IBM

Course Exercises Guide

IBM FileNet Content Manager 5.2.1: Build a FileNet Content Repository

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Exercises description

Overview

This section provides some general information regarding the lesson exercises in this course.

This course includes the following exercises:

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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.

- If you are taking this course as part of a self-paced online course (SPVC), you must start the student system that is provided by the SPVC provider.
- If you are taking this course as part of an instructor-led training (ILT) program, 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.
- 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 might also include optional sections that you can complete.

Exercise 1. 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).

---

i 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

- Create JDBC data sources for an object store, on page 1-3
- Create an object store, on page 1-9
- Add the repository to an IBM Content Navigator desktop, on page 1-15

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.

1.1. 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.

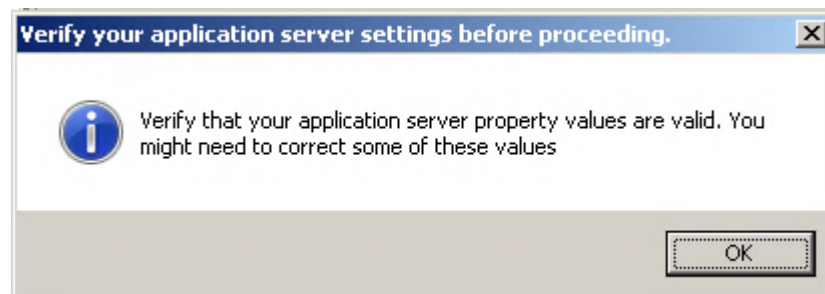   b. In the lower right corner of the Control Center, click the Connect link.
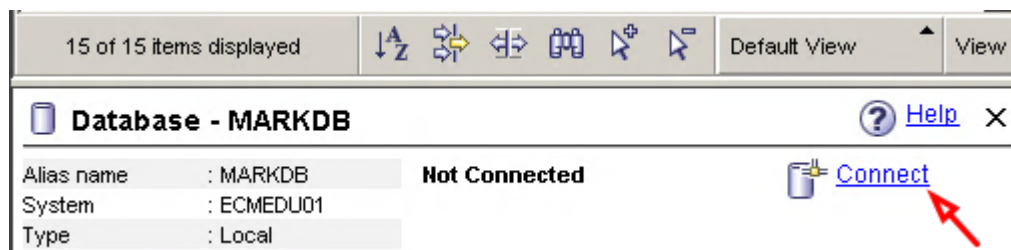
c. The properties of the MARKDB database are listed in the lower right pane of the Control Center.

- 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.

Verify your application server settings before proceeding.

Verify that your application server property values are valid. You might need to correct some of these values

OK

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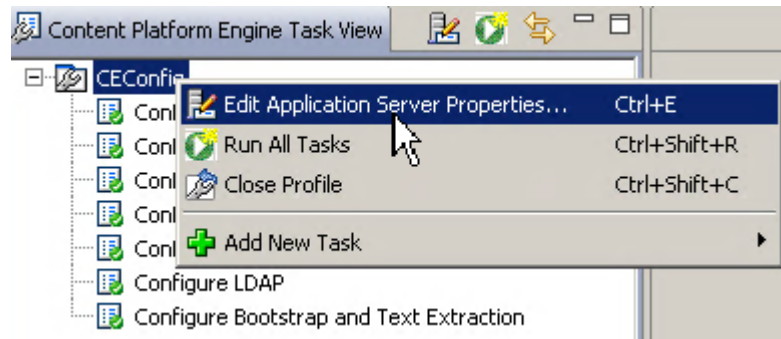
   c. Change the Application server version to version 8.5.

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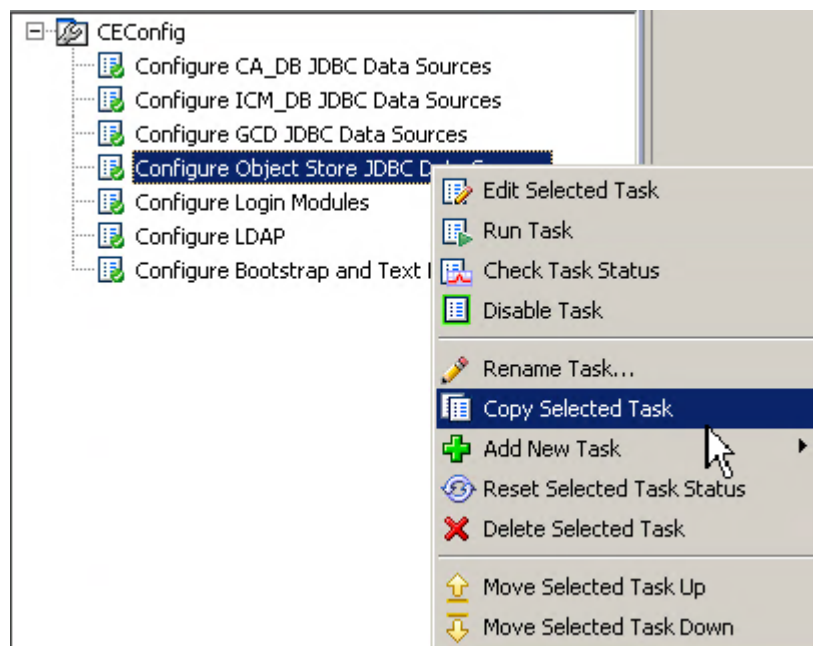
   A copy of the task with a name beginning with the string *Copy_of_* is listed in the left pane.

   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.
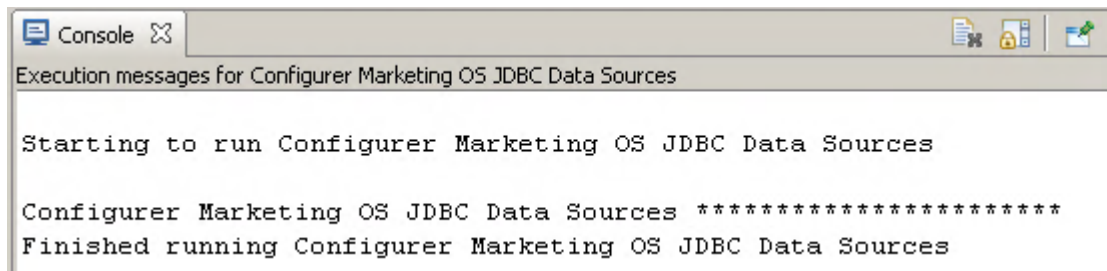
7.   Close the profile and exit Configuration Manager.

      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*.
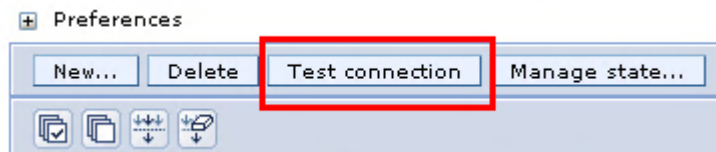
After a few moments, a message is shown on the same page that the test connection operations for Data Source MOSDS and MOSDSXA were successful.
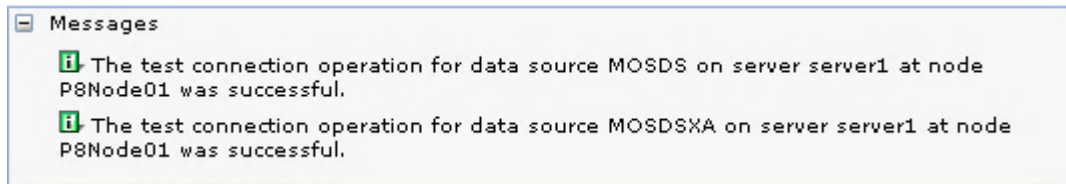
4. Log out of the WebSphere Application Server Administrative Console and close the browser.

1.2. 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.
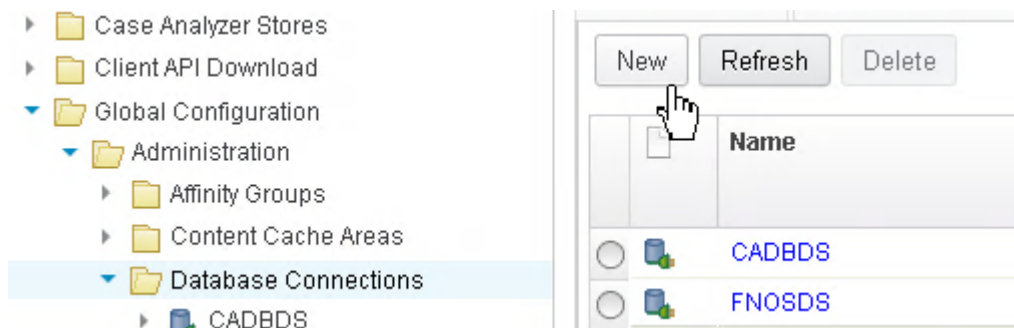
    The New Database Connection tab opens.

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.

> ℹ️ **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 icon] **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.

i **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.

1.3. 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 an IBM 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 1-15

Procedure 2, "Edit the desktop to add your repository," on page 1-16

Procedure 3, "Make other repositories visible," on page 1-17

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 IBM 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.
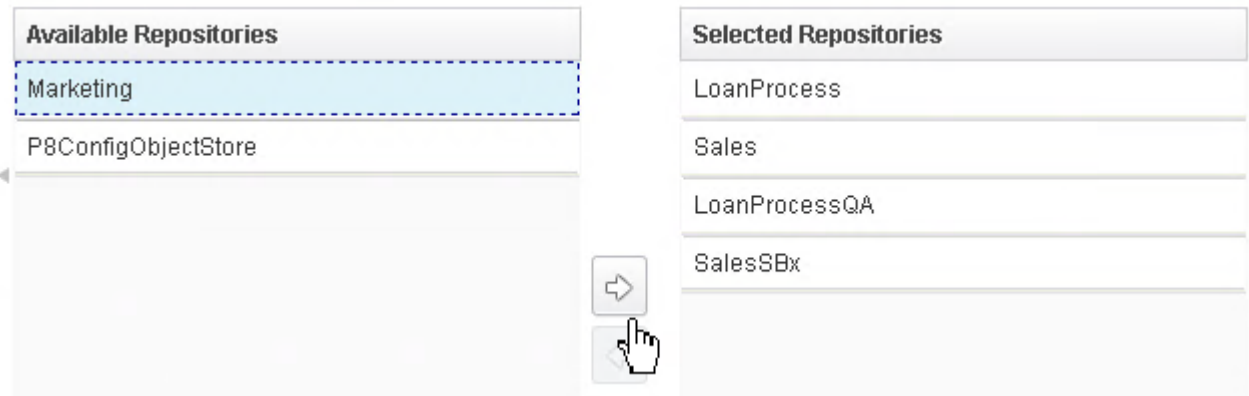
Procedure 3: Make other repositories visible

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, select all of the object stores to display in the Browse feature.
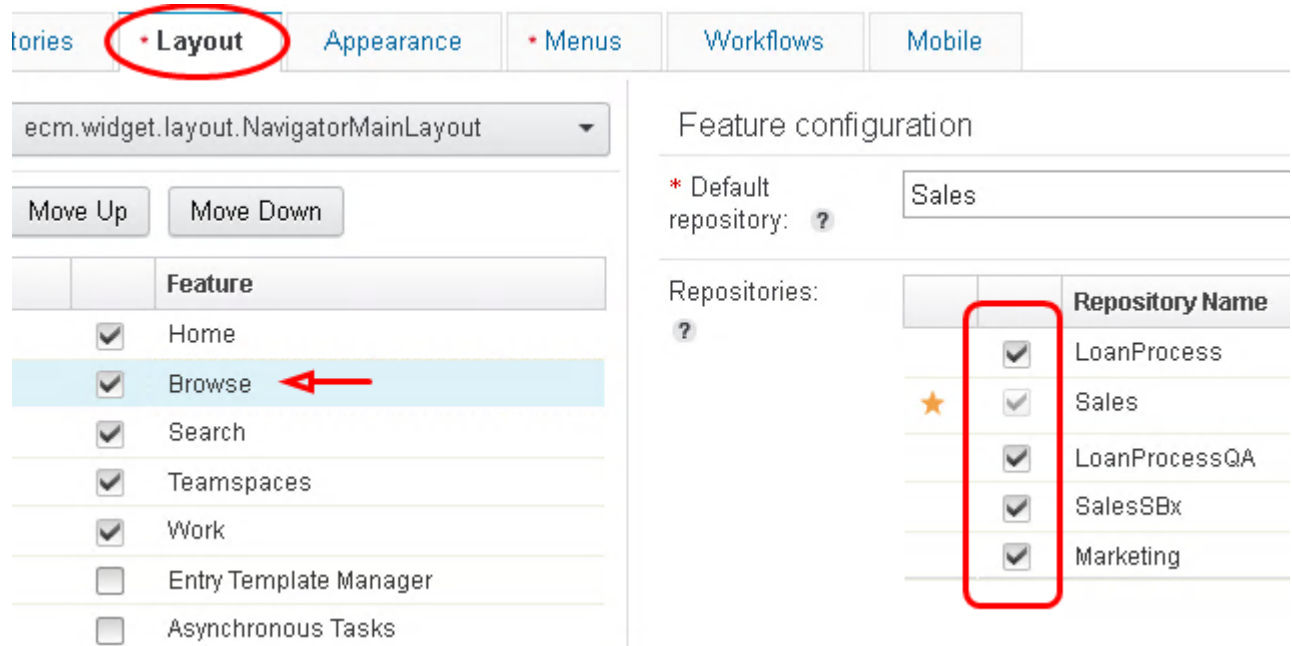
4. Save the settings for the new desktop.

  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.
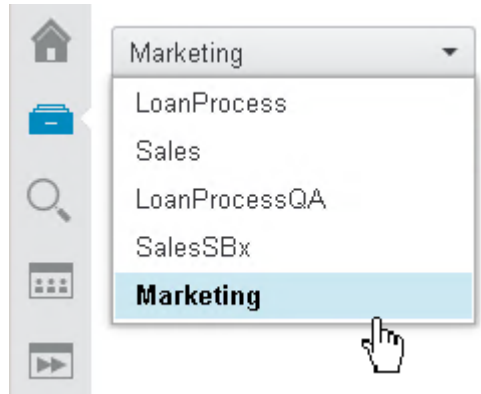
   d. Click Marketing.

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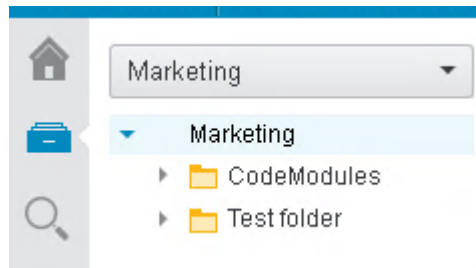
 Information

In the following lessons, you are going to create other content objects in this object store in Content Navigator.

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 2. 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

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.

2.1. 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

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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.

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.

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   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 subdirectory and select Properties.

   b. In the Properties window, click the Security tab.
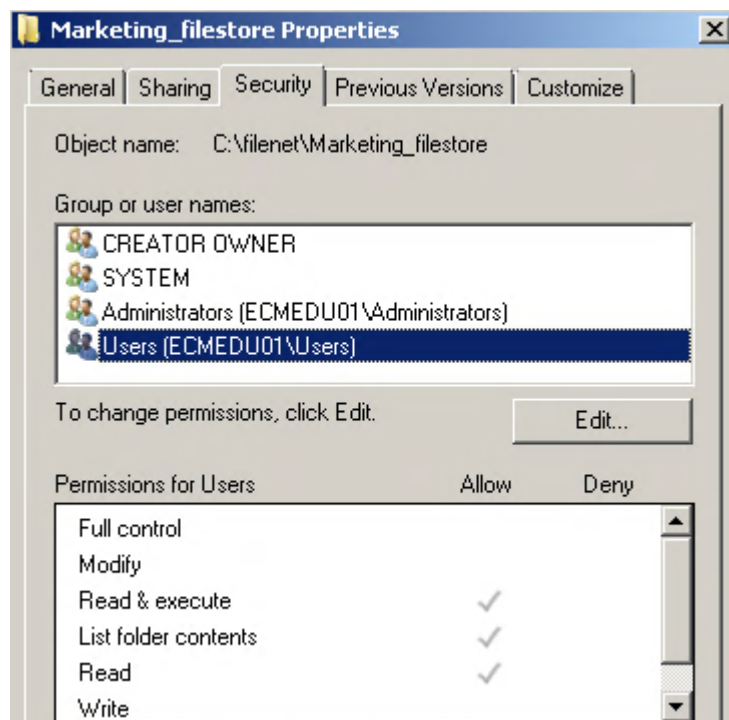
    c. Verify that the permission for the non-admin users is read-only to the folder.

    d. 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.

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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. When you are prompted with "Informational message: The storage area cannot be used until it is mapped to a storage policy", click OK.

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.

Default storage area: ?	Marketing Storage Area
Default storage policy: ?	<None>
Default document lifecycle policy: ?	<None>
Default replication group: ?	<None>

   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.

Storage Area Maximums

Maximum number of elements: ⦿ Unlimited

○ 10

Maximum size: ?   ○ Maximum allowed on device

⦿ 10

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.

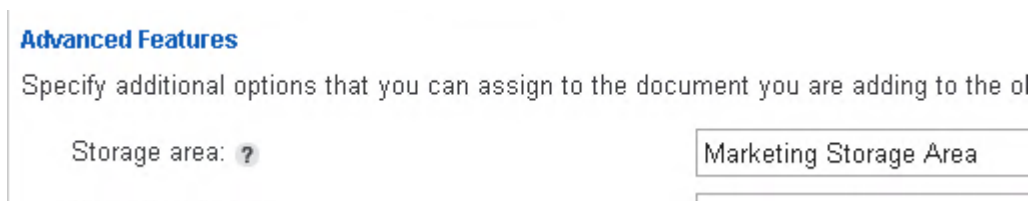Add document to the Test folder.

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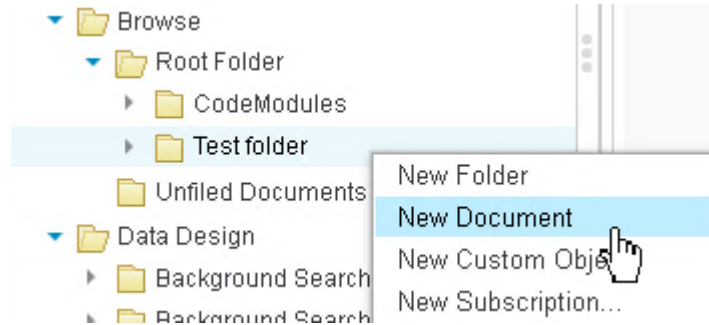
c. Name the document: `Storage Area Test`.

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.

2.2. 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

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 "Informational message: The storage area cannot be used until it is mapped 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 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.

   | Default storage area: ? | <None> |
   | Default storage policy: ? | Farm Storage Policy |

   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.
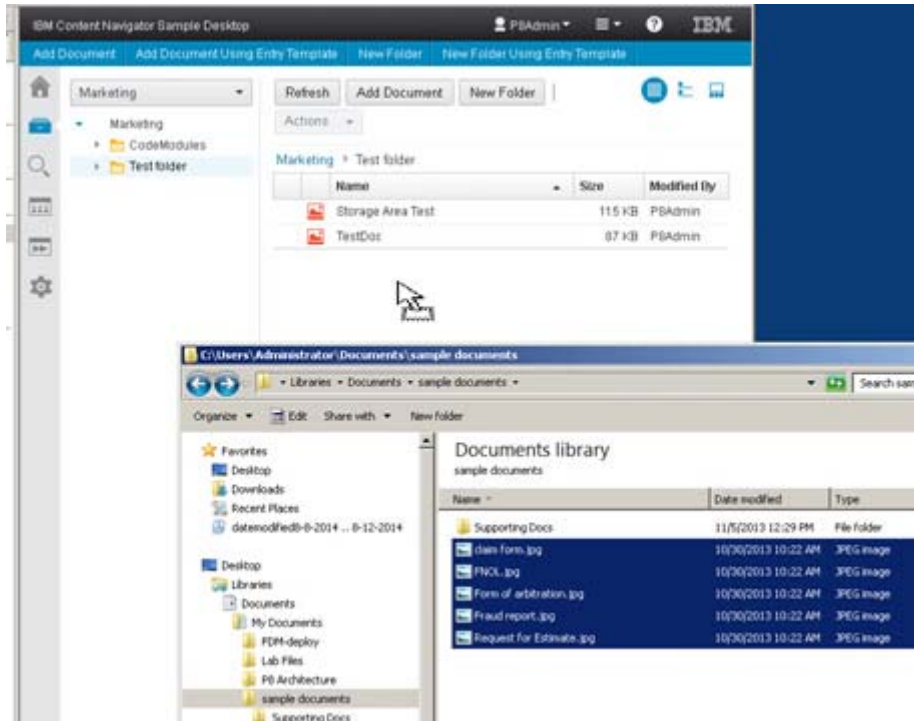
1. Log on to IBM Content Navigator.

   - 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.
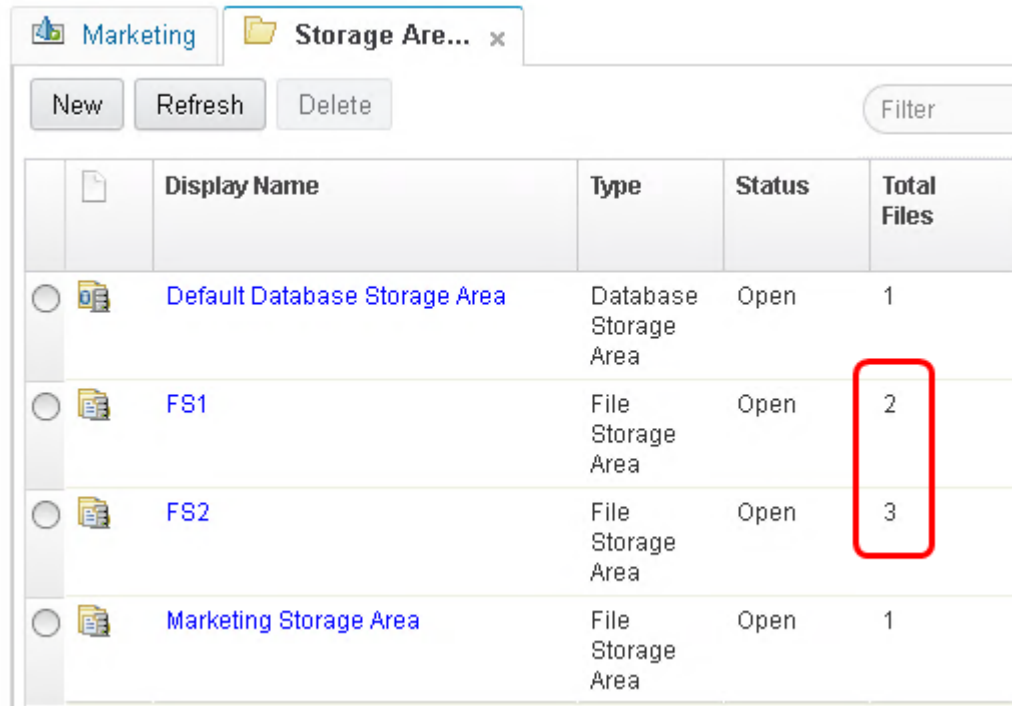

Hint

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

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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.

2.3. 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

𝑖 **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.

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i **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. In Administration Console, go to Marketing > Administration > Storage > Advanced Storage > Advanced Storage Areas.

7. Verify that ADV_SA contains some files.

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

8. Log out of Administration Console.

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.

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.

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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).

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`

   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 similar to:
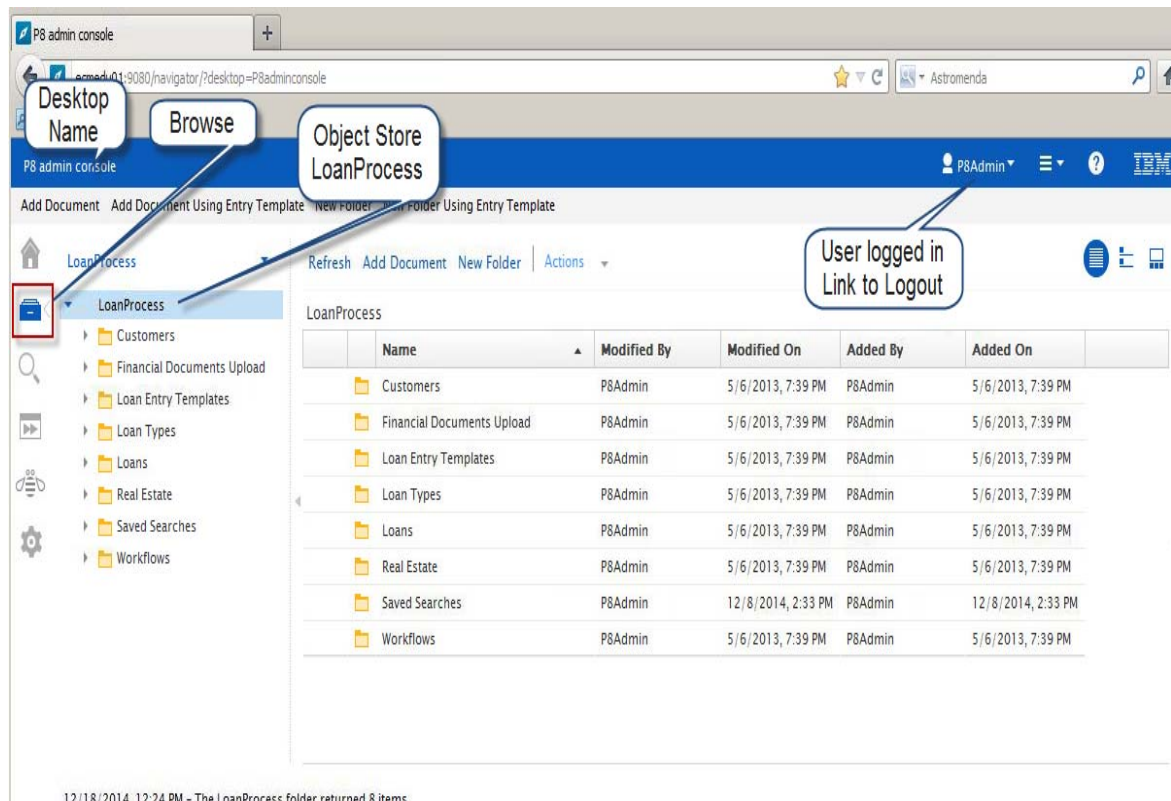

If you get to this screen, it indicates that the following components are running and communicating within your student system:

- 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 Workflow Author desktop is functioning properly.

   a. Open a Mozilla Firefox browser window.

   b. Click the Bookmarks menu and select, Workflow Author desktop

      i. URL for desktop:
         `http://ecmedu01:9080/navigator/?desktop=WorkflowAuthordesktop`

   c. Log in in as a workflow author.

      - Username: p8admin

      - Password: IBMFileNetP8

   A successful login to the Workflow Author desktop should look similar to:
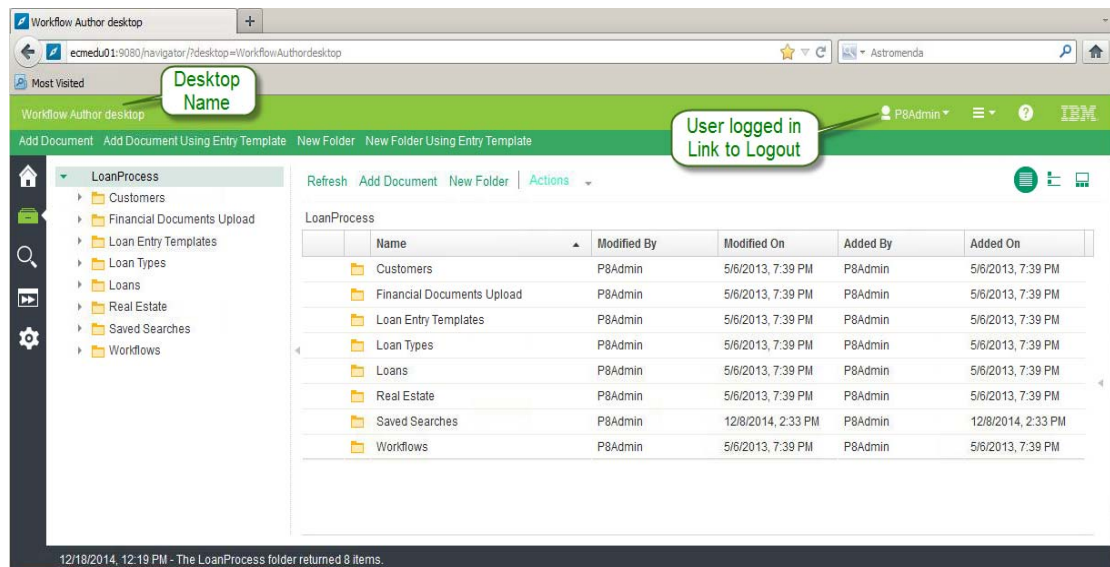
   d. Logout of the Workflow Author desktop.

      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).

IBM Training