Course Exercises Guide

IBM FileNet Content Manager 5.2.1: Optimize Search Performance

Course code F284 ERC 1.0

IBM Training

October 2016 edition

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Exercises description

This course includes the following exercises:

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.
- 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 the instructions or 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 enough time and want an extra challenge, some exercises might also include optional sections that you can complete.

Exercise 1. 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

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.

1.1. 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

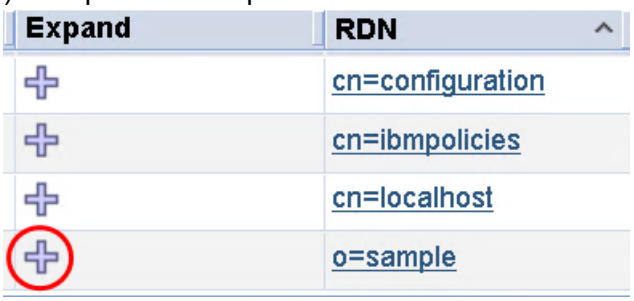
Your company was reorganized. You have a new Marketing team. You must create a new Marketing group and then modify security on marketing documents to provide group members special permissions.

Procedures

Procedure 1: Create the Marketing security group

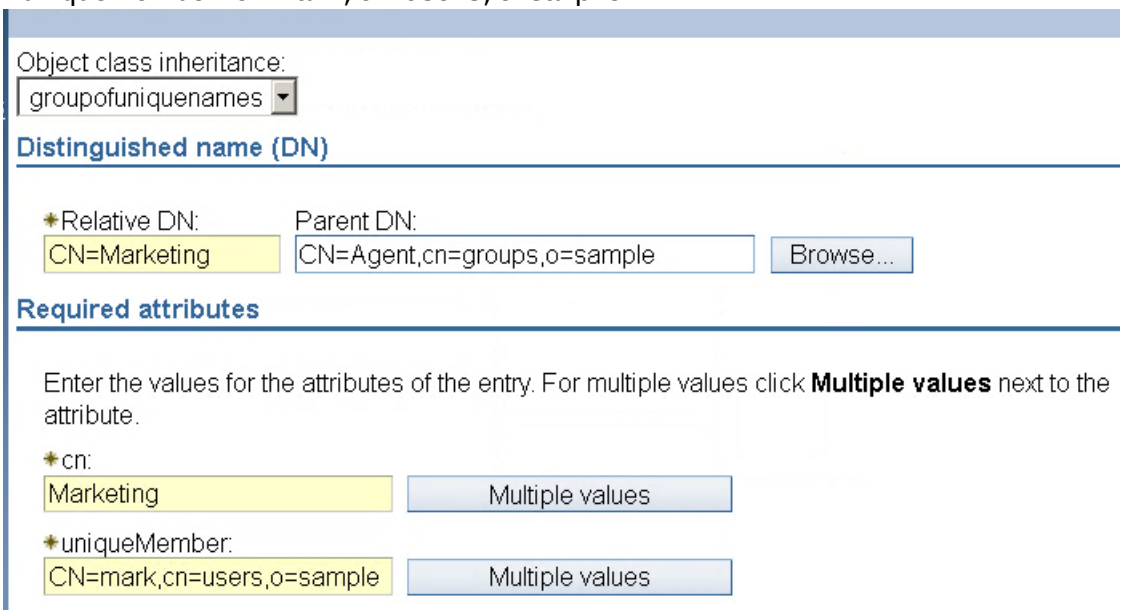
You can create the Marketing group by using Tivoli Directory Server.

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):

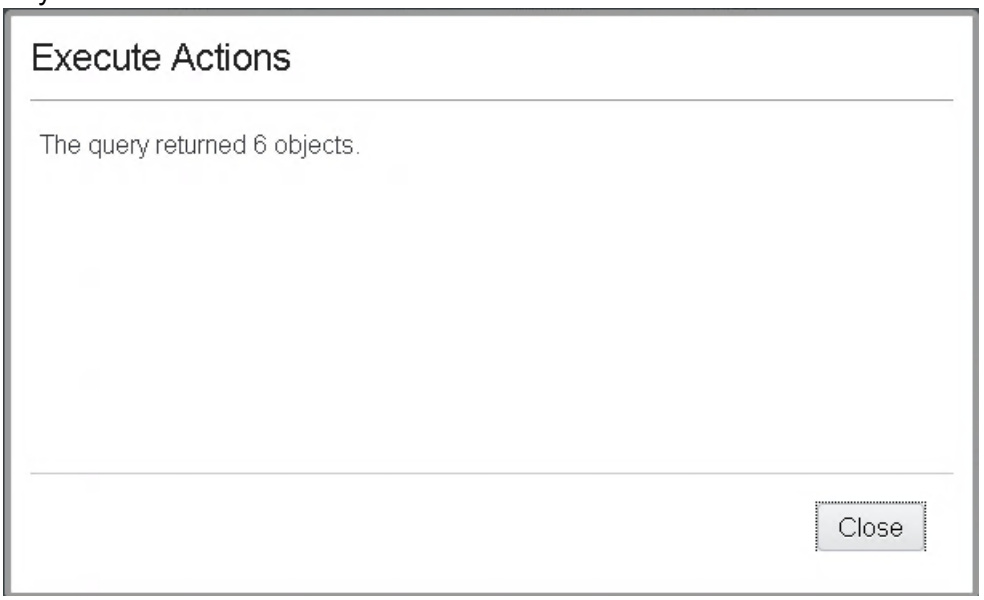
- Column: Document Title
- Condition: Starts With
- Value: `Marketing`

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.

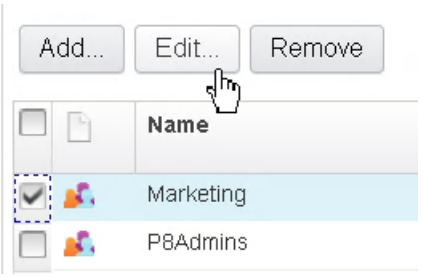
9. Verify that you see an Execute Actions window.



Procedure 4: Verify security change

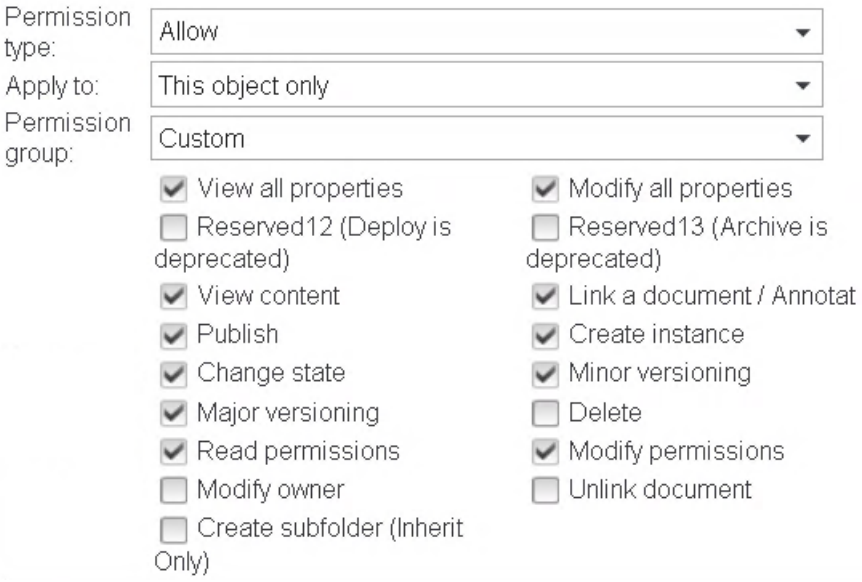
You ran a search that includes a bulk action. The action occurred as the search ran. Inspect one of the documents to ensure that the Marketing group was added to the document. The search results tab is open, displaying the results of the search.

1. Click the title of one of the documents in the Search Results table.
2. On the document properties page, open the Security tab.
3. Verify that Marketing is now displayed in the Access Control List. If you do not see Marketing, click Refresh.
4. Select the Marketing row.



5. Click Edit.

6. Verify that the permissions match the permissions that you specified for this group in the bulk action.



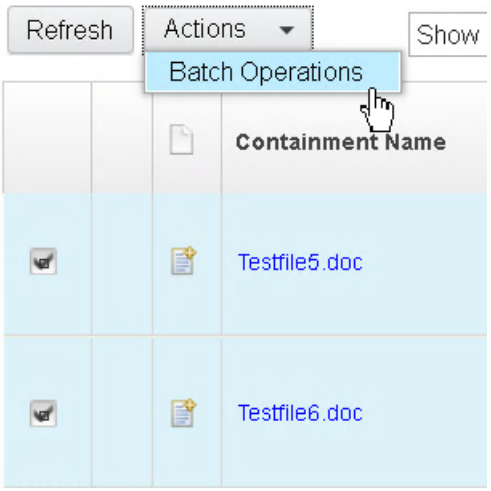
7. Click Cancel.
8. Click Close.

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.”

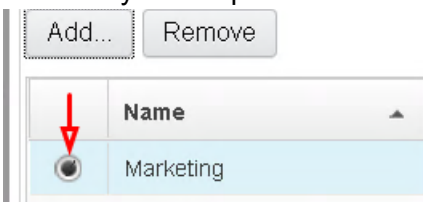
4. Select Actions > Batch Operations.



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.

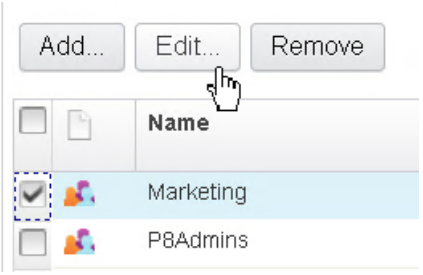


8. Scroll to the bottom to click OK.
9. Click Refresh.

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.

1.2. 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 2. 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 2-3

User accounts

	Type	User ID	Password
	Operating system	administrator	passw0rd
	Content Platform Engine administrator	P8Admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

2.1. 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.

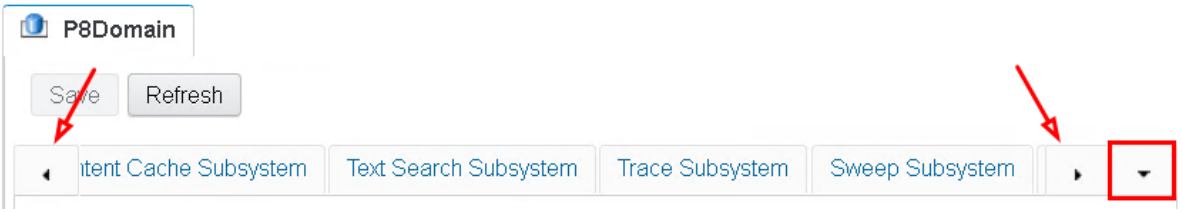
Procedure 4: Verify indexing on P8 Domain

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 3. 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

User accounts

	Type	User ID	Password
	Operating system	administrator	passw0rd
	Content Platform Engine administrator	P8Admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

3.1. 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 B, "Answers to written exercises," on page B-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.

3.2. 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

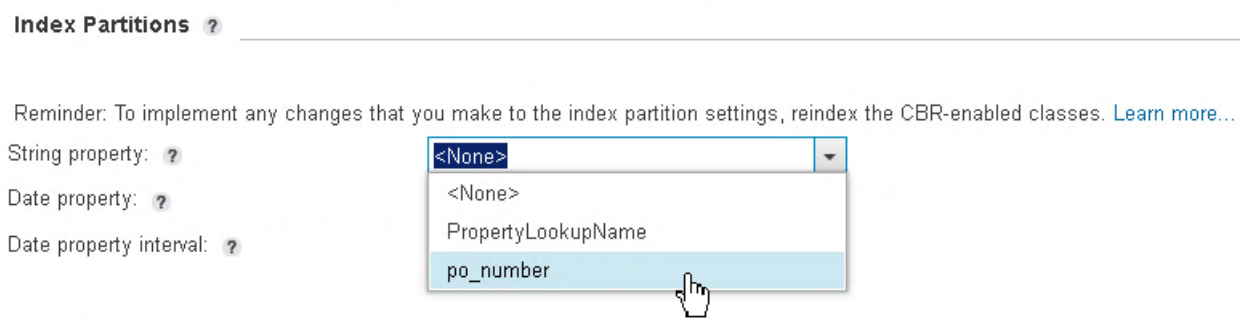
A property must be *Settable only on create* in order to be configured as an index partition. In Administration Console for Content Platform Engine, the *Settable only on create* option is represented by the value 2. You must set this attribute on the property template (not the property definition on 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.

3.3. 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

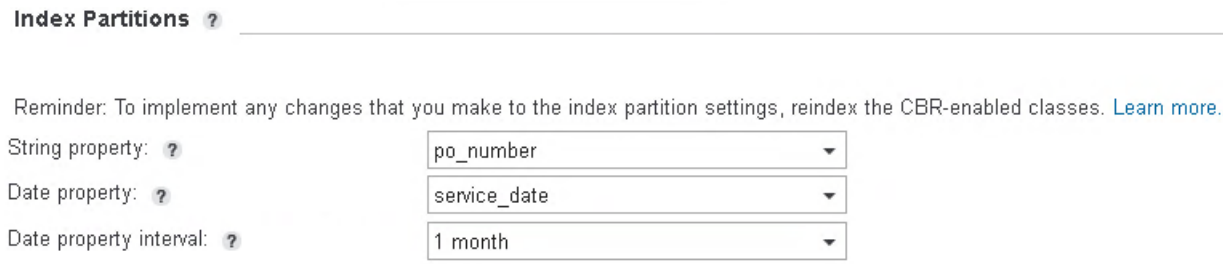
Customer service representatives often search for service orders by using the service_date property.

Challenge

Create an index partition based on the service_date property. Set the Date property interval to 1 month.

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 4. 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.

4.1. 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.

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

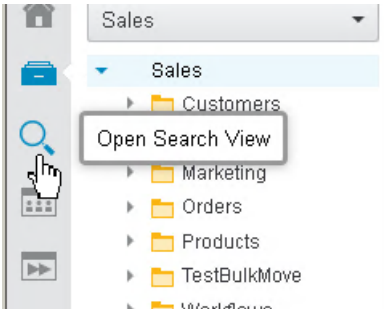
The index job created an index. You can view the index properties from the Index Area node. You can also verify the index area by going to the location in the file system.

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.

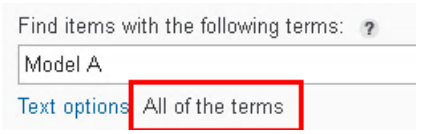
Procedure 8: Create a content-based search

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.



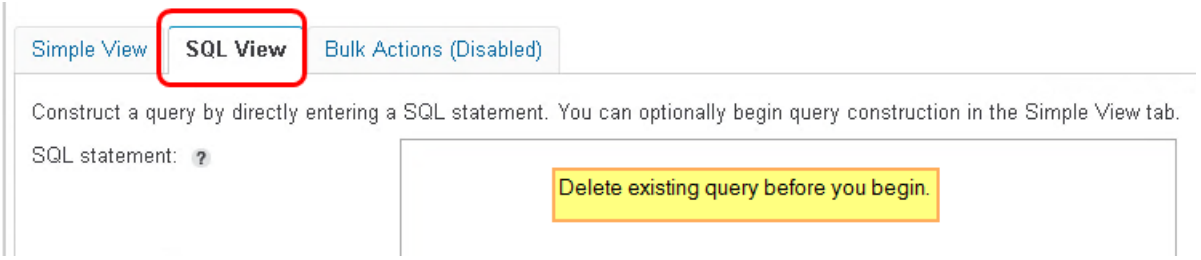
6. Click Search (you might need to scroll down to see the button).
7. Verify that the search returned a few documents.
8. Open one of the documents to verify that it contains the term *Model A*.
9. Log out from IBM Content Navigator.

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.

4.2. 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.

4.3. 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 4-10

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.

4.4. 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 4-9 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.

4.5. 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 4-12

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.

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. 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

      - 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.

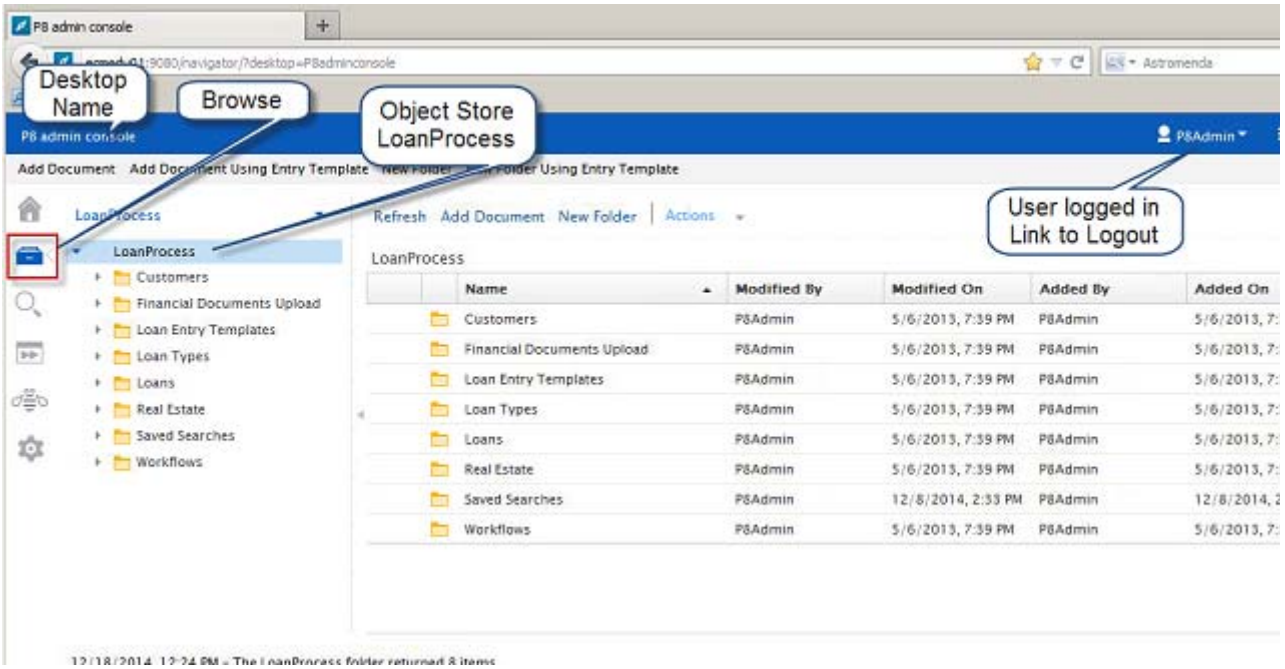
   a. Open a Mozilla Firefox browser window.
   b. Click the Bookmarks menu and select, P8 Admin console

      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.



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.

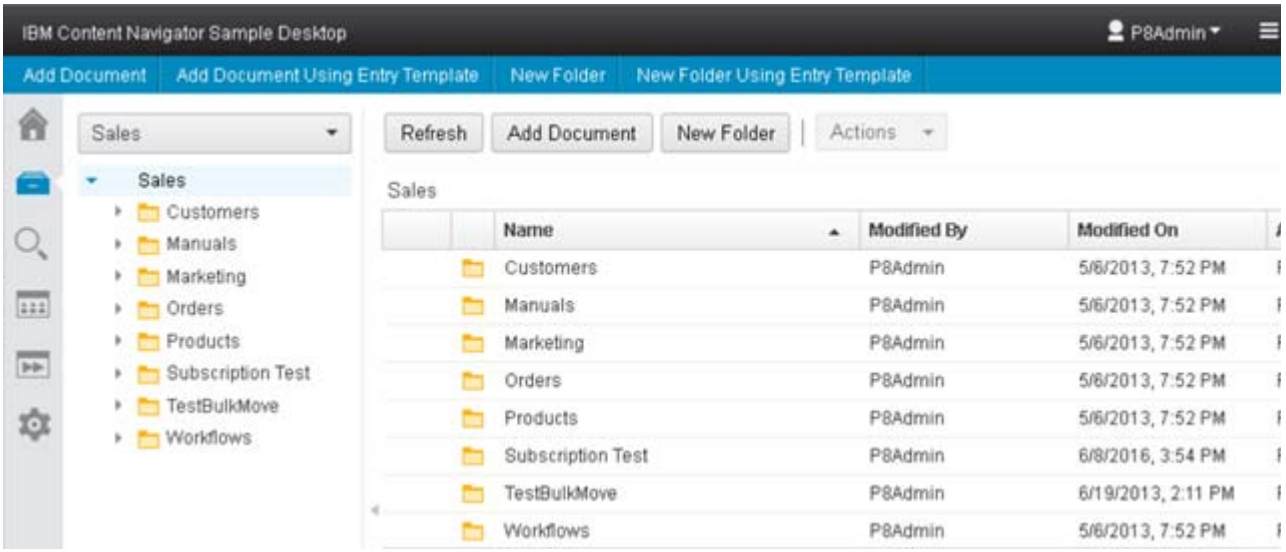
   a. Open a Mozilla Firefox browser window.
   b. Click the Bookmarks menu and select, Content Navigator.

      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. 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 3-3

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.

IBM Training