IBM

Course Exercises Guide

IBM FileNet Content Manager 5.2.1: Auditing and Logging

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Exercise 1. Work with system logs

Estimated time

00:30

Overview

In this exercise you, archive and view the system logs, and enable/disable trace logging.

Objectives

After completing this exercise, you should be able to:

- Archive and view system logs
- Configure trace logging

Exercise Introduction

Introduction

This exercise includes two activities:

- Archive and view system logs
- Configure trace logging

In this exercise, you archive and view the Content Platform Engine and WebSphere Application Server logs.

Activities

- "Archive and view system logs" on page 1-3

- "Configure trace logging" on page 1-8

User accounts

Type	User ID	Password
Administrator	p8admin	IBMFileNetP8
Business user	Carol	filenet

Before you begin

Important

You must complete these tasks before you start the lesson exercises.

Start the student system:

To log in to the student system.

- User name: `Administrator`
- Password: `passw0rd`

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

1.1.   Archive and view system logs

Introduction

In this activity, you locate the Content Platform Engine logs and the WebSphere Application Server logs. You shut down the web application server to archive the logs. You restart the web application server and examine the new logs created.

Procedures

Procedure 1: Locate the logs

In this procedure, you locate the Content Platform Engine logs and the WebSphere Application Server logs.

1. Locate the Content Platform Engine logs.

    a. Get the log file location:

        -   Open a Mozilla Firefox browser window and go to the Content Engine Startup Context (Ping Page).

            Use the bookmark: System Health > CE ping.

        -   Copy the Log File Location path.
        -   Open a Windows Explorer window and go to that path.
        -   You should see 3 log files:

GCD	9/13/2016 6:03 PM	File folder	
import-error	12/4/2014 4:59 PM	File folder	
INSO	2/11/2016 10:44 PM	File folder	
pedata	10/30/2014 3:47 PM	File folder	
p8_server_error.log	9/13/2016 6:04 PM	Text Document	92 KB
perflog_config.properties	7/25/2016 2:09 PM	PROPERTIES File	2 KB
pesvr_system.log	9/13/2016 6:04 PM	Text Document	8 KB
pesvr_trace.log	7/25/2016 2:09 PM	Text Document	0 KB

        -   Minimize the Windows Explorer window.

2. Locate the WebSphere Application Server logs.

   a. Open the folder, WebSphere Admin, on the desktop.

   b. Right-click the link, **server 1 WAS logs**, and select, **Open in new window**.

   c. You should see:

native_stderr.log	9/13/2016 6:02 PM	Text Document	1 KB
native_stdout.log	9/13/2016 6:02 PM	Text Document	13 KB
server1.pid	9/13/2016 6:04 PM	PID File	1 KB
startServer.log	9/13/2016 6:04 PM	Text Document	20 KB
stopServer.log	8/1/2016 12:22 PM	Text Document	15 KB
SystemErr.log	9/13/2016 6:04 PM	Text Document	470 KB
SystemErr.log.owner	7/25/2016 2:07 PM	OWNER File	1 KB
SystemOut.log	9/13/2016 6:06 PM	Text Document	400 KB
SystemOut.log.owner	7/25/2016 2:07 PM	OWNER File	1 KB
SystemOut_16.08.01_12.17.51.log	8/1/2016 12:17 PM	Text Document	1,006 KB
trace.log	9/13/2016 6:08 PM	Text Document	0 KB
trace.log.owner	7/25/2016 2:07 PM	OWNER File	1 KB
trace_16.07.26_13.41.15.log	7/26/2016 1:41 PM	Text Document	20,480 KB
trace_16.08.01_12.15.36.log	8/1/2016 12:15 PM	Text Document	20,480 KB
trace_16.08.01_12.20.57.log	8/1/2016 12:20 PM	Text Document	20,480 KB
trace_16.08.01_12.22.53.log	8/1/2016 12:22 PM	Text Document	20,480 KB
trace_16.09.13_18.08.28.log	9/13/2016 6:08 PM	Text Document	20,480 KB

The two files that are highlighted are the files that are most often referenced.

   d. Minimize the Windows Explorer window.

Procedure 2: Disable WebSphere Application Server trace logging

In this procedure, you disable trace logging for the WebSphere Application Server. The image was configured with trace logging enabled.

1. Start the WebSphere Integrated Solutions Console.

   a. In the WebSphere Admin folder, on the desktop, double-click, **Administrative console server1**.

   b. Accept the p8admin credentials, and click **Log in**.

2. Turn off the trace output:

   a. In the left navigation pane, select Troubleshooting > Logs and trace.

   b. On the right, click the link, **server1**.

   c. Click Diagnostic Trace. You see:

   - The highlighted box in the screen capture, shows you how to control the maximum file size, the number of historical files to keep before overwriting, and the location of the trace log.

   d. Select **None** to disable the trace output.

   e. Click OK.

   f. Click Save to save the configuration.

   g. Log out of the WebSphere Integrated Solutions Console.

   h. Close the browser window and tabs.

✎ Note

The change does not take effect until WebSphere Application Server is restarted. You restart WebSphere Application Server in the next procedure.

Procedure 3: Archive old log files

In this procedure you, stop the WebSphere Application Server and archive the WebSphere Application Server and Content Platform Engine logs.

1. Stop WebSphere Application Server:

    a. In the WebSphere Admin folder, on the desktop, double-click, **Stop the Server1.bat**.

    b. Wait for the operation to complete (the command window disappears).

    c. Minimize the WebSphere Admin folder window.

2. Archive the Content Platform Engine log files:

    a. Maximize the Windows Explorer window where you viewed the Content Platform Engine log files in Procedure 1.

    b. Create a folder in this directory to store the archived logs (example, **Archived Logs**).

    c. Move all of the *.log files to the folder that you created.

    d. Minimize the Windows Explorer window.

3. Archive the WebSphere Application Server log files:

    a. Maximize the Windows Explorer window where you viewed the WebSphere Application Server log files in Procedure 1.

    b. Create a folder in this directory to store the archived logs (example, **Archived Logs**).

    c. Move all of the files to the folder that you created.

    d. Minimize the Windows Explorer window.

4. Start WebSphere Application Server:

    a. Maximize the WebSphere Admin folder.

    b. Double-click, **Start Server1.bat**.

    c. Wait for the operation to complete (the command window disappears).

Procedure 4: Examine the new log files

If no log files exist, the Content Platform Engine and the WebSphere Application Server create new logs at startup.

1. Examine the Content Platform Engine log files:

    a. Maximize the Windows Explorer window where you viewed the Content Platform Engine log files.

    b. Notice the 3 log files that are created with the current date and time.

    c. Right-click the file, **p8_server_error.log**, and select, **Edit with Notepad++**. (Cancel any prompts to update to the version).

        - Examine the log entries that are created during startup.

2. Examine the WebSphere Application Server log files:

   a. Maximize the Windows Explorer window where you viewed the WebSphere Application Server log files.

   b. Notice the log files that are created with the current date and time.

   c. Open SystemOut.log with Notepad++.

      - Examine the log entries that are created during startup.
      - Scroll down the log file until you see:

      ```
      O ==============================================================================
      O P8 Content Platform Engine Startup:  5.2.1.3 dap521.003.172   Copyright IBM Corp.
      O ==============================================================================
      ```

      ○ Which indicates the Content Platform Engine startup.

ⓘ **Information**

Errors are logged as Java stack traces. You see a couple of errors:

- Error binding CNMailSession
- Error in load config file cmis.properties

These errors can be ignored because the components are not being used. However, it is important that you monitor your organization's log files regularly and learn to recognize errors that might indicate a serious issue.

---

   d. Open SystemErr.log with Notepad++.

      - Notice that this log file does not have as many entries as the SystemOut.log.
      - Only the CNMailSession error is logged.

   e. Open startServer.log with Notepad++.

      - Notice the last entry that includes, *Server server 1 open for e-business*.
      - This log entry indicates that the WebSphere Application Server started successfully.

   f. When you are done examining the log files, click File > Close All.

   g. Close Notepad++.

3. Minimize the Windows Explorer windows.

1.2. Configure trace logging

Introduction

In this activity, you:

- Configure trace logging on the Content Platform Engine at the domain level and site level.
- Log in to an IBM Content Navigator desktop to created security entries in the trace log.
- Examine the entries in the trace log.

Procedures

Procedure 1: View trace configuration

Trace logging options can be set on the domain or at the site level. If the settings are configured on the site, they override the settings on the domain. On your student system, trace logging is configured at the site level. In this procedure, you are going to verify these settings.

1. Start the Administration Console for Content Platform Engine.

   a. In a browser window, go to `http://ecmedu01:9080/acce`.

   💡 **Hint**

   For your convenience, a bookmark, **ACCE**, is defined in Mozilla Firefox.

   ---

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

2. On the right, select the **Trace Subsystem** tab (you might need to click the right arrow to scroll to the right).

3. Verify that trace logging is not enabled.

4. In the left navigation pane, go to **Global Configuration > Administration > Sites > Initial Site (Default)**.

5. On the right, select the **Trace Subsystem** tab.

6. Verify that the configuration settings look like:

7. Leave the Administration Console open for the next procedure.

Procedure 2: Configure trace logging on the domain

Trace logging is configured at both the site level and the domain level. In this procedure, you are going to configure trace logging at the domain level, and then configure the site to inherit these settings.

1. In the Administration Console for Content Platform Engine, select the P8Domain tab on the right.

2. On the Trace Subsystem tab, select the option, **Enable trace logging**.

3. On the Log file location, select the option, **Use default** (the trace log is saved in the same folder as the Content Platform Engine log files).

4. In the Subsystems section, select the Detail level trace options for the following subsystems:

    ▪ Error trace flags
    ▪ Security trace flags

! **Important**

Log files at the Detail level grow quickly. Enable only the subsystems that you need. Remember to disable trace logging when you no longer need it.

5. Click Save to save the P8Domain configuration.

6. Check to see whether any trace logs are created:

    a. Maximize the Windows Explorer window where you viewed the Content Platform Engine log files.

      - You don't see any trace logs because the site level configuration is overriding the domain level configuration.

    b. Minimize the Windows Explorer window.

7. Leave the Administration Console open for the next procedure.

Procedure 3: Configure trace logging at the site

You enabled trace logging on the domain, but no trace logs exist because the settings are overridden at the site level. In this procedure, you configure the site to inherit the domain settings.

1. In the Administration Console for Content Platform Engine, select the Initial Site tab.

2. Click Refresh to pick up the changes you saved in the previous procedure.

3. For Configuration source, select **P8Domain**.

    a. Read the message that displays and click OK.

4. Click Save to save the site settings.

5. Log out of the Administration Console.

6. Minimize the browser window.

Procedure 4: Inspect the trace log files.

By default, trace logs are generated in the same location as the Content Platform Engine log files. With trace options enabled, the log files are already being generated.

1. Maximize the Windows Explorer window where you viewed the Content Platform Engine log files.

2. Refresh the window.

3. Verify that **p8_server_trace.log** exists.

✎ **Note**

The size of the file is already large compared to the other log files.

4. Right-click the file, p8_server_trace.log, and select Edit with Notepad++.

5. Verify that the file contains DEBUG level entries.

```
3   VirtualServer: P8Node01 ServerInstance: server1
4   Date (UTC -05:00)         Thread   Sub   Category      Sev  Message
5   2016-09-13T20:59:58.421 4868912D SEC   FNRCE0000D -  DEBUG SecurityContext : principalVal=P8Admin
6   2016-09-13T20:59:58.421 4868912D SEC   FNRCE0000D -  DEBUG SecurityContext : principalVal=P8Admin
```

6. Leave the trace log open for the next procedure.

7. Minimize the Notepad++ window.

Procedure 5: Create trace log entries

You enabled security trace logging. You are going to log in to IBM Content Navigator as Carol and then check the trace log file for this entry.

1. Open an IBM Content Navigator desktop:

   a. Maximize the browser window and open a new tab.

   b. Go to `http://ecmedu01:9080/navigator`.

   ### 💡 Hint

   For your convenience, a bookmark, **Content Navigator**, is defined in Mozilla Firefox. If you have issues, refer to, "Troubleshooting" on page B-1

   ---

   c. Log in as:

   - User name: `Carol`
   - Password: `filenet`

2. Maximize the Notepad++ window. If prompted, click **Yes**, to reload the file.

3. Search for the word "Carol."

4. Review the log entry. Several log entries show Carol's login event.

```
- DEBUG SecurityContext : principalVal=carol  name=carol  isAnon=true  isRealmCheck=true
- DEBUG <getObjectsRequest clientVersion="511" clientId="608e094f:WebContainer : 1" cacheAllowed="true" correlationId="j1">\
- DEBUG SecurityContext : principalVal=carol  name=carol  isAnon=true  isRealmCheck=true
- DEBUG _getSecurityToken domain={00000000-0000-0000-0000-000000000000} principal=carol;  Stack trace after LDAP provider c
- DEBUG Start retrieving user access token by user name [carol] from Domain [(00000000-0000-0000-0000-000000000000)]
- DEBUG Calling IBMTivoliProvider.getUserByShortName(carol);  SearchProperties: MemberOfGroups, ShortName, Id
- DEBUG URL: ldap://127.0.0.1:389; BaseDN: o=sample; Filter: (&(objectClass=person)(cn=carol)); SearchAttributes: (<DUMMY>,i]
```

5. Close the trace log.

6. Close Notepad++.

7. Log out of the IBM Content Navigator desktop.

Procedure 6: Disable trace logging

Never leave trace logging enabled for long periods of time. Trace logging affects system performance and uses disk space.

1. In the Administration Console for Content Platform Engine window, log in as the `P8admin` user (password: `IBMFileNetP8`).

Hint

You might see this error:

Click OK. The login screen is refreshed, so you can log in. This situation occurs because you logging in to two different applications in the same browser window.

---

2. Open the Trace Subsystem tab on the right.

3. Clear the Enable trace logging option.

4. Click Save.

5. Log out of the Administration Console.

6. Close the browser windows.

7. Close the open Windows Explorer windows.

Exercise review and wrap-up

In this exercise, you completed the following tasks:

- Locate the Content Platform Engine logs and the WebSphere Application Server logs.
- Archive the existing Content Platform Engine logs and the WebSphere Application Server logs.
- Restart the WebSphere Application Server to generate new logs files.
- Examine the new Content Platform Engine logs and the WebSphere Application Server logs.
- Configure trace logging at the domain level and site level.
- Inspect the trace log files.
- Create trace log entries.
- Disable trace logging.

Exercise 2. Work with audit logs

Estimated time

00:50

Overview

In this exercise, you learn:

- How to configure auditing on document class objects.
- How to view the audit history and query the audit log.
- How to create an audit disposition policy to automatically prune the audit log.

Objectives

After completing this exercise, you should be able to:

- Create audit definitions
- Prune audit entries

Exercise Introduction

Introduction

In this exercise, you learn how to:

- Define audit definitions to create audit entries in the audit log.
- Create audit disposition policies to automatically prune the audit log.

Activities

-

-

User accounts

Type	User ID	Password
Administrator	p8admin	IBMFileNetP8

2.1. Create audit definitions

Introduction

In this activity, you add an audit definition to a custom document class. You update a document and then observe the audit history.

Procedures

Procedure 1: Enable auditing on the Sales object store

You can enable and disable auditing at the object store level. Auditing is disabled by default.

1. Open a browser window and start the Administration Console for Content Platform Engine.

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

2. Enable auditing on the Sales object store:

    a. Open the object store, **Sales**

    b. In the General tab, on the right, locate, **Enable auditing** (three rows from the bottom).

    c. Click the down arrow and select, **Yes**.

    d. Click Save.

    e. Leave the Administration Console open for the next procedure.

Procedure 2: Create audit definitions

In this procedure, you create audit definitions on the document subclass, Order. The Order class has two subclasses.

1. Open the document subclass, **Order**:

    a. On the left navigation pane of the Sales object store, go to **Data Design > Classes > Document > Order**.

2. On the right, select the **Audit Definitions** tab (you might need scroll to the right).

3. Click **New**.

4. On the New Audit Definition page, enter the following information:

Item	Value
Display name	`Audit Updates`
Event	Update Event
Object State Recording Level	Modified object only
Audit type	Success
Apply to subclasses	Checked
Is Enabled	Checked

- You see:

5. Click OK to create the Audit Definition.

6. Repeat Steps 3-5 to create another audit definition. Use the following information:

Item	Value
Display name	`Audit Deletions`
Event	Deletion Event
Object State Recording Level	None
Audit type	Success
Apply to subclasses	Checked
Is Enabled	Checked

7. Click **Save** to save the changes to the Order class definition.

8. Log out of the Administration Console.

Procedure 3: Create audit entries

In this procedure, you create audit entries by updating a document of class, Order.

1. Log on to IBM Content Navigator:

    a. Open a new Firefox browser tab, and go to the bookmark, **Content Navigator**.

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

2. From the Sales object store, open the folder, **Orders**.

3. Select a document (Example: Order Basic A).

4. Right-click Properties.

5. Change a property value (Example: Amount_due).

6. Click **Save**.

7. Log out of IBM Content Navigator.

Procedure 4: View the audit history

When auditing is enabled, you can view the audit history of an object to see which audited events took place. The audit log entries include when the change was made, and the user that made the change.

1. Log on to Administration Console for Content Platform Engine:

    a. Switch back to the tab in the Firefox browser, already open to the Administration Console.

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

Troubleshooting

If you do not get a login screen, close the browser window and open a new browser window. Launch the Administration Console.

---

2. Go to **Sales > Browse> Root Folder > Orders**.

3. Open the document that you changed in the previous procedure.

4. Open the **Audit History** tab (you might need to scroll to the right to find it).

5. Verify that you can see at least one audit log entry.

	Event	Date Created	Event Status	Creator	Id
	Update	September 14, 2016 at 12:54:18 PM Eastern Standard Time	Succeeded	P8Admin	{A81F2506-4EF7-46D5-803C-19560B8C7541}

Audit history

6. Examine the information that is provided in the audit entry.

7. Click the Update link to open the audit entry.

8. Verify that you can see which properties were modified:

Modified properties: ?

```
DateLastModified = 2016-09-14T16:54:18.026Z
LastModifier = P8Admin
amount_due = 150.0
```

9. Close the Update tab.

10. Leave the Administration Console open.

Procedure 5: Create more audit entries

In this procedure, you check out and download a document to save a local copy, then you delete the document from the object store.

1. Go to IBM Content Navigator:

   a. Switch to the Firefox browser tab that is open to the IBM Content Navigator Sample Desktop.

   b. Click the browser refresh icon.

2. From the Sales object store, open the Orders folder.

3. Right-click a document and select, **Check Out > Check Out and Download** (Example: PO 3411.tif).

   a. Save the file (saved to Downloads).

4. Cancel the checkout.

5. Right-click the same document and select, **Delete**.

6. Log out of the IBM Content Navigator desktop.

Procedure 6: Query the audit log

In this procedure, you use the Administration Console Search page to find audit log entries.

1. Log on to Administration Console for Content Platform Engine:

   a. Switch back to the tab in the Firefox browser, already open to the Administration Console.

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

2. Open the Sales object store and click the Search icon.

3. Create an object store search. Use the following criteria:

Item	Value
Class	Object Change Event
Column A	Date Created
Condition	Less than
Value	Tomorrow's date and any time

4. In the Search Result Display section, for Order By, select **Audit Sequence**.

5. Run the search.

6. Review the search results.

    ▪ Verify that you see four audit entries returned.
    ▪ Verify that you see two types of audit entries, Update Event and Deletion Event.
    ▪ Note the Audit Sequence values.

7. Save the Search:

    a. Click Save As.

        - Document Title: `Object Change Event Query`

    b. Click OK.

📝 **Note**

You can also search for the class, **Event**, which will return more results.

---

8. Close the search tab.

    ▪ Click **No**, in the message window.

9. Log out of the Administration Console.

10. Close the browser window.

2.2. Prune audit entries

Introduction

Audit logs can grow quickly and use up storage space. You can prune the audit logs manually, by using a search template, or automatically by using an audit disposition policy. In this activity, you create an audit disposition policy.

Procedures

Procedure 1: Create an audit disposition policy

In this procedure, you create an audit disposition policy that deletes audit entries that are older than 7 minutes.

1. Open a browser window and start the Administration Console for Content Platform Engine.

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

2. Open Object Stores > Sales > Administrative > Audit Disposition > Audit Disposition Policies.

3. Click **New**.

4. Use the data in the table to complete the wizard:

Item	Value
Name	`Prune Audit Logs`
Disposition rule	`DateCreated < Now () - TimeSpan(7, 'Minutes')`
Duration between completed sweeps	`300` seconds
Enable audit disposition policy	Checked

5. On the Summary page, click **Finish**.

6. On the Success page, click **Close**.

7. In the Audit Disposition Policies tab, click **Refresh**.

    a. The new audit disposition policy is listed.

Procedure 2: Configure the audit subsystem

The audit subsystem controls the pruning of the audit entries from the audit log. In this procedure, you enable the audit subsystem so that the auto disposition policy, that you defined in the previous procedure, can run.

1. In the Administration Console for Content Platform Engine, open the P8Domain tab on the upper left.

2. Select the Audit Subsystem tab.

3. Check the option, **Enable audit pruning**.

4. Click **Save**.

Procedure 3: Verify that the audit logs are deleted

You enabled the audit subsystem. You configured the audit disposition policy to delete audit logs that are older than 7 minutes. In this procedure, you verify that the audit entries are deleted from the audit log.

1. In the Administration Console for Content Platform Engine, click the Sales tab.

2. Click the Search icon.

3. Run the search that you saved, **Object Change Event Query**.

   a. Click OK on the message displayed.

4. Verify that the search returns zero results.

5. Examine the Content Platform Engine server log:

   a. Use the skills that you learned in the previous exercise to open the folder that contains the Content Platform Engine logs.

   b. Open the file, p8_server_error.log in Notepad++.

   c. Scroll to the end of the file.

   d. Verify that a full disposition sweep completed. Note how many records were deleted.

   ```
   FNRCE0000I - INFO A full audit disposition sweep has completed; 5 records deleted, 0 failure(s).
   ```

6. Minimize the Notepad++ window.

7. Minimize any open Windows Explorer windows.

Procedure 4: Configure an audit disposition schedule

In this procedure, you create a schedule for the audit subsystem so that the audit disposition policy runs every 5 minutes, one day a week.

1. In the Administration Console for Content Platform Engine, click the P8Domain tab and open the Audit Subsystem tab.

2. Scroll down to the Schedule area.

3. Click **New**.

4. Use the data in the table to configure the New Time Period:

Item	Value
Day of week	Today's day of the week
Start time	`Current system time plus 3 - 5 minutes`
Duration	`0 hours 13 minutes`

💡 **Hint**

For the start time, choose one of the time slots that are listed, then edit the value.

5. Click **OK**, then click **Save**.

6. Create some audit entries:

   a. Open a new browser tab to open the IBM Content Navigator Sample Desktop.

   b. Go to the folder, **Orders**.

   c. Change the Amount_due on a couple of the documents.

7. Examine the Content Platform Engine server log:

   a. Maximize the Notepad++ window.

   b. Click yes to reload the file.

   c. Scroll to the end of the file.

8. You see a series of delay entries, one for each object store.

   ▪ The Audit Disposition subsystem is delaying until the time that you scheduled as the start time.
   ▪ When the start time is reached, you see an entry with a full disposition sweep completed with 0 records deleted.

9. Minimize the Notepad++ window.

10. Check the p8_server_error.log again after 5 minutes. Keep checking the log until after the 13-minute duration time expires.

   a. Notice that after the duration time expires, you do not see any more entries logged for a full audit disposition sweep. The next audit disposition sweep will run one week from today, starting with the scheduled start time.

   b. One of the entries should show a number of records deleted, corresponding to the number of documents that you updated.

11. When you are finished:

- Close the p8_server_error.log.
- Log out of the Administration Console.
- Close all the browser windows.

2.3. Challenge: Configure auditing on another object store

In this exercise, you use the skills you learned to create audit definitions and a disposition policy on the object store, LoanProcess.

Scenario: Product Department

The Real Estate department wants Residential objects to be audited for Update and Creation events. Residential object audit entries must be deleted after 30 days.

Challenge

Before you start, make sure that the Audit Subsystem is disabled for the P8Domain.

- Enable auditing on the LoanProcess object store.

- Create audit definitions for Update and Creation events on the document class, Real Estate.

- Create audit entries:

    ▪ Create and update a document of class, Real Estate > Residential.
    ▪ You can use the folder, Real Estate > Residential.

💡 Hint

Use the IBM Content Navigator Sample Desktop to create the audit entries. Make sure that you select the object store, LoanProcess.

The folder, **Libraries > Documents > sample documents**, contains sample documents that you can use to add content to the loan document.

- Change the title (For example: Sandy Smith's home).
- In the properties of the residential document, you need to enter values only for Document Title and Price.

- View the audit history and query the audit log for the audit entries.

- Create an audit disposition policy that deletes audit log entries older than 30 days.

    ▪ Set the Duration between completed sweeps to 300 seconds.
    ▪ Do not enable the Audit Subsystem until you successfully query the audit entries.

Verification

Before you enable the Audit Subsystem:

- Search the audit log for the audit entries, search for the class, **Event**.
- Verify that audit entries are created when you add and update the document.

Enable the Audit Subsystem.

- You can remove the scheduled day and time, or adjust the time so that it is 3 - 4 minutes after the current time.

After you enable the Audit Subsystem:

- Check the Content Platform Engine log, p8_server_error.log.
- Verify that a full disposition sweep is running every 5 minutes.
- Zero records are deleted because the documents are not older than 90 days.

Exercise review and wrap-up

In this exercise, you completed the following tasks:

- Created audit definitions.

- Viewed the audit history of an object

- Queried the audit logs.

- Created an audit disposition policy.

- Pruned audit logs automatically.

- Viewed the log entries for audit disposition sweep in the Content Platform Engine error log.

- Created an audit disposition schedule.

Appendix A. Start and stop system components

Appendix Overview

This image contains three WebSphere Application Server profiles. For this unit, you use the profile for server1, which hosts the following applications:

- Tivoli Directory Server Administration tool
- Content Platform Engine
- IBM Content Navigator
- Administration Console for Content Platform Engine

List of procedures:

Procedure 1: Start system components

There are start scripts to make starting the WebSphere Application Server profiles easier. The scripts are in the folder, **WebSphere Admin**, on the desktop.

Important

If you just started the student system, ensure that the Windows 2008 Operating System completes starting all the services before starting the WebSphere Application Server profile. 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).
4. Minimize the **WebSphere Admin** folder.

ℹ️ **Information**

For your convenience, the WebSphere Admin folder also contains:

- A link to launch the WebSphere administrative console for each server profile.
- A shortcut to the location of the WebSphere Application Server logs for each profile.

The Start Server1.bat, starts the WebSphere Application Server, **server1**, which starts the following applications:

- Tivoli Directory Server Administration tool
- Content Platform Engine
- IBM Content Navigator
- Administration Console for Content Platform Engine

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 one IBM Content Navigator desktop, Sample Desktop. You need to verify that the Content Platform Engine and the IBM Content Navigator desktop 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. Go to the URL: `http//ecmedu01:9080/FileNet/Engine`

💡 **Hint**

There is a bookmark in the Bookmarks menu under:

> - *System Health > CE ping*

Because the Content Platform Engine is running as an application inside the IBM WebSphere Application Server, successfully viewing the Content Engine Startup Context (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. Go to the URL: `http//ecmedu01:9080/peengine/IOR/ping`

Hint

There is a bookmark in the Bookmarks menu under:

    - *System Health > PE ping*

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    c. Log in as the P8 administrator.

        - Username: p8admin
        - Password: IBMFileNetP8

    d. If both ping pages display successfully, close the browser and all the tabs.

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.

    a. Wait for the command window to disappear (Can take several minutes).

Appendix B. Troubleshooting

Appendix Overview

This appendix contains issues and resolutions for:

- "WebSphere Application Server error log" on page B-1
- "IBM Content Navigator Desktop issues" on page B-1

WebSphere Application Server error log

The IBM Content Navigator and Content Platform Engine applications are web applications that run on the WebSphere Application Server. If you encounter issues that are not covered in the issues, listed in the appendix, review the WebSphere Application Server error log.

1. Open the WebSphere Admin folder on the desktop.
2. Right-click **server1 WAS logs** and select, **Open in new window**.
3. Right-click **SystemOut.log** and select, **Edit with Notepad++**.
4. Scroll to the bottom and look for any stack traces. See whether you can figure out the cause of the issue from the exception reported.

IBM Content Navigator Desktop issues

Issue

You open an IBM Content Navigator desktop and do not get a login prompt (see a blank screen).

Cause

The cookies are stale.

Resolution

Close the browser window and open a new browser window. Open the desktop again. If the login prompt does not display; clear the browser cache and open the desktop again.

Issue

The IBM Content Navigator Sample Desktop appear to hang with Loading Desktop.

Cause

The first time a desktop is launched; it has to load the Java applications. Once the Java cache is populated, subsequent desktop launches are faster.

Resolution

Be patient. It can take a few minutes for the desktop to open and display the login prompt.

Mozilla Firefox issues

Issue

No bookmarks exist.

Cause

You clicked the option to reset Firefox.

Resolution

Start Firefox Profile Manager:

- In a command window open to Mozilla Firefox, type: `firefox.exe -P`
- Create a new profile.
- Enter a name for the profile.
- Click **Choose Folder** and browse to the **Old Firefox Data** folder on the desktop that the reset created.

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