than 7 minutes. In this procedure, you verify that the audit entries are deleted from the audit log.

1. In the Administration Console for Content Platform Engine, click the Sales tab.
2. Click the Search icon.
3. Run the search that you saved, **Object Change Event Query**.
   a. Click OK on the message displayed.
4. Verify that the search returns zero results.
5. Examine the Content Platform Engine server log:
   a. Use the skills that you learned in the previous exercise to open the folder that contains the Content Platform Engine logs.
   b. Open the file, p8_server_error.log in Notepad++.
   c. Scroll to the end of the file.
   d. Verify that a full disposition sweep completed and note the number of records that were deleted.

      ```
      FNRCE0000I - INFO A full audit disposition sweep has completed; 5 records deleted, 0 failure(s).
      ```
6. Minimize the Notepad++ window.
7. Minimize any open Windows Explorer windows.

Procedure 4: Configure an audit disposition schedule

In this procedure, you create a schedule for the audit subsystem so that the audit disposition policy runs every 5 minutes, one day a week.

1. In the Administration Console for Content Platform Engine, click the P8Domain tab and open the Audit Subsystem tab.
2. Scroll down to the Schedule area.
3. Click **New**.

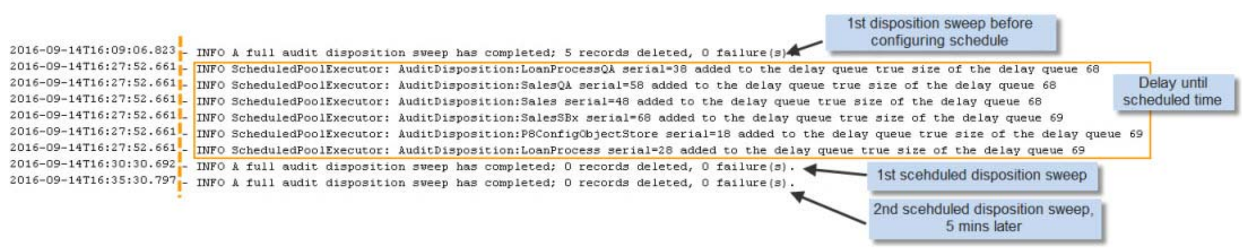
4. Use the data in the table to configure the New Time Period:

Item	Value
Day of week	Today's day of the week
Start time	`Current system time plus 3 - 5 minutes`
Duration	`0 hours 13 minutes`

Hint

For the start time, choose one of the time slots that are listed, then edit the value.

5. Click **OK**, then click **Save**.
6. Create some audit entries:
   a. Open a new browser tab to open the IBM Content Navigator Sample Desktop.
   b. Go to the folder, **Orders**.
   c. Change the Amount_due on a couple of the documents.
7. Examine the Content Platform Engine server log:
   a. Maximize the Notepad++ window.
   b. Click yes to reload the file.
   c. Scroll to the end of the file.
8. You see a series of delay entries, one for each object store.
   - The Audit Disposition subsystem is delaying until the time that you scheduled as the start time.
   - When the start time is reached, you see an entry with a full disposition sweep completed with 0 records deleted.



9. Minimize the Notepad++ window.
10. Check the p8_server_error.log again after 5 minutes. Keep checking the log until after the 13-minute duration time expires.
    a. Notice that after the duration time expires, you do not see any more entries logged for a full audit disposition sweep. The next audit disposition sweep will run one week from today, starting with the scheduled start time.
    b. One of the entries should show a number of records deleted, corresponding to the number of documents that you updated.

11. When you are finished:
    - Close the p8_server_error.log.
    - Log out of the Administration Console.
    - Close all the browser windows.

27.3. Challenge: Configure auditing on another object store

In this exercise, you use the skills you learned to create audit definitions and a disposition policy on the object store, LoanProcess.

Scenario: Product Department

The Real Estate department wants Residential objects to be audited for Update and Creation events. Residential object audit entries must be deleted after 30 days.

Challenge

Before you start, make sure that the Audit Subsystem is disabled for the P8Domain.

- Enable auditing on the LoanProcess object store.
- Create audit definitions for Update and Creation events on the document class, Real Estate.
- Create audit entries:
  - Create and update a document of class, Real Estate > Residential.
  - You can use the folder, Real Estate > Residential.

Hint

Use the IBM Content Navigator Sample Desktop to create the audit entries. Make sure that you select the object store, LoanProcess.

The folder, **Libraries > Documents > sample documents**, contains sample documents that you can use to add content to the loan document.

- Change the title (For example: Sandy Smith's home).
- In the properties of the residential document, you need to enter values only for Document Title and Price.

- View the audit history and query the audit log for the audit entries.
- Create an audit disposition policy that deletes audit log entries older than 30 days.
  - Set the Duration between completed sweeps to 300 seconds.
  - Do not enable the Audit Subsystem until you successfully query the audit entries.

Verification

Before you enable the Audit Subsystem:

- Search the audit log for the audit entries, search for the class, **Event**.
- Verify that audit entries are created when you add and update the document.

Enable the Audit Subsystem.

  - You can remove the scheduled day and time, or adjust the time so that it is 3 - 4 minutes after the current time.

After you enable the Audit Subsystem:

- Check the Content Platform Engine log, p8_server_error.log.
- Verify that a full disposition sweep is running every 5 minutes.
- Zero records are deleted because the documents are not older than 90 days.

Exercise review and wrap-up

In this exercise, you completed the following tasks:

- Created audit definitions.
- Viewed the audit history of an object
- Queried the audit logs.
- Created an audit disposition policy.
- Pruned audit logs automatically.
- Viewed the log entries for audit disposition sweep in the Content Platform Engine error log.
- Created an audit disposition schedule.

Appendix A. Start and Stop System Components

Appendix Overview

This image contains three WebSphere Application Server profiles. For this unit, you use the profile for server1, which hosts the following applications:

- Tivoli Directory Server Administration tool
- Content Platform Engine
- IBM Content Navigator
- Administration Console for Content Platform Engine

List of procedures:

Procedure 1: Start system components

There are start scripts to make starting the WebSphere Application Server profiles easier. The scripts are in the folder WebSphere Admin on the desktop.

Important

If you just started the image, ensure that the Windows 7 Operating System completes starting all the services. Launch the Windows Task Manager and ensure that CPU usage is down to 0-1% CPU usage. It can take several minutes.

1. If necessary, log into Windows as `Administrator`, password: `passw0rd`.
2. Open the WebSphere Admin folder on the desktop.
3. Double-click the Start Server1.bat to run the script.
4. Wait for the command window to disappear (Can take several minutes).

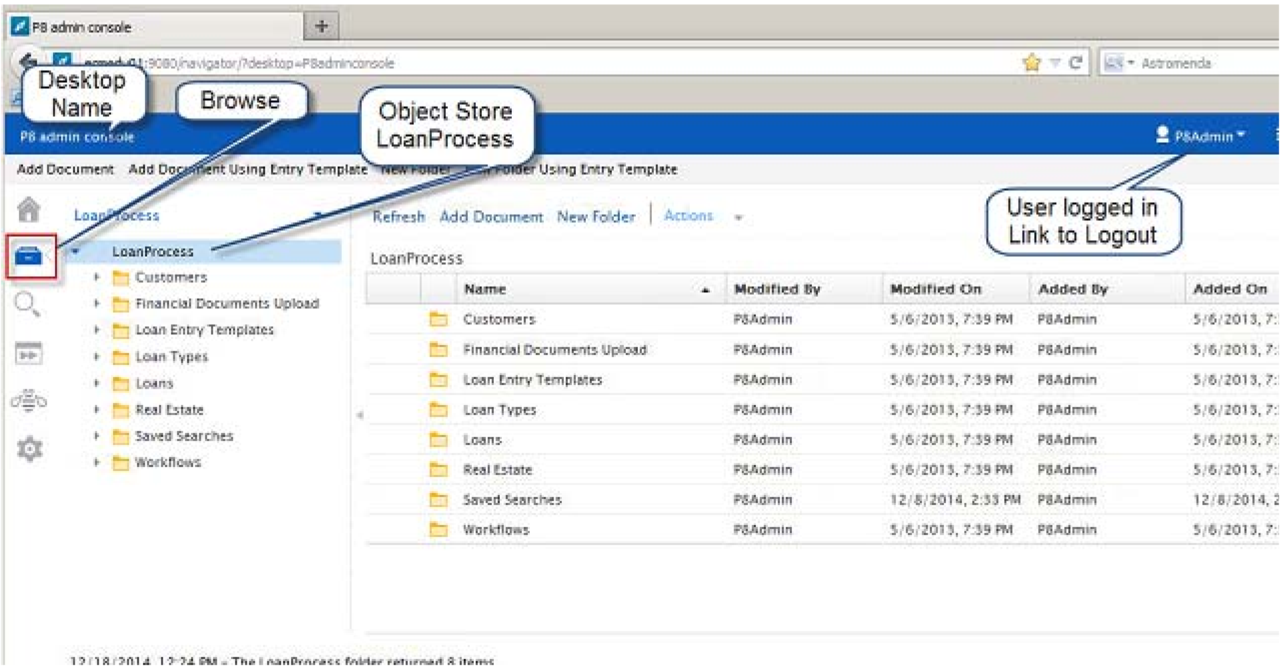
Procedure 2: Check system components

An IBM FileNet P8 Workflow system consists of one main engine, the Content Platform Engine, with two primary services, content and process services. In addition to the Content Platform Engine, a client application is required for the users and databases are required to store configuration information and the object stores. The client that you use for these activities is IBM Content Navigator. You work with two IBM Content Navigator desktops that are configured for the workflow administrator and for the workflow author. You need to verify that the Content Platform Engine and the IBM Content Navigator desktops are fully functional before you start your student exercises. Because these two applications rely on more software, testing the two applications also ensures that the underlying software is also functioning properly within your system.

1. Verify that the Content Platform Engine, content services are functioning properly by opening the Content Engine Startup Context (Ping Page).
   a. Open a Mozilla Firefox browser window.
   b. Click the Bookmarks menu and select, System Health > CE ping
      i. URL for Ping Page: `http://ecmedu01:9080/FileNet/Engine`

   Because the Content Engine is running as an application inside the IBM WebSphere Application Server, successfully viewing the Content Platform Engine Ping Page indicates that the web application server is also running on your student system.
2. Verify that the Content Platform Engine process Services are functioning properly.
   a. Open a new browser tab.
   b. Click the Bookmarks menu and select, System Health > PE ping
      i. URL for Ping Page: `http://ecmedu01:9080/peengine/IOR/ping`
      ii. User name: `p8admin`
      iii. password: `IBMFileNetP8`
   c. If both ping pages display successfully, close the browser and all the tabs.
3. Verify that the P8 Admin console desktop is functioning properly.
   a. Open a Mozilla Firefox browser window.
   b. Click the Bookmarks menu and select, P8 Admin console
      i. URL for desktop: `http://ecmedu01:9080/navigator/?desktop=P8adminconsole`
   c. Log in as the administrator.
      - Username: `p8admin`
      - Password: `IBMFileNetP8`

A successful login to the P8 Admin console desktop opens to a screen.



If you get to this screen, it indicates that the following components are running and communicating within your student system:

- A database system. Your system uses the IBM DB2 database software. Every time a user logs in to the P8 Admin console desktop, the desktop configuration is loaded from the IBM Content Navigator DB2 database. This desktop is configured to browse the LoanProcess object store by default, which demonstrates that the database used by the Content Platform Engine is functional.
- A directory service to handle user authentication. Your system uses the IBM Tivoli Directory Server.

d. Logout of the P8 Admin console.

i. On the upper right corner of the desktop, click P8Admin and select Log Out.

ii. Click Log Out to confirm.

4. Verify that the Sample desktop is functioning properly.

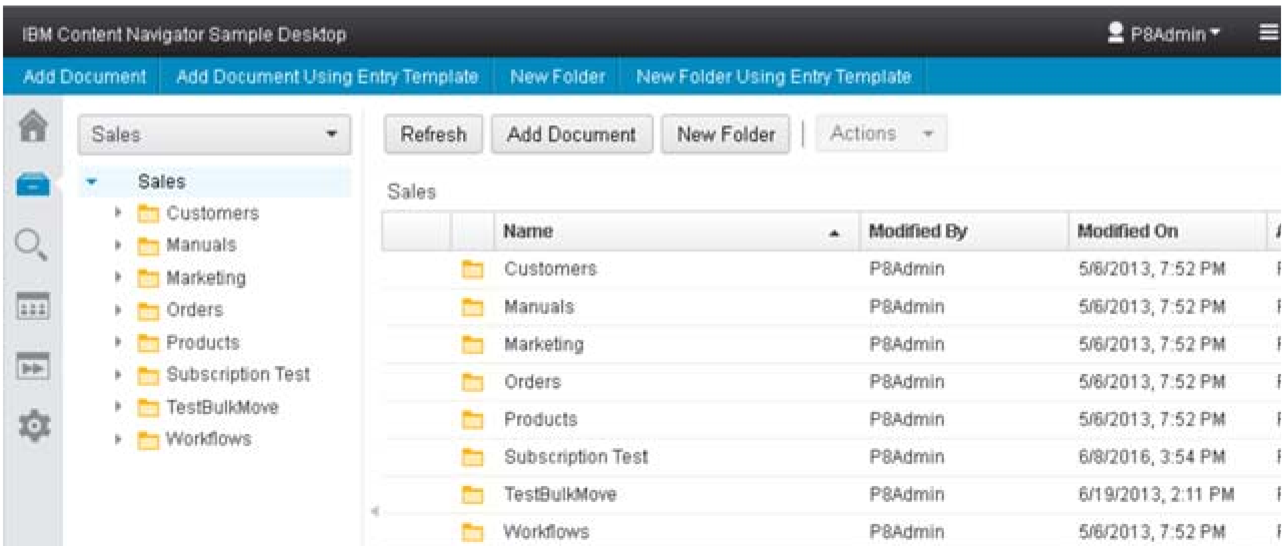
   a. Open a Mozilla Firefox browser window.
   b. Click the Bookmarks menu and select, Content Navigator.

      i. URL for desktop: `http://ecmedu01:9080/navigator/`

   c. Log in in as an administrator:

      - Username: `p8admin`
      - Password: `IBMFileNetP8`

   d. Confirm that you see the Sample desktop, the Sales object store.



   e. Logout of IBM Content Navigator.

      i. On the upper right corner of the desktop, click P8Admin and select Log Out.
      ii. Click Log Out to confirm.

Procedure 3: Stop system components

1. Open the WebSphere Admin folder on the desktop.
2. Double-click the Stop Server1.bat to run the script.
3. Wait for the command window to disappear (Can take several minutes).

Appendix B. Troubleshooting

Appendix Overview

This appendix contains issues and resolutions for:

- "WebSphere Application Server error log" on page B-1
- "IBM Content Navigator Desktop issues" on page B-1

WebSphere Application Server error log

The IBM Content Navigator and Content Platform Engine applications are web applications that run on the WebSphere Application Server. If you encounter issues that are not covered in the issues, listed in the appendix, review the WebSphere Application Server error log.

1. Open the WebSphere Admin folder on the desktop.
2. Right-click **server1 WAS logs** and select, **Open in new window**.
3. Right-click **SystemOut.log** and select, **Edit with Notepad++**.
4. Scroll to the bottom and look for any stack traces. See whether you can figure out the cause of the issue from the exception reported.

IBM Content Navigator Desktop issues

Issue

You open an IBM Content Navigator desktop and do not get a login prompt (see a blank screen).

Cause

The cookies are stale.

Resolution

Close the browser window and open a new browser window. Open the desktop again. If the login prompt does not display; clear the browser cache and open the desktop again.

Issue

The IBM Content Navigator Sample Desktop appear to hang with Loading Desktop.

Cause

The first time a desktop is launched; it has to load the Java applications. Once the Java cache is populated, subsequent desktop launches are faster.

Resolution

Be patient. It can take a few minutes for the desktop to open and display the login prompt.

Mozilla Firefox issues

Issue

No bookmarks exist.

Cause

You clicked the option to reset Firefox.

Resolution

Start Firefox Profile Manager:

a. In a command window open to Mozilla Firefox, type: `firefox.exe -P`

b. Create a new profile.

c. Enter a name for the profile.

d. Click **Choose Folder** and browse to the **Old Firefox Data** folder on the desktop that the reset created.

Appendix C. Answers to written exercises

Unit 1: Use searches with bulk actions

No written exercises.

Unit 2: Configure a text search server

No written exercises.

Unit 3: Configure index partitions

"Select a property for an index partition" on page 16-3

Property	Notes
Document title	
ID	
customer_name	
customer_id	
po_number	**Correct Answer**
product_id	
service_date	

Unit 4: Create content-based indexes

No written exercises.

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