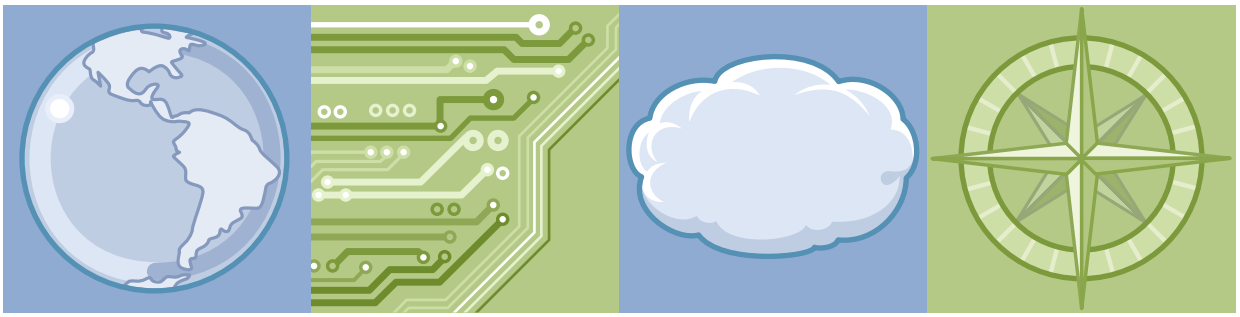
IBM Training

Student Exercises

IBM Case Foundation 5.2.1: Administration

Course code F247 ERC 1.0



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Unit 1. IBM Case Foundation 5.2.1: Configure the workflow system

Unit overview

Lessons

Unit dependencies

The activities in this unit must be performed in order.

This unit is independent of all other units.

Lesson 1.1. Workflow system concepts

Overview

Why is this lesson important?

As a workflow system administrator, you are responsible for defining and configuring the workflow system to run FileNet workflow applications.

As a workflow author, you design and implement FileNet workflow applications.

To do these tasks effectively, you need to understand what a workflow system is and what it provides to FileNet workflow applications.

Activities

Identify workflow system concepts: Written exercise

For each question, indicate the correct answer or the best answer.

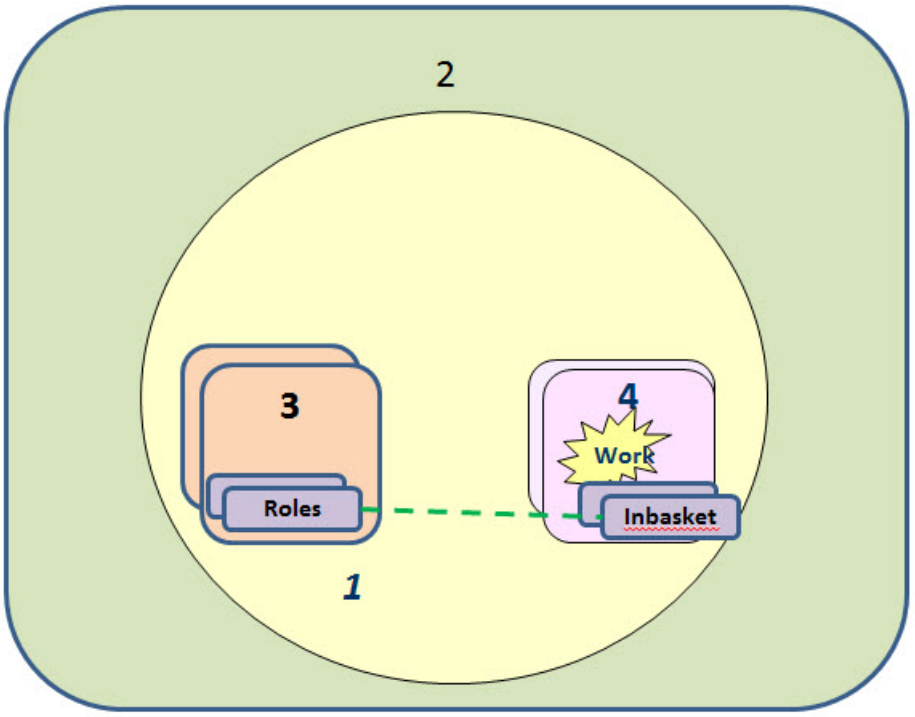
1. What is a workflow system?
   a. A logical structure that contains isolated regions.
   b. A database that contains isolated regions.
   c. A logical structure similar to an object store but used for processing workflows.
   d. Another name for an isolated region.
2. An object store can have multiple workflow system.

   True or **False**:
3. Which of the following components are contained in an isolated region? (Select all that apply)
   a. Queues
   b. Event logs
   c. Application Spaces
   d. Connection points
4. What is the function of a work queue?
   a. Stores work items that are waiting to process by more than one user or an automated process.
   b. Stores work items that are waiting to process by an individual.
   c. Stores workflows that are waiting to process by more than one user or an automated process.
   d. Allows the processing of a workflow step by an external entity.
5. What is the function of a roster? (Select all that apply)
   a. Keep track of work in progress.
   b. Provide an efficient way to locate specific active workflows.
   c. Store work items that are waiting to process by an individual.
   d. Allows the processing of a workflow step by an external entity.
6. When an isolated region is initialized, a number of default region objects are automatically created. (Select all that apply)
   a. DefaultRoster
   b. DefaultApplication
   c. DefaultIn-basket
   d. DefaultQueue

Identify workflow system components

Match the component name in the table to the component in the diagram.

Component Name
Queue
Isolated region
Application Space
Workflow system



Enter the component name, from the table, corresponding to the component number.

1. _____
2. _____
3. _____
4. _____

Lesson 1.2. Configure the workflow system

Overview

Why is this lesson important?

As a workflow system administrator, you are responsible for defining and configuring the workflow system to run FileNet workflow applications.

As a workflow author, you design and implement FileNet workflow applications.

To do these tasks effectively, you need to know how to create and configure a workflow system.

Activities

User accounts

	Type	User ID	Password
	Operating system	administrator	passw0rd
	P8 administrator	p8admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

Prepare your system for the student exercises

Introduction

The Windows server student system is installed and configured as a single-server FileNet P8 system with three WebSphere Application Server profiles. For this unit, you use server1. You follow the steps in Procedure 1 and 2 to start the system components and validate that all necessary components are running.

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 7 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.

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).

Note

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.

- If you have issues with starting the system components, refer to Appendix A, "Start and Stop System Components".
- Minimize the WebSphere Admin folder.

Information

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 application that you use for these activities is IBM Content Navigator. You work with two IBM Content Navigator desktops that are configured for the workflow system 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. 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 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. Go to the URL: `http//ecmedu01:9080/peengine/IOR/ping`

Hint

There is a bookmark in the Bookmarks menu under:

- *System Health > PE ping*

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.

3. Verify that the P8 Admin console desktop is functioning properly.

a. Open a Mozilla Firefox browser window.
b. Go to the URL: `http://ecmedu01:9080/navigator/?desktop=P8adminconsole`

Hint

There is a bookmark in the Bookmarks menu, *P8 Admin console*, for your convenience.

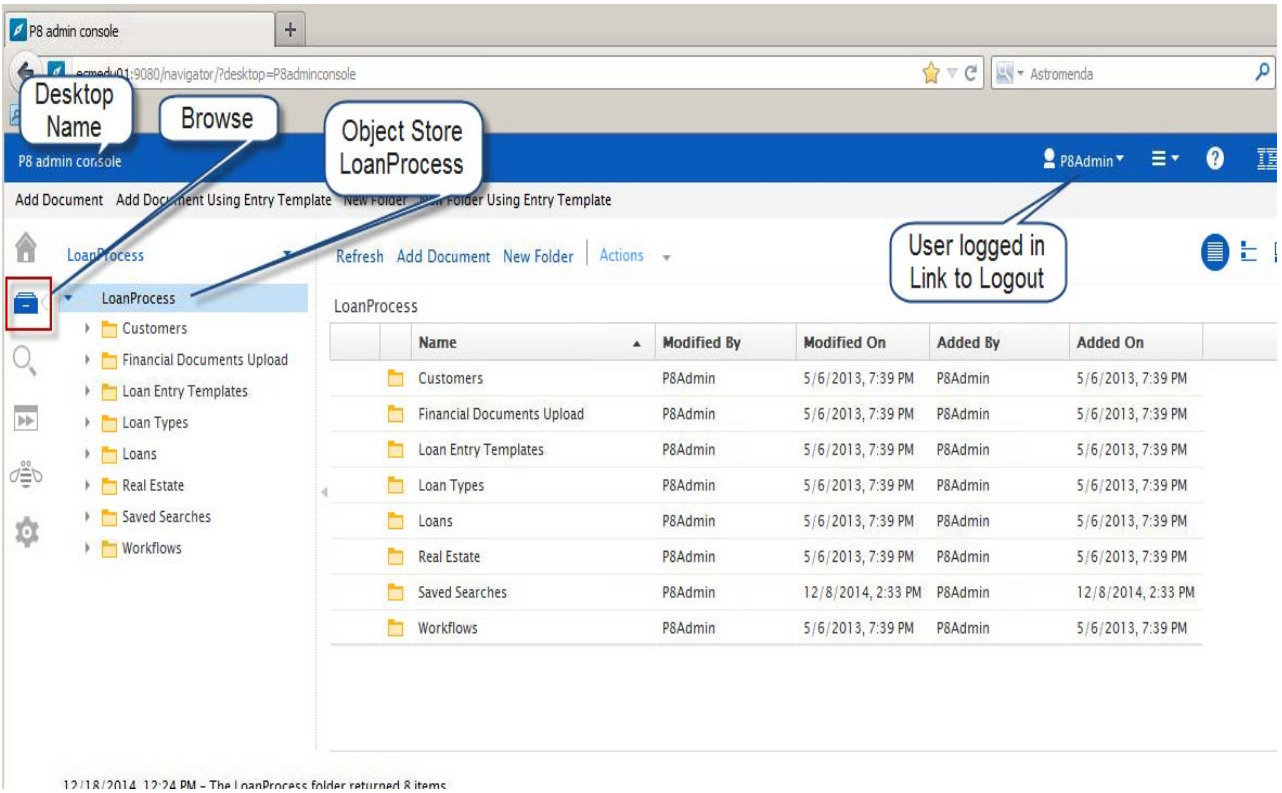
c. Log in as the P8 administrator.
   - Username: `p8admin`
   - Password: `IBMFileNetP8`

Note

If you do not get a login prompt, that means that the credentials were cached in Step 2c.

The first time the desktop is launched; it can take several minutes to load the profile. The subsequent times, the desktop is launched, should be faster because the Java cache is used.

You see 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. Log out of the P8 Admin console.

- On the upper right corner of the desktop, click **P8Admin** and select **Log Out**.
- Click **Log Out** to confirm.

4. Verify that the Workflow Author desktop is functioning properly.

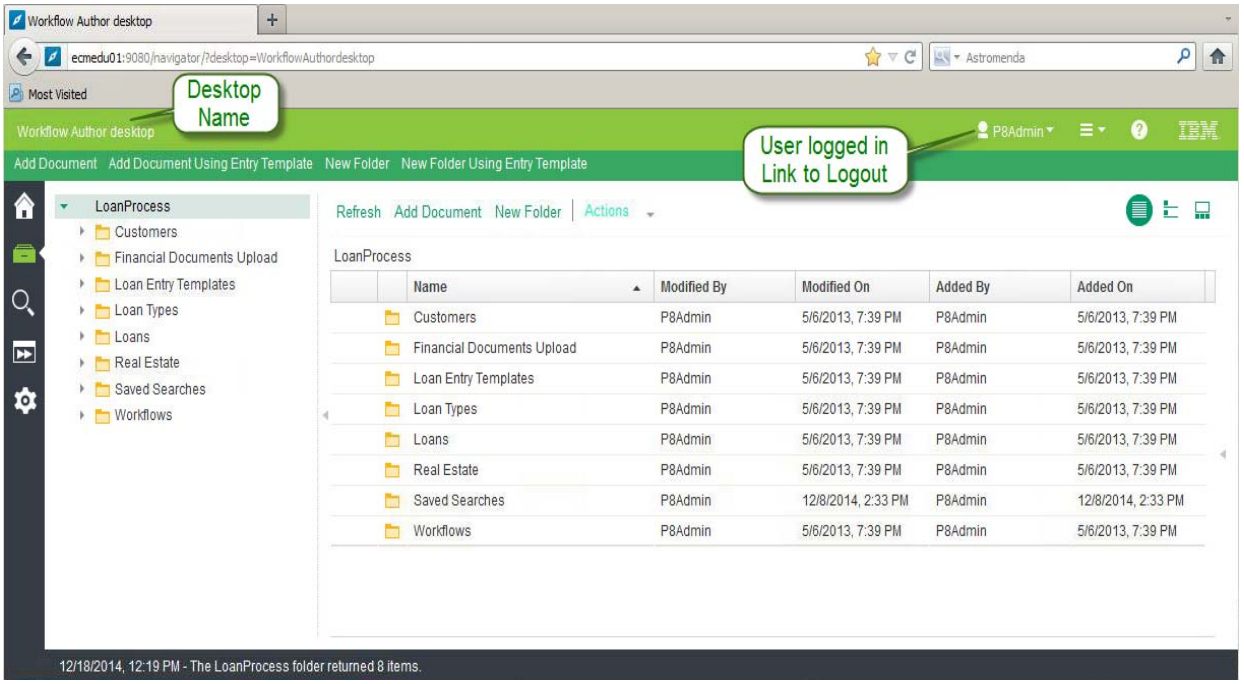
a. Go to the URL: `http://ecmedu01:9080/navigator/?desktop=WorkflowAuthordesktop`

Tip: There is a bookmark in the Bookmarks menu, *Workflow Author desktop*, for your convenience.

b. Log in as a workflow author.

- Username: `p8admin`
- Password: `IBMFileNetP8`

A successful login to the Workflow Author desktop should look similar to:



c. Log out 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.

d. Close the browser window and all the tabs.

Create a workflow system

Introduction

In this exercise, you create a new workflow system in the LoanProcessQA object store.

Procedures

Procedure 1: Create a workflow system

In this procedure, you create a workflow system in the LoanProcessQA object store with the Administration Console for Content Platform Engine.

1. Launch the Administration Console for Content Platform Engine.
   a. Open a Mozilla Firefox browser window.
      - Go to the URL: `http://ecmedu01:9080/acce`

   Tip: There is a bookmark in the Bookmarks menu, ***ACCE***, for your convenience.

   b. Log in as a P8 administrator.
      - Username: `p8admin`
      - Password: `IBMFileNetP8`
2. Create a workflow system.
   a. Click the **LoanProcessQA** object store to open it.
   b. Click **Administrative > Workflow System**.
   c. Click **New**, on the right pane.
   d. Use the data in the table to complete the first screen of the wizard.

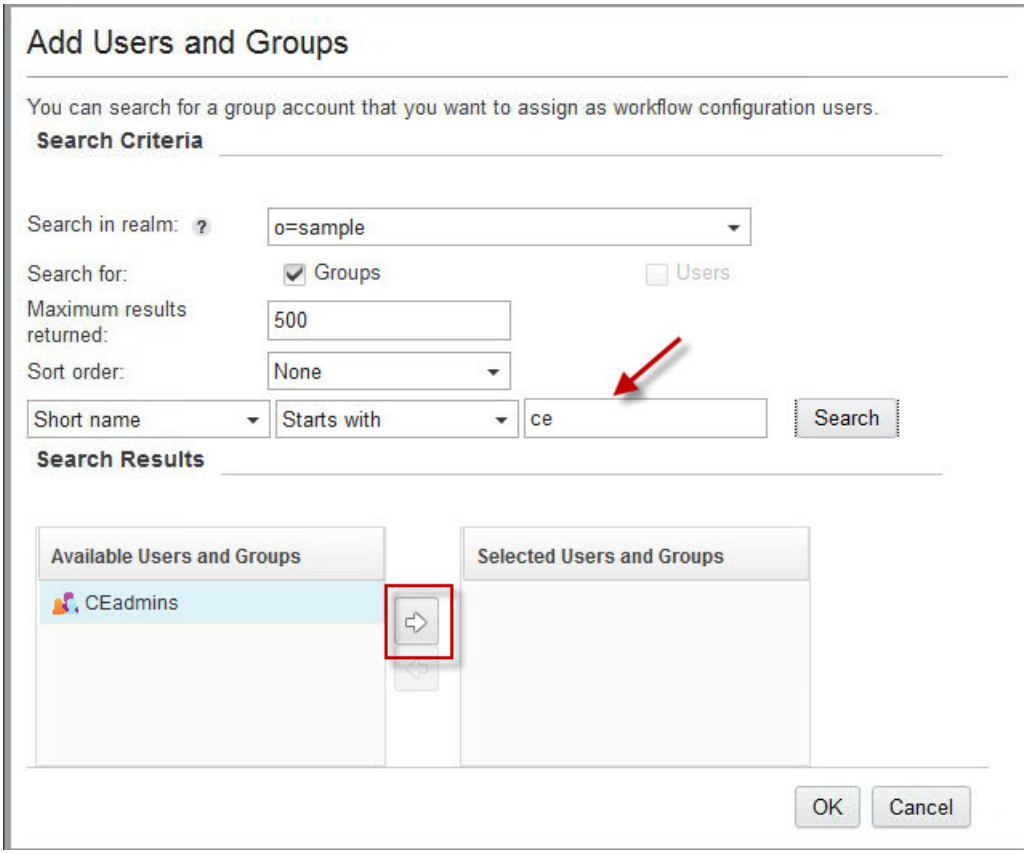
Screen	Field Name	Value
New Workflow System	Table Spaces: Data	CEDATA_TS

Note

You get a message that the workflow system administration group is required.

e. Select **CEadmins** for the Administration group.

- Click the **Browse** button.
- To the left of the **Search** button, enter ce, and click **Search**.
- Under **Search Results**, click the right arrow to move **CEadmins** from the **Available Users and Groups** to **Selected Users and Groups.**



- Click **OK**.

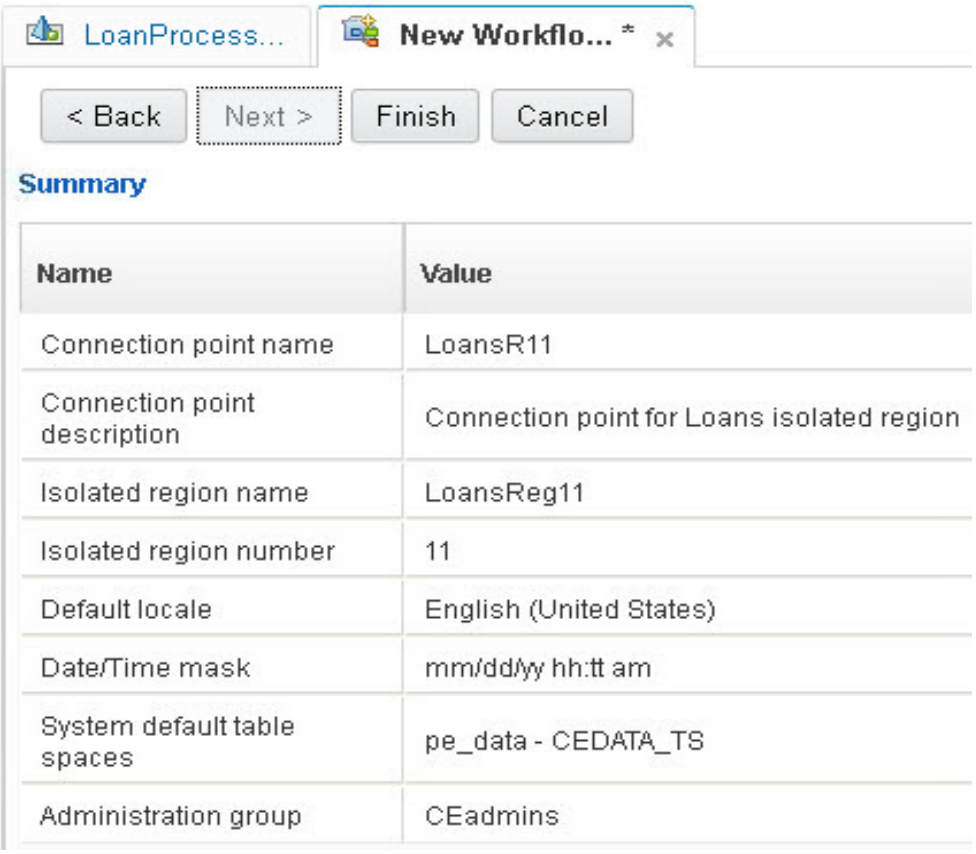
f. Click **Next** to move to the next screen of the wizard.

g. Use the data in the table to complete the rest of the wizard. Accept all other defaults.

Screen	Field Name	Value
Connection Point	Name	LoansR11
	Description	Connection point for Loans isolated region.
Isolated region	Isolated region name	LoansReg11
	Isolated region number	11

- Click **Next** to advance to the next screen.
- At the **Specify Isolated Region Table Space** screen, click **Next**.

3. The Summary screen should look similar to:



4. Click **Finish** to complete the wizard and create the workflow system.
5. Make sure that you see **Success** displayed. Close the tab.

Procedure 2: Verify the workflow system that you created

In this procedure, you use the Administration Console for Content Platform Engine to verify the workflow system that you created in Procedure 1.

1. Verify the General properties of the workflow system.
   a. You are in the Administration Console for Content Platform Engine in the LoanProcessQA object store.
   b. Click **Administrative > Workflow System**.
      - Observe that the **General** tab includes the values you entered for the table space and the workflow system **Administration group**.
2. Verify the connection point of the workflow system.
   a. On the left, expand **Workflow System > Connection Points**.
      - Observe that the connection point you created is listed.
   b. Click the **LoansR11** connection point to open it.
      - Observe the Isolated region that it points to.
   c. Click the Properties tab to explore the properties.

d. Click the down arrow, to the right of any of the property values.

- Observe that you can Display or Edit the value of the property values that are not disabled. The disabled properties can be displayed or copied.

3. Verify the isolated region of the workflow system.

a. On the left, expand **Isolated Regions**.

- Observe that the isolated region you created is listed.

b. Click the **LoansReg11** isolated region to open it.

- Observe that the display name and the isolated region number are the values that you provided.
- Observe the additional information, for example the **Database connection**.

Information

The system populates the information, based on the object store where you created the workflow system.

c. Click the **Table Spaces** tab.
d. Observe that **CEDATA_TS** is the table space in use.

Information

Since you did not specify a different table space to use for the isolated region, it uses the same table space as the workflow system. It is suggested that the workflow system and the isolated region use the same table space.

e. Click the **Connection Points** tab.
f. Click **LoansR11** to open it.

- You are now in the **LoansR11** screen, as in Step 2c.

g. Click the **General** tab and click the isolated region, **LoansR11**.

4. On the left, click **Workflow System**.

a. Click the **Isolated Regions** tab.

b. Click **LoansReg11**.

c. Observe that you are now back in the isolated region, **LoansReg11** screen.

Information

As you can see, there are various ways to get to the same information. You will add a connection point, an isolated region, and isolated region objects in the next lesson.

d. Log out of the administration console and close the browser window.

Explore and configure the workflow system created

Introduction

In this exercise, you explore the workflow system that you created in the previous exercise. You configure a few of the workflow system properties.

Procedures

Procedure 1: Explore the workflow system

In this procedure, you explore the workflow system that you created in the previous exercise. You explore the different tabs and the workflow system properties that can be configured. In the next procedure, you will configure some of the workflow system properties.

1. Launch the Administration Console for Content Platform Engine.
   a. Open a Mozilla Firefox browser window.
      - Go to the URL: `http://ecmedu01:9080/acce`

   Tip: There is a bookmark called **ACCE**, in the Bookmarks menu.

   b. Log in as a P8 administrator.
      - Username: `p8admin`
      - Password: `IBMFileNetP8`
2. Open the **LoanProcessQA** object store.
3. Click **Administrative > Workflow System**.
4. Explore the General tab.
   a. Ensure that the General tab is selected.
   b. In the **Workflow System Security Groups** section, hover over the question mark, to the right of Configuration Group. You might need to click the question mark.
      - Read the information that is displayed and click the Learn more... link.
      - Read the IBM Knowledge Center topic that is displayed.
   c. Take a few minutes to explore other fields, and read the information that is provided.
5. Explore the **Runtime Options** tab.
   a. Click the **Runtime Options** tab.
      - Explore the settings that are defined by default.
      - Take a few minutes to review all the settings and read the information that is provided.

6. Explore the remaining tabs.
   a. Click each of the remaining tabs.
      - Notice the buttons and Actions available.
      - Read the introductory paragraph.
      - Explore the workflow system properties that can be configured and read the information that is provided.
      - Leave the administration console open for the next procedure.

Procedure 2: Configure the workflow system

In this procedure, you configure the Configuration Group and the default Web Application, with the Administration Console for Content Platform Engine.

1. In the Administration Console for Content Platform Engine, click **LoanProcessQA > Administrative > Workflow System**.
2. Set the workflow system security group for the **Configuration group** to **CEadmins**.
   a. Ensure that the General tab is selected.
   b. On the **Workflow System Security Groups: Configuration group** field, click **Browse**.
      - In the Add Users and Groups window, enter ce for the search criteria.
      - Move **CEAdmins** from **Available Users and Groups** to **Selected Users and Groups**.
      - Click **OK**.
   c. Click **Save**.
3. Modify the default Web Application configured.
   a. Click the **Web Applications** tab.
   b. Scroll down until you see **IBM Content Navigator**.
   c. Click the box to the left and click the option to specify it as the Default Application.
   d. Click **Save**.
4. Close the **LoanProcessQA** tab.
5. Leave the administration console open for the next exercise.

Create a database connection

Introduction

In this exercise, you add a DbExecute connection to an existing workflow system in the LoanProcess object store. The new database connection allows a workflow step to execute a stored procedure on an external database.

Procedures

Procedure 1: Create a DbExecute connection

In this procedure, you add a DbExecute connection to an external database.

1. In the administration console, open the **LoanProcess** object store.
   a. In the administration console, click the **P8Domain** tab.
   b. Under Object Stores, select **LoanProcess**.
2. Click **Administrative > Workflow System**.

Important

Make sure that you in the object store **LoanProcess**, not **LoanProcessQA**.

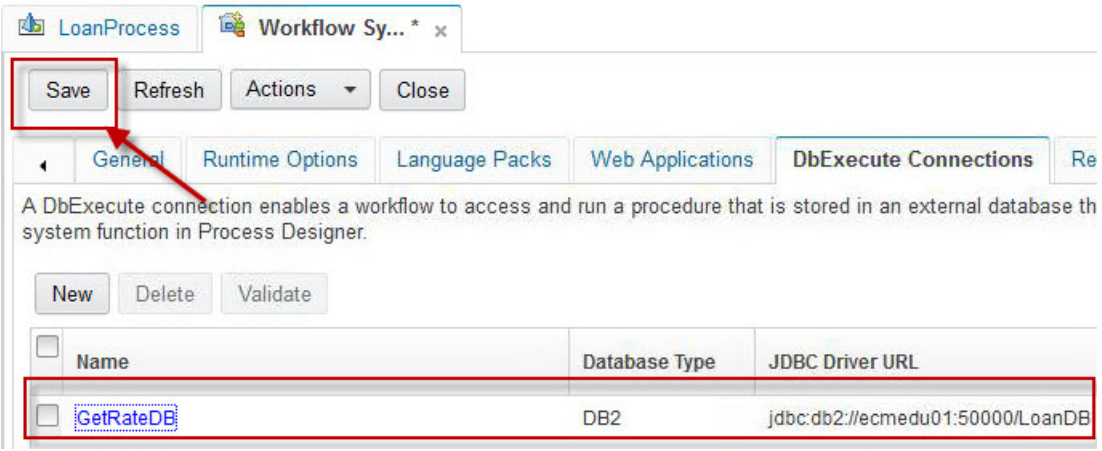
3. Click the **DbExecute Connections** tab.

4. Click **New**.

5. Use the data in the table to complete the wizard. The connection name, database name, and password must be entered exactly as shown in the table. The values are case-sensitive.

	Field	Value
	Connection name	GetRateDB
	Database type	DB2
	Database name	LoanDB
	Database host	ecmedu01
	Database port	50000
	Database user name	dsrdbm01
	Database password	IBMFileNetP8

6. Scroll to the bottom of the window and click **Validate**. Make sure that you get a message, that states that the validation of the database connection was successful. If not, review your entries and correct them.
7. Click **OK** to close the validation message window.
8. Click **OK** to add the connection.
9. Click **Save**, to save the connection.



10. Minimize the browser window.

11. Verify the database connection with vwtool.

Information

The command-line tool, vwtool is a powerful tool that can analyze and modify various components of a workflow system or isolated region.

a. Launch vwtool.
   - Double-click the **vwtool P8ConnP5.bat** shortcut on your desktop.

Hint

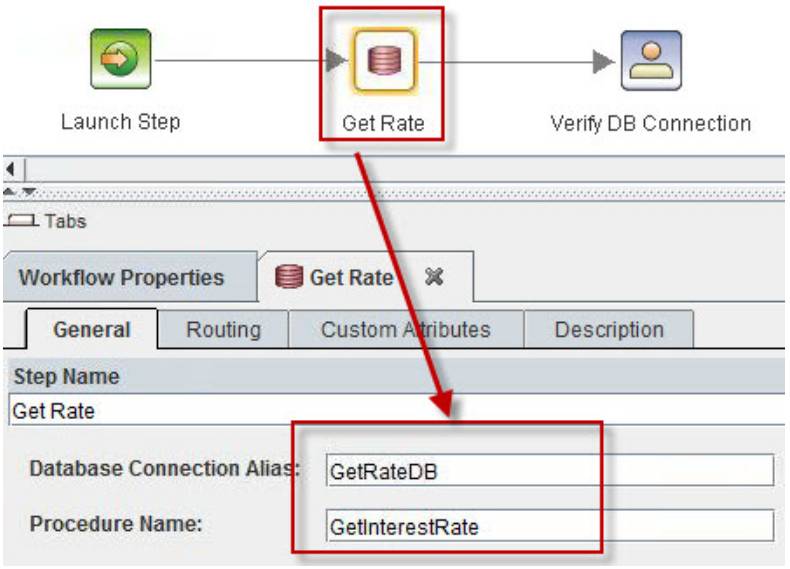
You might want to increase the Layout > Buffer Size Height on the command prompt window, for example to 300.

b. Type `listdbconfig *` followed by a carriage return.
c. Your output should look similar to:

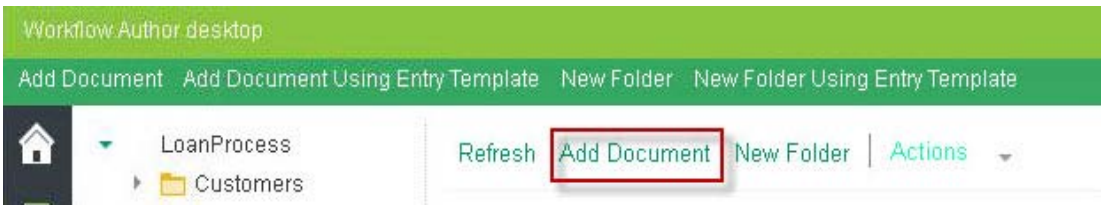
d. Type **quit** to exit vwtool.

Procedure 2: Test the database connection with a workflow application.

In this procedure, you add, transfer, and launch a simple workflow that contains a step, **GetRate** that calls the stored procedure, **GetInterestRate**, which uses the DbExecute connection, **GetRateDB**, that you created in Procedure 1.



1. Open the Workflow Author desktop.
   a. Maximize the browser window and open a new browser tab.
   b. In the bookmarks menu, select **Workflow Author desktop**.
2. Select the **Workflows** folder.
3. Add the workflow definition.
   a. Click **Add Document**.

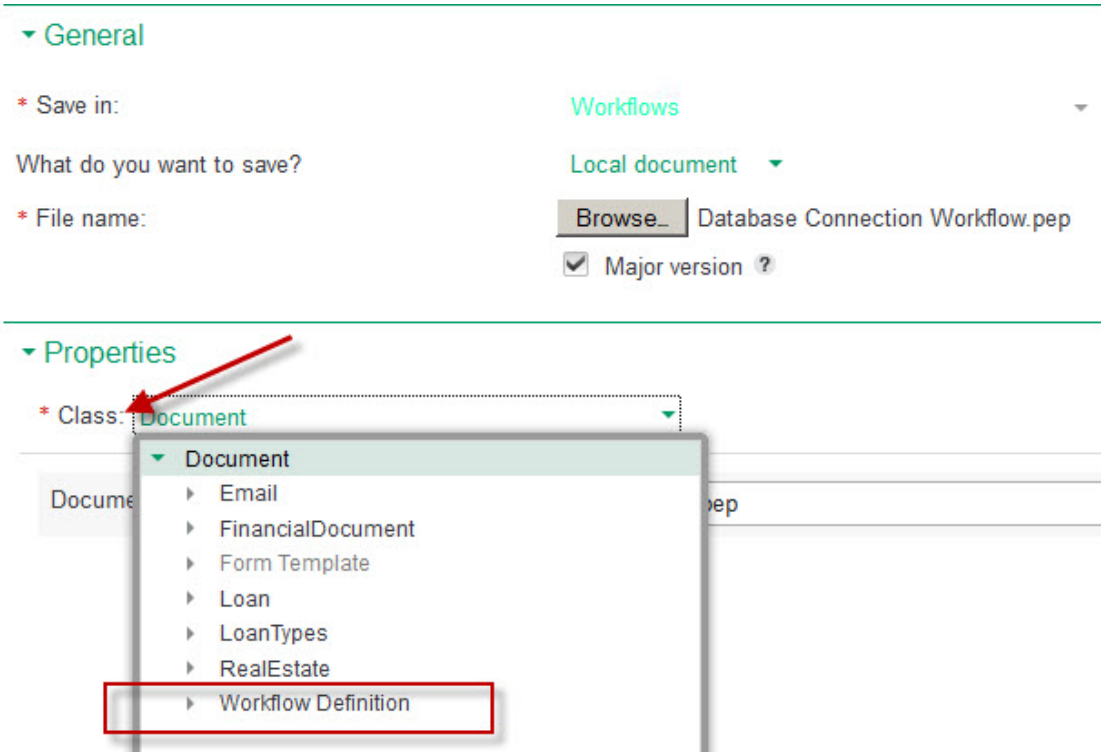


   b. Click **Browse** and go to the path:

`C:\Labs\Case Foundation 5.2.1 Administration\Configure workflow system`

   c. Select **Database Connection Workflow.pep**.

d. For the Class, select **Workflow Definition.**



e. Click **OK**.
f. Click **Add,** on the lower right.

4. Transfer the workflow.

a. Ensure that the **Database Connection Workflow** is selected, click **Actions > Workflow > Transfer Workflow**.
b. If the **Transfer Workflow Window** is displayed, accept the option to, **Use the workflow name**., then click **Transfer**.

Information

If a workflow was transferred previously with the same name, the Transfer Workflow Window displays, providing you the option to use the same name or change the name.

c. Ensure that you see a message, on the lower left, that states, ***The workflow was transferred successfully***.

5. Launch the workflow.

a. Click **Actions > Workflow > Launch Workflow**.
b. The **Database Connection Test** window is displayed.

Information

The values for all the data fields in the workflow are prefilled for you. Notice that the interest_rate field has 0 as its value. In the workflow, the DbExecute system step, calls Get Rate, connects to the database, and retrieves data based on values that are provided in the work item.

c. Click the **Launch Workflow** link at the lower right.

6. Verify that the database stored procedure, **GetInterestRate**, was executed.

a. On the Workflow Author desktop, open the Work view.
b. Click **Customer**.

Information

If the database connection is functioning and the call to the stored procedure is successful, you see a work item labeled **Database Connection Test** in the Inbox.

c. Click the icon of the work item that is listed to open it.

- The interest_rate displayed is **5.25**.

Information

The GetRate step, which uses the DbExecute connection, you created, to call the GetInterestRate stored procedure of the LoanDB database, returns the interest rate. The interest rate returned, is based on the values for loan_amount, large_loan and loan_term.

d. Click **Complete**.

7. Logout of the Workflow Author desktop.
8. Close all the browser windows and tabs.

Lesson 1.3. Create and configure an isolated region and region objects

Overview

Why is this lesson important?

As a workflow system administrator, you are responsible for defining and configuring isolated regions to support FileNet workflow applications.

As a workflow author, you design and implement FileNet workflow applications.

To do these tasks effectively, you need to know how to create and configure isolated regions and region objects.

Activities

- "Create a connection point and isolated region" on page 1-33
- "Create isolated region objects" on page 1-35

User accounts

	Type	User ID	Password
	Operating system	administrator	passw0rd
	P8 administrator	p8admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

Create a connection point and isolated region

Introduction

In this exercise, you create a new connection point and its associated isolated region in the LoanProcess object store.

Procedures

Procedure 1, "Create a connection point," on page 1-33

Procedure 1: Create a connection point

In this procedure, you use the data in the table to create a new connection point and isolated region in the object store, **LoanProcess**. Step-by-step instructions are included, if you need them. Use default values for any items that are not listed in the table.

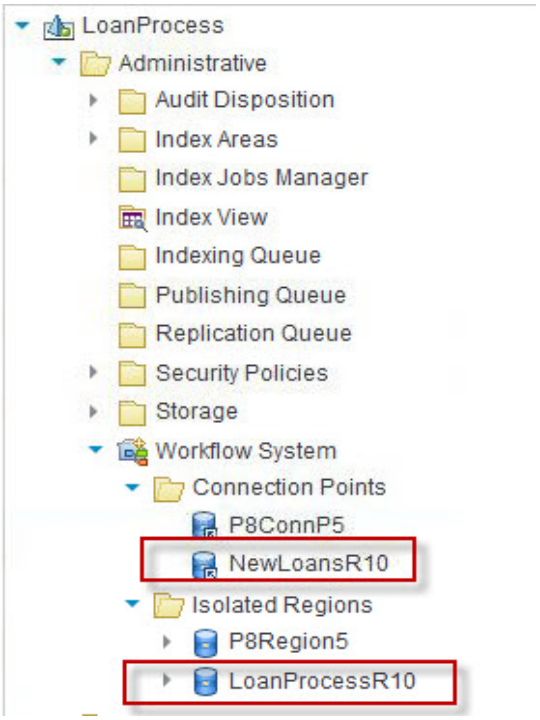
Item	Value
Connection Point Name:	`NewLoansR10`
Isolated region:	`Create new`
Isolated region name:	`LoanProcessR10`
Isolated region number:	`10`

1. Launch the Administration Console for Content Platform Engine.
   a. Open a Mozilla Firefox browser window.
      - Go to the URL: `http://ecmedu01:9080/acce`

   Tip: There is a bookmark called ***ACCE***, in the Bookmarks menu.

   b. Log in as a P8 administrator.
      - Username: `p8admin`
      - Password: `IBMFileNetP8`
2. Open the **LoanProcess** object store.
3. Expand **Administrative > Workflow System**.
4. Click **Connection Points**.
5. Click **New**.
6. Use the data in the table to complete the wizard. Accept the defaults for values that are not provided.
7. Make sure **Success** is displayed. Click **Close**.

8. When you are done you should see the new connection point and the new isolated region in the left navigation pane, similar to:



9. Leave the administration console open for the next exercise.

Create isolated region objects

Introduction

In this exercise, you create isolated region objects in the isolated region you created in the previous exercise. You must complete Exercise , "Create a connection point and isolated region" before starting this exercise. You create:

- A queue
- A roster
- An event log
- An application Space

Procedures

Procedure 1: Create a queue

In this procedure, you create a queue in the LoanProcessR10 isolated region.

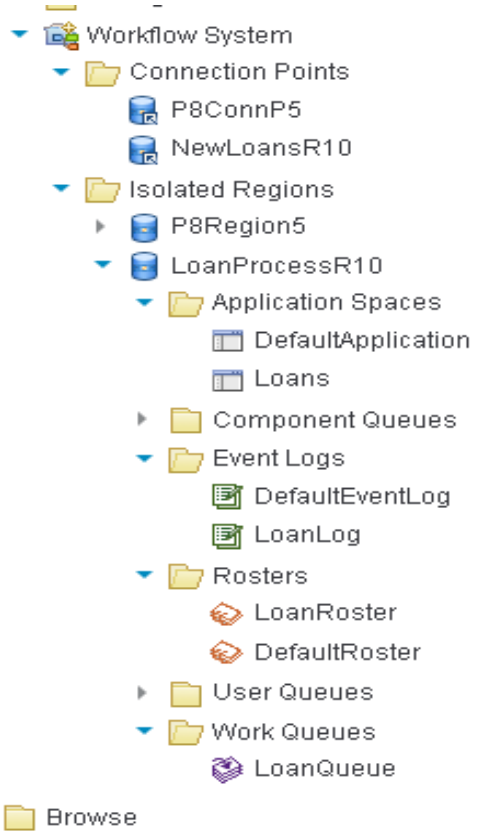
1. You should still be in the Administration Console for Content Platform Engine, logged in as the administrative user, p8admin.
2. Open the **LoanProcess** object store, if not already open.
3. Expand the isolated region, **LoanProcessR10**.
4. Click **Work Queues**.
5. Click **New**.
   a. **Name:** LoanQueue.
   b. Click **Next**.
   c. Click **Finish**.
   d. Close the **Success** window.

Procedure 2: Create a roster, event log, and application space

Use the data to complete the steps:

Item	Value
Roster Name:	LoanRoster
Event log Name:	LoanLog
Application Space Name:	Loans

1. Click **Rosters**, in the navigation pane.
   a. Click **New**.
   b. Complete the wizard with the data in the table.
   c. Close the **Success** window.
2. Repeat Step 1, clicking **Event Logs,** and **Application Spaces**.
3. When you are done, you see the new isolated region objects.



Procedure 3: Explore the isolated region objects with vwtool

In this procedure, you use the command-line tool, vwtool to validate the isolated region objects you created.

1. Launch the command-line tool, vwtool.
   a. Create a shortcut on the desktop to launch vwtool with the new connection point.
      - Copy and paste the vwtool P8ConnP5.bat shortcut, on the desktop and edit it, using notepad++.
      - Change the connection point from **P8ConnP5** to **NewLoansR10**.
      - Save and rename the shortcut to `vwtool NewLoansR10.bat`

Information

When you open vwtool, you must include the connection point that you want to connect to.

   b. Double-click **vwtool LoansR10.bat**.

2. Use the queueconfig command to explore the **LoanQueue** configuration.

Note

Beware, vwtool is case-sensitive.

   a. <vwtool::10> `queueconfig LoanQueue`
   b. What is the Queue type? _____
   c. What is the Physical table name? _____
   d. What is the Database view name? _____

3. Use the queueconfig command to explore the **Inbox** configuration.
   a. <vwtool::10> `queueconfig Inbox`
   b. What is the Queue type? _____
   c. What is the Physical table name? _____
   d. What is the Database view name? _____

4. Use the rosterconfig command to explore the **LoanRoster** configuration.
   a. <vwtool::10> `rosterconfig LoanRoster`
   b. What is the Schema name? _____
   c. What is the Physical table name? _____
   d. What is the Database view name? _____

5. Use the logconfig command to explore the **LoanLog** configuration.
   a. <vwtool::10> `logconfig LoanLog`
   b. What is the Schema name? _____
   c. What is the Physical table name? _____
6. Use the appspace command to explore the **Loans** configuration.
   a. <vwtool::10> appspace Loans
   b. What is the ID? _____

Information

Notice that the physical table names all have the format:

VW<*object_type*><*region#*>_<*table #*>

The database view names all have the format:

VWVR<*region #*>_<*region_object_name*>

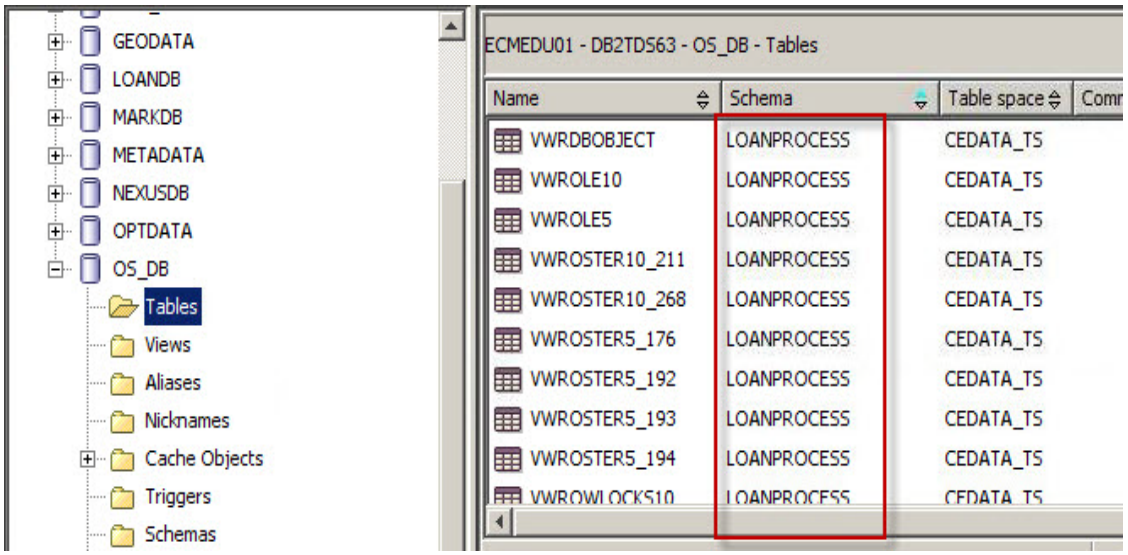
7. Leave the command prompt window open.

Procedure 4: Explore the workflow system database tables

In this procedure, you use the database engine administration tool to explore the workflow system database tables, referenced by the physical table names in vwtool. You need the values for the physical table names from Procedure 3.

1. Launch the IBM DB2 Control Center.
   a. Start > All Programs > IBM DB2 > TDSV63DB2 > General Administration Tools > Control Center.
   b. Accept the Advanced view on the Control Center View window. Click **OK**.
2. Expand **All Databases > OS_DB**.
3. Click **Tables**, on the left. If a filter window is displayed, close it.

4. Ensure that the tables are sorted by schema name and you see **LOANPROCESS**.



5. Locate the physical table name for the LoanQueue.
   a. Explore the columns that are listed in the lower pane.
   b. Notice the values in the Name column.
6. Locate the physical table name for the LoanRoster.
   a. Explore the columns that are listed in the lower pane.
   b. Notice the values in the Name column.
7. Close the IBM DB2 Control Center.
8. Logout of the administration console and close the browser windows.
9. Close the command prompt window.

Lesson 1.4. Expose data fields

Overview

Why is this lesson important?

It is common for workflow applications to have user fields, for example, loan_id and customer_name. Some are used for internal processing and some need to be exposed to facilitate searching and tracking changes in the event logs.

As a workflow author or workflow system administrator, you need to know how to expose data fields in an isolated region.

Dependencies

In order to perform the activities in this lesson, you must complete the activities that are listed:

- Lesson 1.3: Create a connection point and isolated region.
- Lesson 1.3: Create isolated region objects.

Activities

- "Expose data fields" on page 1-43

User accounts

	Type	User ID	Password
	Operating system	administrator	passw0rd
	P8 administrator	p8admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

Expose data fields

Introduction

In this exercise, you expose a few data fields in the LoanQueue, the LoanLog, and the LoanRoster that you created in Lesson 3.

Procedures

Procedure 1: Expose system fields to an event log

In this procedure, you expose the system field, F_ResponseCount, and the data field, customer_name, to the event log LoanLog.

1. Launch the Administration Console for Content Platform Engine and login as the P8 administrator.
    - Username: `p8admin`
    - Password: `IBMFileNetP8`
2. Open the **LoanProcess** object store.
3. Expand **Administrative > Workflow System > Isolated Regions > LoanProcessR10 > EventLogs**.
4. Click **LoanLog**.
5. Expose the system field, F_ResponseCount.
    a. Click the **System Fields** tab.
    b. Click **Add**.
    c. In the Add System Fields window, select **F_ResponseCount**.
    d. Click **OK**.
    e. Click **Save**.

Procedure 2: Expose user fields to a queue

In this procedure, you expose user fields to the work queue, LoanQueue.

1. Expand **Work Queues**.
2. Click **LoanQueue**.
3. Add user fields to the LoanQueue. Use the data in the table to complete the steps.

Work queue	Field name	Field type	Length (String fields only)
LoanQueue	customer_name	String	50
	loan_id	String	10
	loan_amount	Float	
	loan_date	Time	

   a. Click the **User Fields** tab.
   b. Click **New**.
   c. Use the data in the table to complete the New User Field window:
   d. Click **OK**.
   e. Repeat Steps 3b - 3d for each of the user fields in the table.
   f. Click **Save**.

Procedure 3: Copy existing user fields to other isolated region objects

After user fields are exposed in an isolated region object and saved, you can clone them to expose in any other object within the isolated region. In this procedure, you clone the user fields you exposed in the LoanQueue to expose them to the LoanLog, the LoanRoster and the user queues, Inbox and Tracker. When you clone a user field, you ensure that you are exposing the same user field and not creating a new user field.

Data

Region object	Field
LoanRoster	customer_name
	loan_amount
	loan_date
	loan_id
LoanLog	loan_id
Inbox	customer_name
	loan_amount
Tracker	customer_name
	loan_amount

1. Click **Rosters > LoanRoster**.
2. Expose the existing user fields.
   a. Click the **User Fields** tab.
   b. Click **Clone**.
   c. In the **Clone User Field** window, you can view the details of any user field by clicking the name.
   d. Use the information in the table to select the appropriate user fields.

Hint

You can either click them individually or click the selector box in the header to select them all.

   e. Click **OK**.
   f. Click **Save**.
3. Expand **EventLogs> LoanLog**.
4. Repeat Step 2.
5. Expand **User Queues > Inbox**.
6. Repeat Step 2.
7. Expand **User Queues > Tracker**.
8. Repeat Step 2.
9. Logout of the administration console.
10. Minimize the browser window.

Procedure 4: Verify the exposed user fields with vwtool

You can see the user fields that are exposed with the administration console. The command-line tool, vwtool, can also be used to verify the exposed user fields. One advantage of using vwtool, is that you can capture a hardcopy of the output, which can be sent to IBM support as part of troubleshooting an issue.

1. Launch vwtool.
   a. Double-click the ***vtwool NewLoansR10.bat*** shortcut that you created.
2. Use the queueconfig command to explore the **LoanQueue** configuration.

   <vwtool::10> queueconfig LoanQueue <carriage return>.

   a. Verify that the data fields that you defined for the queue are displayed.
   b. Record the Physical table name for the **LoanQueue**: _____

c. Record the Physical Field Name for the data fields that you defined:

- customer_name: _____
- loan_amount: _____
- loan_id: _____
- loan_date: _____

3. Minimize the vwtool command prompt window.

Procedure 5: Explore the workflow system database tables

In this procedure, you use the database engine administration tool to explore the workflow system database tables, referenced by the physical table names in vwtool. You need the values for the physical table names from Procedure 3.

1. Launch the IBM DB2 Control Center.
   a. **Start > All Programs > IBM DB2 > TDSV63DB2 > General Administration Tools > Control Center.**
   b. Click OK on the Control Center View window.
2. Expand **All Databases > OS_DB**.
3. Click folder icon for **Tables** on the left.
4. On the center pane, ensure that you are sorted by schema name and you see **LOANPROCESS**.
5. Locate the physical table name for the **LoanQueue**. (Refer to Procedure 4).
   a. Explore the Name column that is listed in the lower pane.
   b. Look for the user fields you added. You need to scroll to the bottom of the list.
6. Locate the physical table name for the LoanRoster.

Hint

To get the physical table name of the roster, maximize the vwtool command prompt window and enter, `rosterconfig LoanRoster <carriage return>`.

   a. Explore the Name column that is listed in the lower pane.
   b. Look for the user fields you cloned.
7. Minimize the IBM DB2 Control Center.

Information

When you query for work items in a later unit, these exposed fields are available to select in the Search Filter Criteria.

Lesson 1.5. Define indexes

Overview

Why is this lesson important?

The loan processors are complaining that it is taking a long time to search for work.

As a workflow system administrator, you need to define an index to make searching more efficient.

As a workflow author, it is important to understand what data fields make good indexes to ensure efficiency in the workflow application.

Dependencies

In order to perform the activities in this lesson, you must complete the activities that are listed:

- Lesson 1.3: Create a connection point and isolated region.
- Lesson 1.3: Create isolated region objects.
- Lesson 1.4: Expose data fields.

Activities

- "Define indexes" on page 1-49

User accounts

	Type	User ID	Password
	Operating system	administrator	passw0rd
	P8 administrator	p8admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

Define indexes

Introduction

In this activity, you create simple and composite indexes for the queue, LoanQueue, workflow roster, LoanRoster, and event log, LoanLog.

Procedures

Procedure 1: Define indexes with exposed user fields

1. Maximize the browser window and log in to the Administration Console for Content Platform Engine as the P8 administrator.
   - Username: `p8admin`
   - Password: `IBMFileNetP8`
2. Open the **LoanProcess** object store.

Important

Composite indexes

For composite indexes with multiple keys, the sequence in which you specify the keys is important. Be sure to specify the index keys for the LoanQueue in the sequence that is listed in these instructions.

3. Define a composite index for the **LoanQueue**, with the data in the table.

Type of index	Region object	Index name	Index keys (in the order listed)
Queue index	LoanQueue	Customer_index	loan_id customer_name loan_amount

   a. Expand **Administrative > Workflow System > Isolated Regions > LoanProcessR10 > Work Queues**.
   b. Click **LoanQueue**.
   c. Click the **Indexes** tab

d. Click **New**.

- Type the index name, as shown in the table.
- In the **Available Fields** column, scroll down to the bottom. Use the shift key to select the three fields, **customer_name, loan_id loan_amount**, and click the right arrow to move them to the **Keys** column.
- In the **Keys** column, select **loan_id** and use the up arrow, to the right, to move it to the top of the list. The order must match the order that is listed in the table.
- Click **OK**.
- Click **Save**.

Important

Required field in roster index

A roster index must contain the F_WobNum field to ensure unique values for roster indexes. If this field is not included in your indexed fields, it is automatically added for you.

Required field in event log index

An event log index must contain the F_TimeStamp and F_SeqNumber fields to ensure unique values for event log indexes. If these fields are not included in your indexed fields, they are automatically added for you.

4. Define an index for the **LoanRoster** and the **LoanLog**.
   a. Repeat step 3, but use the values in the following table.
      - Notice the system fields that are automatically added.

Type of index	Region object	Index name	Index keys (in the order listed)
Roster index	`LoanRoster`	`Loan_index`	`loan_id`
Log index	`LoanLog`	`Loan_index`	`loan_id`

5. Logout of the administration console.
6. Close the browser window.

Procedure 2: View the indexes with vwtool

In this procedure, you use the command-line tool to view the indexes you created.

1. Maximize the command prompt window.
2. View the index that you created in the LoanQueue.
   a. At the <vwtool::10> prompt, type `queueconfig LoanQueue`.

b. Observe the index that you created (Customer_index) is displayed at the end of the report in the Logical Index Name column, and that its index keys are displayed in the Index Fields column.
c. Record the **Physical Index Name**. _____

3. View the index that you created in the LoanRoster.
   a. At the <vwtool::10> prompt, type `rosterconfig LoanRoster`.
   b. Observe the index that you created (Loan_index).
   c. Record the **Physical Index Name**. _____
4. View the index that you created in the LoanQueue.
   a. At the <vwtool::10> prompt, type `logconfig LoanLog`.
   b. Observe the index that you created (Loan_index).
   c. Record the **Physical Index Name**. _____
   d. Notice that it is a unique name, even though the index name, Loan_index is same.
5. Minimize the vwtool command prompt window.

Procedure 3: Explore the workflow system database tables

In this procedure, you use the database engine administration tool to explore the workflow system database tables, referenced by the physical table names in vwtool. You need the values for the physical table names from Procedure 2.

1. Maximize the IBM DB2 Control Center window.
2. Refresh the tables in order to see the changes.
   a. right-click **Tables,** on the left, and select **Refresh**.

Hint

For Steps 3 - 5, you might want to refer to the minimized vwtool, command prompt, window for the values of the physical table names of the isolated region objects and to verify the physical index name.

3. View the index for the LoanQueue.
   a. Select the physical table name for the **LoanQueue** (for example, VWQUEUE10_271).
   b. In the lower-right pane, click **Show Related Objects**.
   c. Click the **Indexes** tab.
   d. Verify that you see the Physical Index Name, for **Customer_index**, listed (for example, VW_IND55).
   e. Close the Show Related window.
4. View the index for the LoanRoster.
   a. Select the physical table name for the **LoanRoster** (for example, VWROSTER10_268).
   b. Repeat Steps 3b - 3e.

5. View the index for the LoanLog.
   a. Select the physical table name for the **LoanLog** (for example, VWLOG10_217).
   b. Repeat Steps 3b - 3e.
6. Close the IBM DB2 Control Center window.
7. Close the vwtool command prompt window.

Lesson 1.6. Configure in-baskets and roles

Overview

Why is this lesson important?

Users process work with a client application, for example an IBM Content Navigator desktop. A desktop requires that in-baskets and roles be defined for a workflow.

Workflow system administrators and workflow authors need to know how to create in-baskets and roles to allow for processing of workflow applications.

Dependencies

In order to perform the activities in this lesson, you must complete the activities that are listed:

- Lesson 1.3: Create a connection point and isolated region.
- Lesson 1.3: Create isolated region objects.
- Lesson 1.4: Expose data fields.
- Lesson 1.5: Define indexes.

Activities

User accounts

	Type	User ID	Password
	Operating system	administrator	passw0rd
	P8 administrator	p8admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

Create and configure in-baskets

Introduction

In this exercise, you create and configure an in-basket in a work queue and an in-basket in a user queue.

Procedures

Procedure 1: Create and configure a work queue in-basket

In this procedure, you create and configure the in-basket, **NewLoans**, for the work queue, **LoanQueue**.

1. Launch the Administration Console for Content Platform Engine and login as the P8 administrator.
    - Username: `p8admin`
    - Password: `IBMFileNetP8`
2. Open the object store, **LoanProcess**.
3. Expand **Administrative > Workflow System > Isolated Regions > LoanProcessR10 > Work Queues**.
4. Click **LoanQueue**.
5. Click the **In-Baskets** tab.
6. Create an in-basket.
    a. Click **New**.
        - Name: `NewLoans`

b. Click the **Columns and Labels** tab.

- Click **Add**, use the information in the table to specify the fields.
- To see the field F_Subject, you need to check **Show system fields**.

Selected Fields	Column Label	Sortable	Content Order
customer_name(String)	`Customer`	yes	`F_SortRule(F_locked + F_SortOrder)`
loan_id(String)	`Loan ID`	no	none
loan_amount(Float)	`Loan Amount`	yes	`F_SortRule(F_locked + F_SortOrder`
loan_date(Time)	`Loan Date`	no	none
System field: F_Subject	Accept the default	no	none

c. Click the **Optional Filters** tab.
d. Click **Add**.

- Select **customer_name**, and click **OK**.
  - Name: `Find Customer`
  - Operator: `like`
  - Display Name: `Find Customer`
- Click **OK**.

7. Click **Save**.

Procedure 2: Create and configure user queue in-baskets.

In this procedure, you create and configure the in-basket, **My work**, for the user queue, **Inbox**.

1. Expand **User Queues**.
2. Create an in-basket for the user queue, **Inbox**.
   a. Click the **Inbox** queue.
   b. Select the **In-Baskets** tab.
   - Click **New**.
     - Name: `MyWork`

c. Click the **Columns and Labels** tab.

- Click **Add**, use the information in the table to specify the fields.

Selected Fields	Column Label	Sortable	Content Order
customer_name(String)	Customer	yes	F_SortRule(F_locked + F_SortOrder)
loan_amount(Float)	Loan Amount	yes	F_SortRule(F_locked + F_SortOrder
System field: F_Subject	Accept the default	no	none

- Click **OK**.

d. Click **Save**.
e. Close the **User Queue: Inbox** window.

3. Create a tracker in-basket.

a. Click **User Queues**.
b. Click **Tracker**.
c. Repeat Steps 2b - 2d. For the in-basket name, type: Loan Status.

4. Leave the administration console open for the next exercise.

Create and configure roles

Introduction

In this exercise, you create and configure roles in an application space and you associate them to the in-baskets you created in the previous exercise.

Procedures

Procedure 1, "Create and configure roles," on page 1-59

Procedure 1: Create and configure roles

In this procedure, you create and configure the roles, **Loan Processor** and **Clerks.** You associate them with the in-baskets, **NewLoans**, and **MyWork**.

1. Click **Application Spaces**
2. Click **Loans**.
3. Click the **Roles** tab.

Create the role, Loan Processor.

a. Click **New**.
b. Name: Loan Processor
c. Click the **In-Baskets and Members** tab.
   - In the **In-Baskets** section, add the in-baskets, **NewLoans**, and **Loan Status**.
   - In the Members section, add the groups **Loan Processors** and **p8admins**.
d. Click **OK**.
e. Click **Save**.

4. Create the role, Clerk.
   a. Repeat Step 3, but use the data in the table:

	Name	In-Baskets	Members
	Clerk	MyWork Loan Status	olivia P8Admins

5. Log out of the administration console.
6. Close the browser window.

Lesson 1.7. Configure Content Navigator for workflow

Overview

Why is this lesson important?

An IBM Content Navigator desktop needs to be created and configured so users can process workflow applications.

Workflow system administrators and workflow authors need to know how to create an IBM Content Navigator desktop and configure it so that it can be used as a client application for workflow authoring and processing.

Dependencies

In order to perform the activities in this lesson, you must complete the activities that are listed:

- Lesson 1.3: Create a connection point and isolated region.
- Lesson 1.3: Create isolated region objects.
- Lesson 1.4: Expose data fields.
- Lesson 1.5: Define indexes.
- Lesson 1.6: Create and configure in-baskets.
- Lesson 1.6: Create and configure roles.

If you would like to complete the exercises in Lesson 1.7 without completing the exercises in Lessons 1.3 - 1.6 refer to Appendix , "Import the isolated region for Lesson 1.7," on page C-3

Activities

User accounts

	Type	User ID	Password
	Operating system	administrator	passw0rd
	P8 administrator	p8admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

Create and configure a Content Navigator desktop for workflow

Introduction

In this exercise, you create and configure a Content Navigator desktop that uses the isolated region that you created and configured in Lessons 1.3 - 1.6. You configure the desktop for workflow, assigning it the application space that you created. You use the IBM Content Navigator administration tool to:

- Create a repository that points to the connection point, created in Lesson 1.3.
- Create a Content Navigator desktop that uses the new repository.
- Configure the desktop for workflow.

Procedures

Procedure 1: Create a Content Navigator repository

In this procedure, you create a Content Navigator repository to point to the connection point you created in Lesson 1.3.

1. Launch IBM Content Navigator administration tool.
   a. Open a Mozilla Firefox browser window.
   b. Go to the URL: `http://ecmedu01:9080/navigator/?desktop=admin`

Hint

There is a bookmark in the Bookmarks menu, *Content Navigator Administration*, for your convenience.

   c. Log in as a Content Navigator administrator.
      - Username: `p8admin`
      - Password: `IBMFileNetP8`
2. Click the **Repositories** node, click **New Repository**, and select **FileNet Content Manager**.

3. The **New Repository** wizard displays. Use the information in the table to complete the **General** tab, then click **Connect**.

	Tab	Item/Field	Value
	General	Display Name	LoanR10
		ID	LoanR10
		Server URL	iiop://ecmedu01:2809/FileNetEngine
		Object store symbolic name	LoanProcess
		Object store display name	LoanProcess

   a. Log in as the P8 administrator.

4. Assign the connection point to the repository.

   a. Click the **Configuration Parameters** tab.
   b. Set **Workflow connection point** to: NewLoansR10:10
   c. Set **Display Workflow definition class** to Yes.
   d. Click **Save and Close**.

5. Leave the administration tool open for the next procedure.

Procedure 2: Create a Content Navigator desktop

In this procedure, you create a Content Navigator desktop that uses the new repository.

1. Click the **Desktops** node, click **New Desktop**.
2. The **New Desktop** wizard displays. Use the information in the table to complete the wizard.

	Tab	Item/Field	Value
	General	Name	Process Loans
		ID	ProcessLoans
		Description	Desktop for loan processing
		Authentication: Repository	LoanProcess
	Repositories	Selected Repositories	LoanR10 LoanProcess
	Layout	Default feature Default repository	Browse LoanR10

3. Click **Save and Close**.
4. Leave the administration tool open for the next procedure.

Procedure 3: Configure the desktop for workflow

In this procedure, you configure the desktop that you created for workflow.

1. Select the **Process Loans** desktop, that you created, and click **Edit**.
2. Use the information in the table to complete the desktop configuration.

Note

When you select the Repository in the Workflows tab, you are prompted to log in, use the P8 administrator credentials. You need to authenticate with the repository to be able to read the application spaces available in the repository.

	Tab	Item/Field	Value

	Layout:
	Browse Feature
		Feature Configuration:
		Default Repository
		Repositories
			
			`LoanR10`
			`LoanR10`
			`LoanProcess`

	Layout	Displayed Features	`Select the Work feature`

	Layout:
	Work Feature
		Feature Configuration:
		Default Repository
		Repositories
			
			`LoanR10`
			`LoanR10`
			`LoanProcess`

	Appearance	Application name	`Process Loans`
		Theme	`Custom: cordierite`
	Workflows	Repository	`LoanR10`
		Selected Application Spaces	`Loans`

3. Click **Save and Close**.
4. Leave the administration tool open for the next exercise.

Configure the desktop to open Process Designer and Process Tracker

Introduction

In this exercise, you register the process applets plug-in and configure the desktop to open the Process Designer and Process Tracker tools.

Procedures

Procedure 1: Register the process applets plug-in

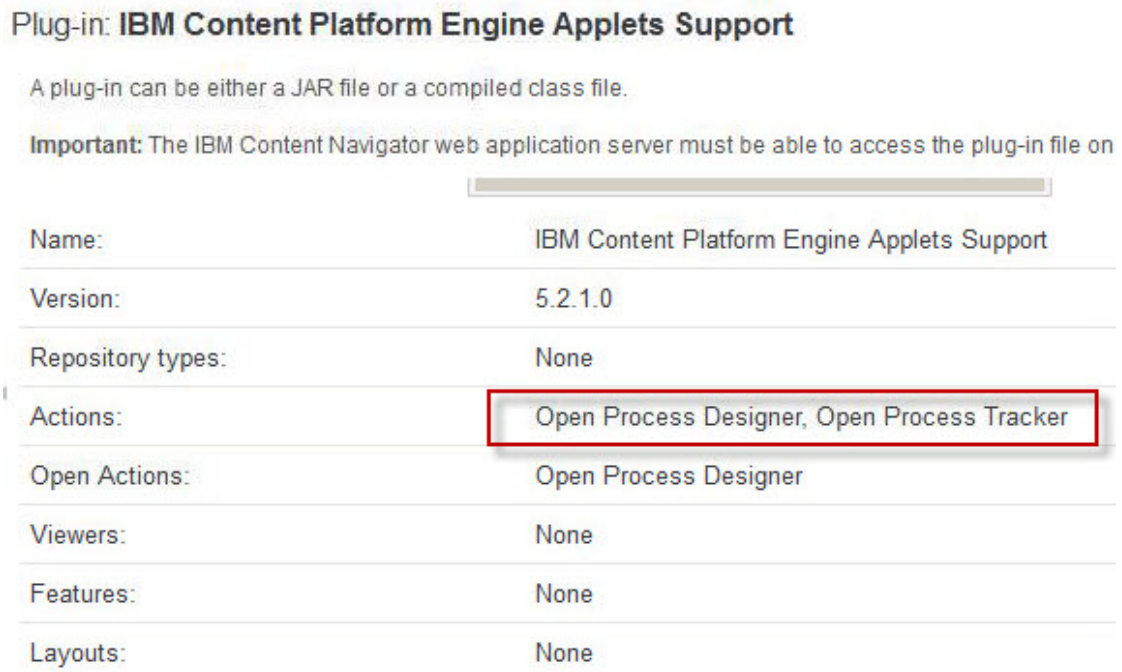
In this procedure, you register the process applets plug-in, **IBM Content Platform Engine Applets Support**. When you add the plug-in, you add the ability to configure menu items in the desktop to open the Process Designer and Process Tracker applets. You need to configure the plug-in only one time for each IBM Content Navigator application.

1. Register the process applets plug-in.
   a. On the IBM Content Navigator administration tool, click the node, **Plug-ins**.
   b. Click **New Plug-in**.
      - **JAR file path**: `http://ecmedu01:9080/peengine/plugins/CPEAppletsPlugin.jar`
      - Click **Load**.

Note

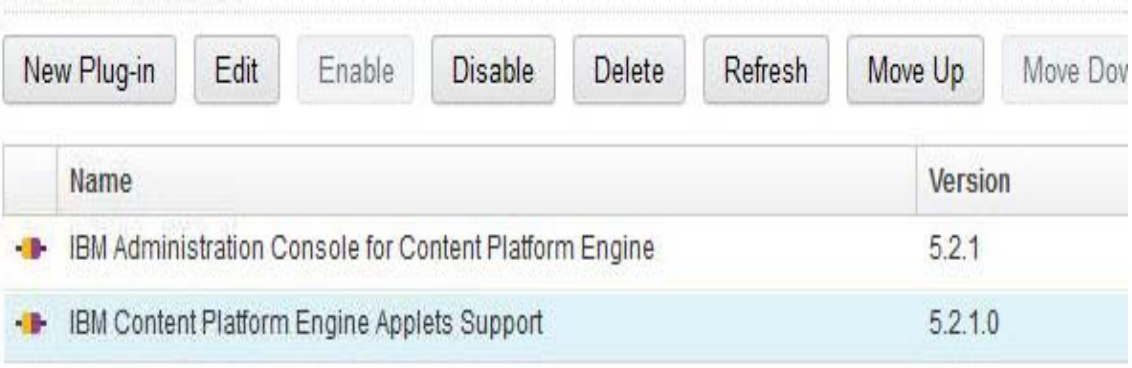
The plug-in was previously added, but you can add the plug-in again.

- Notice the two actions that are provided by the plug-in:



c. Click **Save and Close**.

2. You should see two plug-ins that are displayed.



Information

The IBM Administration Console for Content Engine (ACCE) plug-in adds the ACCE feature to a desktop. You can add the ACCE feature on desktops for users that have administrative access to the FileNet P8 repositories. On the student system, the P8 admin console desktop is configured with this feature. You click the bumble bee icon to select the feature.

3. Close the **Plug-ins** tab.
4. Leave the administration tool open for the next procedure.

Procedure 2: Configure menus to open Process Designer and Process Tracker

In this procedure, you create two new menus and add new actions to Open Process Designer and Open Process Tracker, with the Content Navigator application. You then configure the desktop to use the menus.

1. Add a menu item to Open Process Designer.
   a. Click the **Menus** node.
   b. Read the paragraph at the top.

Information

You copy an existing menu. You can use various menus. The description for the menu explains how the menu is used. For this exercise, you use the **Default repository folder context menu.**

   c. Type `repository` in the **Name contains** field, in the upper right corner, to search for the menu.
   d. Select the **Default repository folder context menu** and click **Copy**.
      - Name: `Custom repository folder context menu`
      - ID: accept default.
      - Move **Open Process Designer** to the **Selected** column.

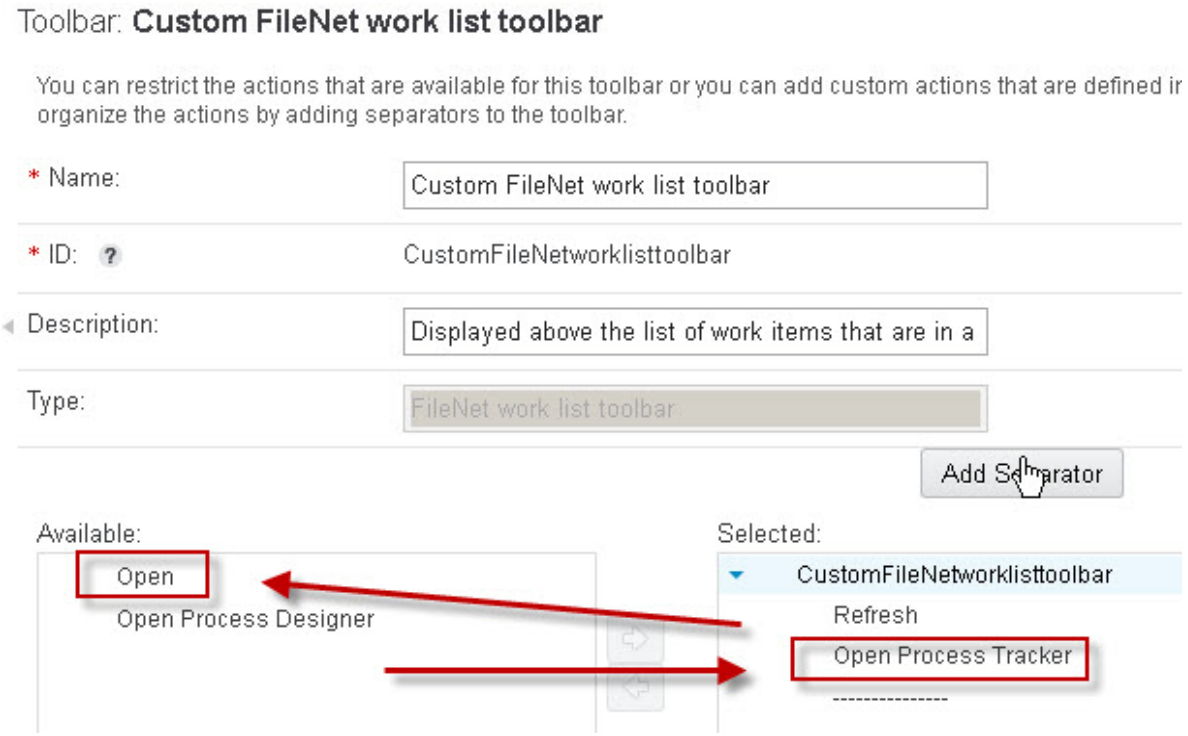
Note

You can choose to add a Separator or a Submenu. A separator adds a line where ever you add the separator. A submenu creates a submenu that you provide a label for. Useful for grouping menu actions.

   e. Click **Save and Close**.

2. Add a menu item to Open Process Tracker.
   a. Back in the **Menus** tab, search for `work.`
   b. Select the **Default FileNet work list toolbar** and click **Copy**.
      - Name: `Custom FileNet work list toolbar`
      - ID: accept default.
      - Move **Open Process Tracker** to the **Selected** column.
      - Move **Open** to the left, so that it is back in the **Available** column.

- On the **Selected** column, use the up arrow to adjust the position of **Open Process Tracker,** so that is right above the separator..



Information

You replace the default IBM Content Navigator **Open** button that displays only the history of a work item with, **Open Process Tracker**, which opens the full tracker applet. The order in the Selected list, determines the order that the menu items appear.

c. Click **Save and Close**.
d. Close the **Menus** tab.
e. Leave the administration tool open for the next procedure.

Procedure 3: Configure the desktop to use the menus.

In this procedure, you configure the desktop to use the two menus you created in the previous procedure.

1. Select the **Desktops** tab.
2. Configure the Process Loans desktop to use the new menus you created.
   a. Select the desktop **Process Loans** and click **Edit**.
   b. Click the **Menus** tab.

c. Search for the string `repository`.
   - Type `Ctrl + F, repository`. You see the search string at the lower left of the browser window.

d. On the **Repository folder context menu**, use the drop-down menu to select:
   - `Custom repository folder context menu`

e. Click **Save**.
f. Repeat Steps 2c - 2d, with these exceptions:
   - Search for the string: `FileNet work list`
   - Select: `Custom FileNet work list toolbar`

g. Click **Save and Close**.

3. Log out of the administration tool.
4. Leave the browser window open for the next exercise.

Test the New Loans Processing workflow

Introduction

In this exercise, you test the New Loans Processing workflow. The final culmination of the steps you completed in Lessons 1.3 - 1.7. You use the Process Loans desktop that you created to:

- Open Process Designer to add the workflow, New Loans Processing.
- Launch a few instances of the workflow.
- View and process work items and open the Process tracker.

Procedures

Procedure 1: Launch a few instances of the New Loans Processing workflow

In this procedure, you use the Process Loans desktop, that you created in the previous exercise to Open Process Designer to:

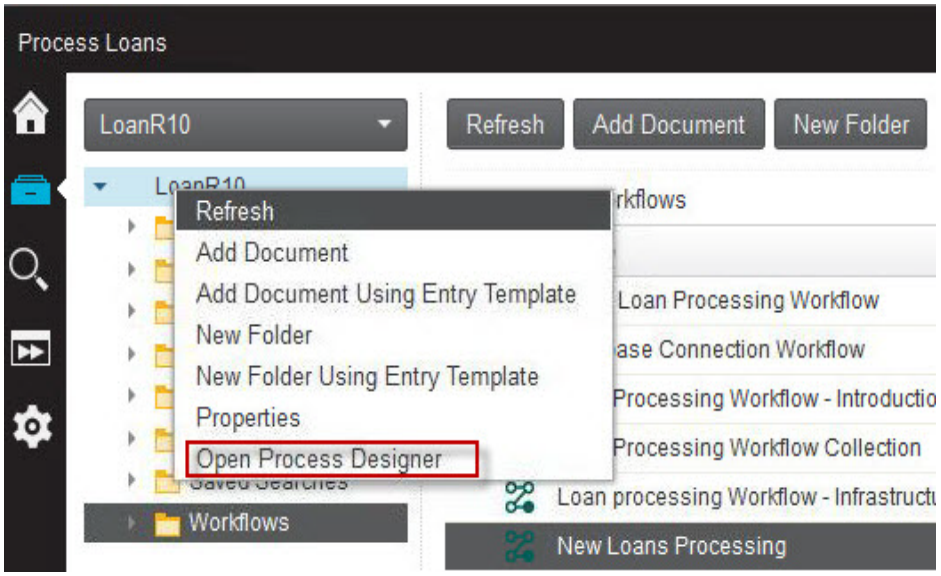
- Add, validate, and transfer the workflow, New Loans Processing.
- Launch a few instances of the New Loans Processing workflow.

1. Launch the Process Loans desktop.
   a. On the Mozilla Firefox browser window.
      - Go to the URL: `http://ecmedu01:9080/navigator/?desktop=ProcessLoans`

   Tip: You can bookmark this URL if you want, to make it easier to open in the future.

   b. Log in as the P8 administrator.
      - Username: `p8admin`
      - Password: `IBMFileNetP8`

2. Add the New Loans Processing workflow with the Process Designer.
   a. Right-click the second **LoanR10**, on the left, and select **Open Process Designer**.



Information

The new menu option is the result of the **Custom repository folder context menu** that you configured.

   b. Click **File > Open**.
   c. Browse to:

`C:\Labs\Case Foundation 5.2.1 Administration\Configure workflow system\`

   d. Select **New Loans Processing.pep**.

3. Validate and transfer the New Loans Processing workflow.
   a. Select **File > Validate Workflow Collection**.
      - Make sure that you get a message that says the workflow validation is successful.
   b. Select **File > Transfer Workflow Collection**.
      - Save the workflow to the LoanProcess object store.
        - Browse to **Loan Process > Workflows**, and click **Select**.
        - Document Title: `New Loans Processing workflow`
        - Click **Next**.
        - Accept the default security.
        - Click Finish.
      - Ensure that you get a successful transfer message.

4. Click **File > Close**, select **Cancel the checkout**.

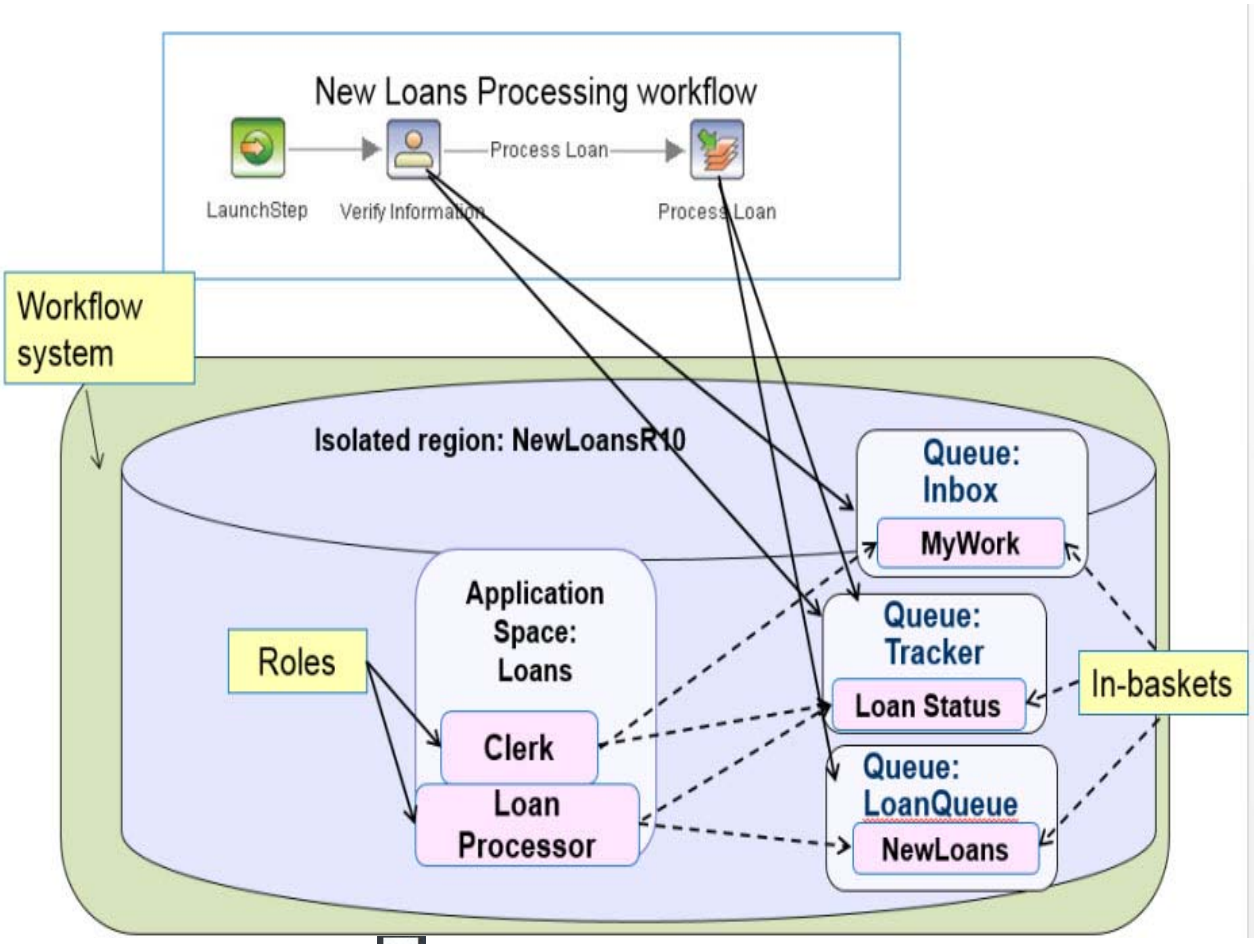
5. Exit the Process Designer.
6. Launch a couple of instances of the workflow.
   a. Open the **Workflows** folder.
   b. Select **New Loans Processing workflow**, click to the right of the name.
   c. Click **Actions > Workflow > Launch Workflow**.
      - customer_name: `Mary Miller`
      - loan_amount: `250000`
   d. Click **Launch Workflow**, lower right corner.
   e. Repeat Steps 6b - 6d, with the data:
      - customer_name: `Gregory Green`
      - loan_amount: `200000`
7. Leave the desktop open for the next procedure.

Procedure 2: View and process work items and open the Process Tracker

In this procedure you use the Content Navigator desktop that you created to:

- View and process work items in the workflow, **New Loans Processing**, that you launched.
- Open the Process Tracker from the tracker in-basket, **Loan Status**.

The diagram shows the workflow definition, **New Loans Processing.pep**, and the isolated region objects that are used when processing the workflow.



1. Switch to the Work view,
2. Expand the role, **Clerk**, and click the in-basket **MyWork**.

Important

Notice the objects that you created:

- Roles: **Loan Processor** and **Clerk**
- In-baskets: **MyWork** and **Loan Status**

3. You see two work items listed.

4. Open one of the work items, enter any string for the **loan_id**, and click **Complete**.
5. Switch to the **Loan Processor** role.
6. Open the Process Tracker.
   a. Click the **Loan Status** in-basket.
   b. Notice the added menu item, **Open Process Tracker**. Click the button.

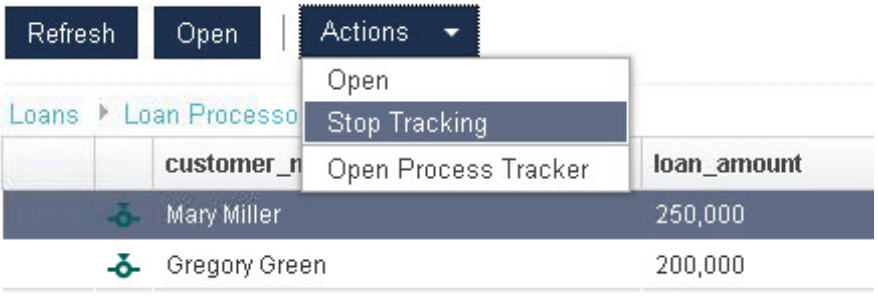
   c. Take a few minutes to explore the information that is displayed.
   d. Close the Process Tracker.

Procedure 3: Customize the desktop to provide multiple options for Process Tracker [Optional]

In this procedure, you customize the **Process Loans** desktop to provide the default **Open** button, which displays the work item history, and add an action menu option to **Open Process Tracke**r. The purpose of this procedure is to show you how easy it is to configure the desktops to provide the options you need for an application.

1. Launch the Content Navigator Administration tool.
   a. Open a new Firefox browser tab. Select Content Navigator Administration, from the bookmarks menu.
2. Select the **Menus** node, on the left.
3. Search for Enhanced, and edit the **Enhanced tracker in-basket context menu**.
   a. Notice that **Open Process Tracker** is already listed in the **Selected** column, under the dashed line.
   b. Click close.
4. Edit the desktop, **Process Loans**.
   a. Select the **Menus** tab.
5. Add the action to Open Process Designer to the menu.
   a. Search for `tracker` (use the browser search capability).
   b. Change **Default tracker in-basket context menu** to Enhanced `tracker in-basket context menu`.
6. Restore the default, **Open**, button to the FileNet work list toolbar.
   a. Search for `filenet`.
   b. Change **FileNet work list toolbar** to `Default FileNet work list toolbar`.
7. Click **Save**.
8. Refresh the desktop, **Process Loans**.
   a. Switch to the **Process Loans** browser tab.
   b. Click the browser refresh button to reload the desktop.

9. Verify the changes that you made to the menus.
   a. Open **Loan Processor > Loan Status**.
   b. Your menu toolbar looks as follows:



10. Click the **Open** to view the tracker history.
11. Click **Actions > Open Process Tracker** to open the full applet.
12. Close the Process Tracker, when you are done.
13. Log out of the desktop.
14. Close the browser window and any open tabs.

Lesson 1.8. Configure a web application and step processor

Overview

Why is this lesson important?

The Information Technology (IT) department requires corporate branding for workflow launch steps in a workflow. As the workflow system administrator, you need to configure a custom launch step processor so that the workflow author can use it in the workflow and meet the IT standards.

Dependencies

In order to perform the activities in this lesson, you must complete the activities that are listed:

- Lesson 1.3: Create a connection point and isolated region.
- Lesson 1.3: Create isolated region objects.
- Lesson 1.4: Expose data fields.
- Lesson 1.5: Define indexes.
- Lesson 1.6: Create and configure in-baskets.
- Lesson 1.6: Create and configure roles.
- Lesson 1.7: Create and configure a Content Navigator desktop for workflow.
- Lesson 1.7: Configure the desktop to open Process Designer and Process Tracker.

Activities

User accounts

	Type	User ID	Password
	Operating system	administrator	passw0rd
	P8 administrator	p8admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

Deploy and configure a custom launch step processor

Introduction

In this exercise, you deploy and configure a custom launch step processor. The developer informs you that the step processor is deployed as part of the navigator application and provides you with the steps that you need to follow.

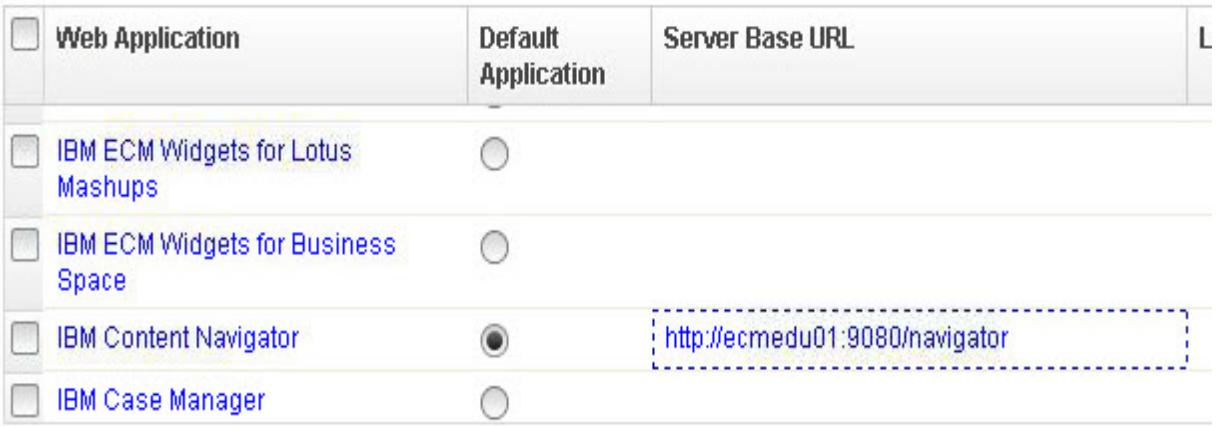
Procedures

Procedure 1: Verify required web application

The step processor that you need to configure, is deployed as part of the Content Navigator application. The path that you provide for the step processor is a relative path from the Server Base URL for IBM Content Navigator. You need to set the Content Navigator web application as the default web application in the isolated region and verify that the Server Base URL is correct.

1. Launch the Administration Console for Content Platform Engine and log in as the P8 administrator.
    - Username: `p8admin`
    - Password: `IBMFileNetP8`
2. Open the **Web Applications** tab for the isolated region.
    a. Open the **LoanProcess** object store.
    b. Click **Administrative > Workflow System > Isolated Regions > LoanProcessR10**.
    c. Click the **Web Applications** tab.
3. Scroll to the bottom of the web application list, and select **IBM Content Navigator** as the Default Application.
4. Set the Server Base URL.
    a. Click the cell for the **Server Base URL**, the **Edit Web Application** window displays.
    b. For the **Server Base URL**, type: `http://ecmedu01:9080/navigator`
    c. Click **OK**.

d. You should see:



e. Click **Save**.

5. Verify the web application configuration for the workflow system.

   a. Click **Workflow System** node.
   b. Click the **Web Applications** tab.
   c. Notice that IBM Content Navigator is set as the Default Application, but the Server Base URL is not set.

Information

The isolated region settings override the workflow system settings. Therefore, the Server Base URL from the isolated region web application configuration is used.

6. Log out of the administration console.

Procedure 2: Deploy the custom step processor

In this procedure, you deploy the custom step processor, following the steps the application developer provided.

Information

How to deploy the custom step processor.

The step processor is deployed as part of the IBM Content Navigator application on the WebSphere Application Server.

The step processor consists of three files. The table shows the file names and the path to save them.

	File name	path
	`stepprocessoredu.jsp`	Content Navigator deployment directory on the application server, <navigator deployment>
	`StepProcessorEDULayout.js`	<navigator deployment>\custom\widget\process
	`StepProcessorEDULayout.html`	<navigator deployment>\custom\widget\process\templates

1. Launch the WebSphere Integrated Solutions Console.
   a. Open the **WebSphere Admin** folder on the desktop.
   b. Double-click **Administrative console server1**, log in as the administrator.
      - Username: `p8admin`
      - Password: `IBMFileNetP8`
2. Stop the navigator application.
   a. Select **Applications > Application Types > WebSphere enterprise applications**.
   b. Select the web application, **navigator**.
   c. Click **Stop**.
   d. Minimize the WebSphere Integrated Solutions Console.

3. Copy the three files to the appropriate folders. The three files that you need to copy are in:

   `C:\Labs\Case Foundation 5.2.1 Administration\Configure workflow system`

   a. Copy stepprocessoredu.jsp to the <*navigator deployment*> folder.

   The <*navigator deployment*> folder is at:

   `C:\Program Files\IBM\WebSphere\AppServer\profiles\AppSrv01\installedApps\P8Node01Cell\navigator.ear\navigator.war`

   b. Under the folder for the <*navigator deployment*>, create four subfolders, that result in the path:

      <*navigator deployment*>\custom\widget\process\templates

   c. Copy the two remaining files to the paths outlined in the table:

	File name	path
	StepProcessorEDULayout.js	<navigator deployment>\custom\widget\process
	StepProcessorEDULayout.html	<navigator deployment>\custom\widget\process\templates

4. Start the IBM Content Navigator application.

   a. Maximize the WebSphere Integrated Solutions Console.
   b. Select the **navigator** application.
   c. Click **Start** (it takes several minutes to start).
   d. Log out of the WebSphere Integrated Solutions Console.

Procedure 3: Configure the custom launch step processor

In this procedure, you register the custom launch step processor to make it available for use in a workflow.

1. Launch the Administration Console for Content Platform Engine and log in as the P8 administrator.

   - Username: p8admin
   - Password: IBMFileNetP8

2. Open the **Step Processors** tab for the isolated region.

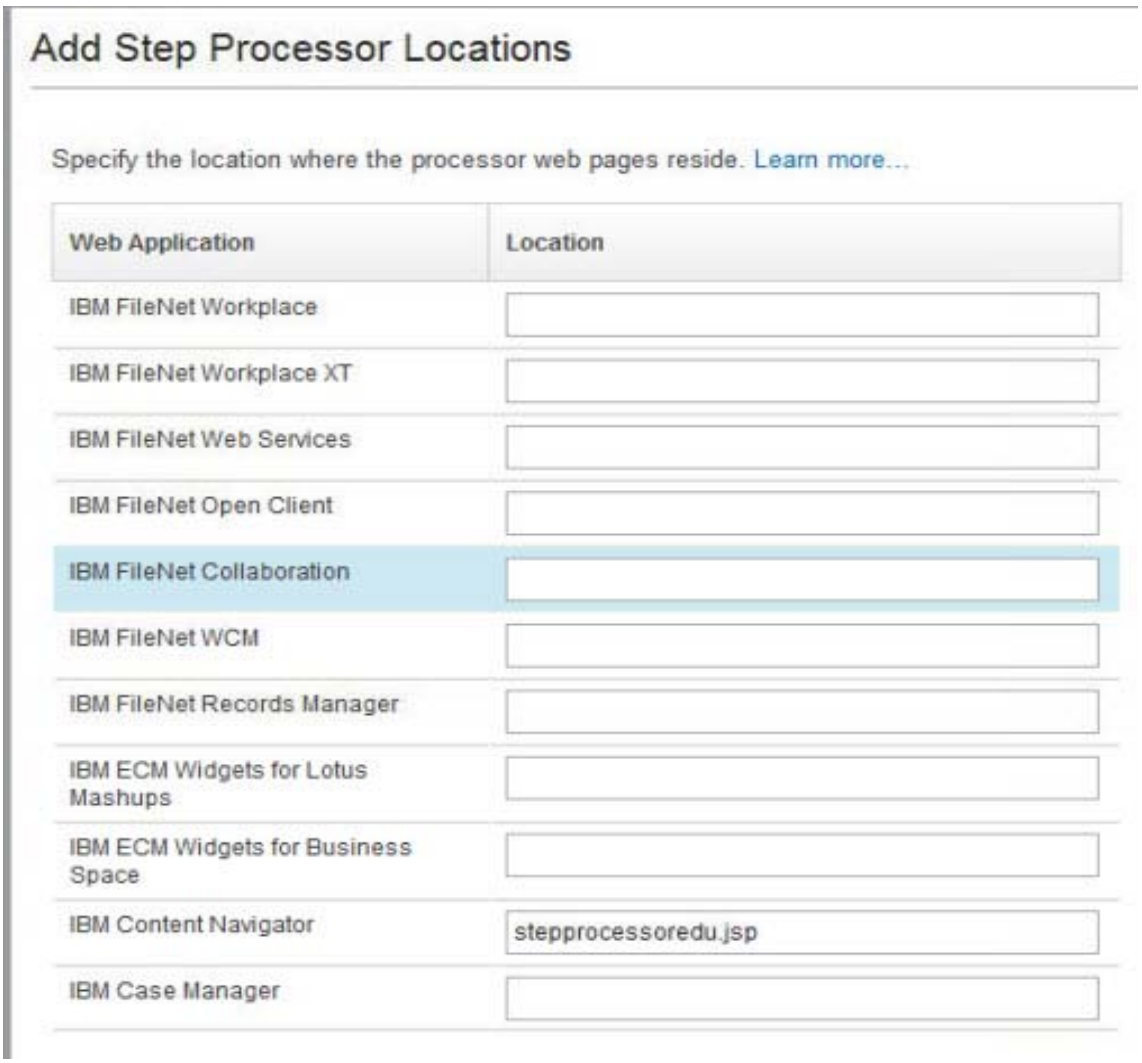
   a. Open the **LoanProcess** object store.
   b. Click **Administrative > Workflow System > Isolated Regions > LoanProcessR10**.
   c. Click the **Step Processors** tab.

3. Add the launch step processor.
   a. Click **Add**.
      - A new row is added to the bottom of the list. You see a check mark next to it. Use the values in the table to complete the fields

.

Type	Name	Language	Location	Width	Height
Step	Step Processor EDU	HTML	(See steps 3b - 3e)	1200	800

   b. Click **Enter a location link**.
   c. The **Add Step Processor Locations** window is displayed.
   d. Click the Location field for **IBM Content Navigator**, and enter `stepprocessoredu.jsp`.



   e. Click **OK**.
4. Click **Save**.
5. Log out of the administration console.
6. Leave the browser open for the next exercise.

Test the custom step processor in a workflow

Introduction

In this exercise, you test a workflow that uses the StepProcessorEDU launch step processor you configured in the previous exercise. You add, validate, and transfer the workflow, to make it available in the runtime environment. Finally, you launch the workflow to see the Step Process EDU launch step processor in action.

Procedures

Procedure 1: Add the workflow definition

1. Launch the Process Loans desktop.
   a. `http://ecmedu01:9080/navigator/?desktop=ProcessLoans`
   b. Log in as the P8 administrator.
2. Add the ProcessLoan workflow with the Process Designer.
   a. Right-click the second **LoanR10**, on the left, and select **Open Process Designer**.
   b. Click **File > Open**.
   c. Browse to:

   `C:\Labs\Case Foundation 5.2.1 Administration\Configure workflow system\`

   d. Select **ProcessLoan.pep**.
3. Validate the Workflow.
   a. Click **File > Validate Workflow Collection**.
      - Make sure that you get a message that says the workflow validation is successful.
4. Transfer the workflow.
   b. Click **File > Transfer Workflow Collection**.
      - Save the workflow to the LoanProcess object store.
        - Browse to **Loan Process > Workflows**, and click **Select**.
        - Document Title: `Process Loan workflow`
        - Accept the default security.
      - Ensure that you get a successful transfer message.
5. Click **File > Close**, select **Cancel the checkout**.

6. Close the Process Designer.
   a. Click **File > Exit**.
7. Leave the Process Loans desktop open for the next procedure.

Procedure 2: Launch the workflow to test the launch step processor

In this procedure, you launch the ProcessLoan workflow to validate the custom step processor, StepProcessorEDU.

1. Launch the Process Loans desktop.
   a. `http://ecmedu01:9080/navigator/?desktop=ProcessLoans`
2. Open the **Workflows** folder.
3. Launch the **Process Loan workflow**.
   a. Select the **Process Loan workflow**, click the name.
   b. Click **Actions > Workflow > Launch Workflow**.
   c. Enter the values in the table:

	Item/Field	**value**
	CustomerName	`Carol Cook`
	LoanAmount	`350000`
	Attachments tab: Loan Application	Add Document > From Local Directory: `C:\Labs\Case Foundation Administration\Configure the workflow system\ CarolCookLoan.pdf`

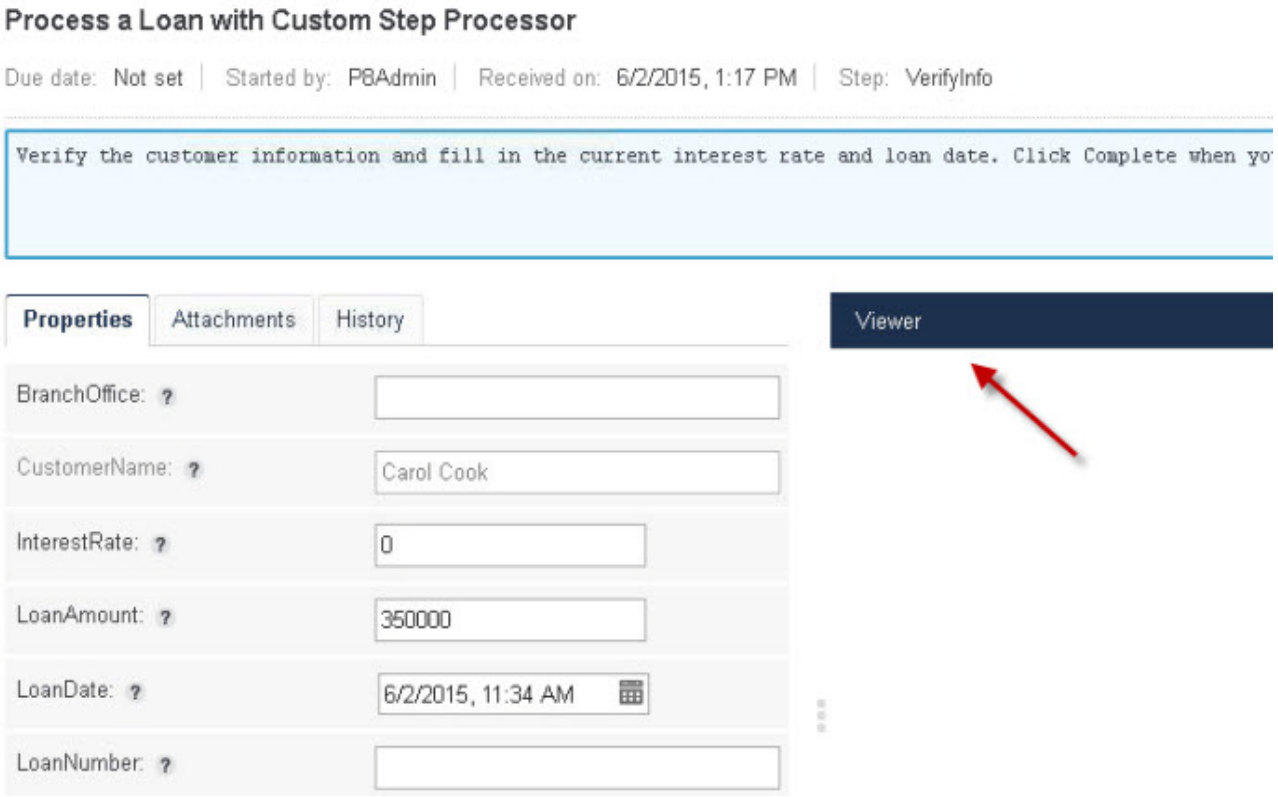
   d. Click **Launch Workflow**.
4. Switch to the **Work** view, click the  .icon.
5. Open the work item in the Clerk role.
   - Expand the **Clerk** role.
   - Click **MyWork**.

Information

The user fields, which are defined in the Process Loan workflow, have different names than the user fields exposed in the work queue, LoanQueue. Therefore the only field that shows a value is the system field F_Subject.

- Open the work item that has the F_Subject field set to, "**Process a Loan with Custom Step Processor**."

6. Notice how the viewer is displayed in the same window as the properties.



7. Type, San `Diego` in the BranchOffice field, and complete the step.
8. Log out of the Process Loans desktop.
9. Close the browser window.

Unit 2. Security

Unit overview

Lessons

Requirements

The activities in this unit assume that you have access to the student system configured for these activities.

System start

Your student system should be started. If it is not started, then perform the startup steps in Appendix A, "Start and Stop System Components".

Lesson 2.1. Overview of workflow security

Overview

Why is this lesson important?

As a system administrator, you are responsible for workflow system security. You are setting up a workflow testing environment. You must configure security for this new environment.

Activities

- Inspect security settings, on page 2-5

User accounts

	Type	User ID	Password
	Operating system	administrator	passw0rd
	Workflow system administrator	p8admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

Inspect security settings

Introduction

In this exercise, you inspect the security settings of your imported workflow system.

Procedures

Procedure 1: Review object store security

In this procedure, you review the security configuration of the object store for your workflow system.

1. Start Firefox if it is not already started.
2. Log on to Administration Console for Content Platform Engine as p8admin:
   a. Use the ACCE bookmark: `http://ecmedu01:9080/acce`
   b. User name: `p8admin`
   c. Password: `IBMFileNetP8`
3. Open the LoanProcess object store.
4. Open the Security tab for the object store to review the object store access.

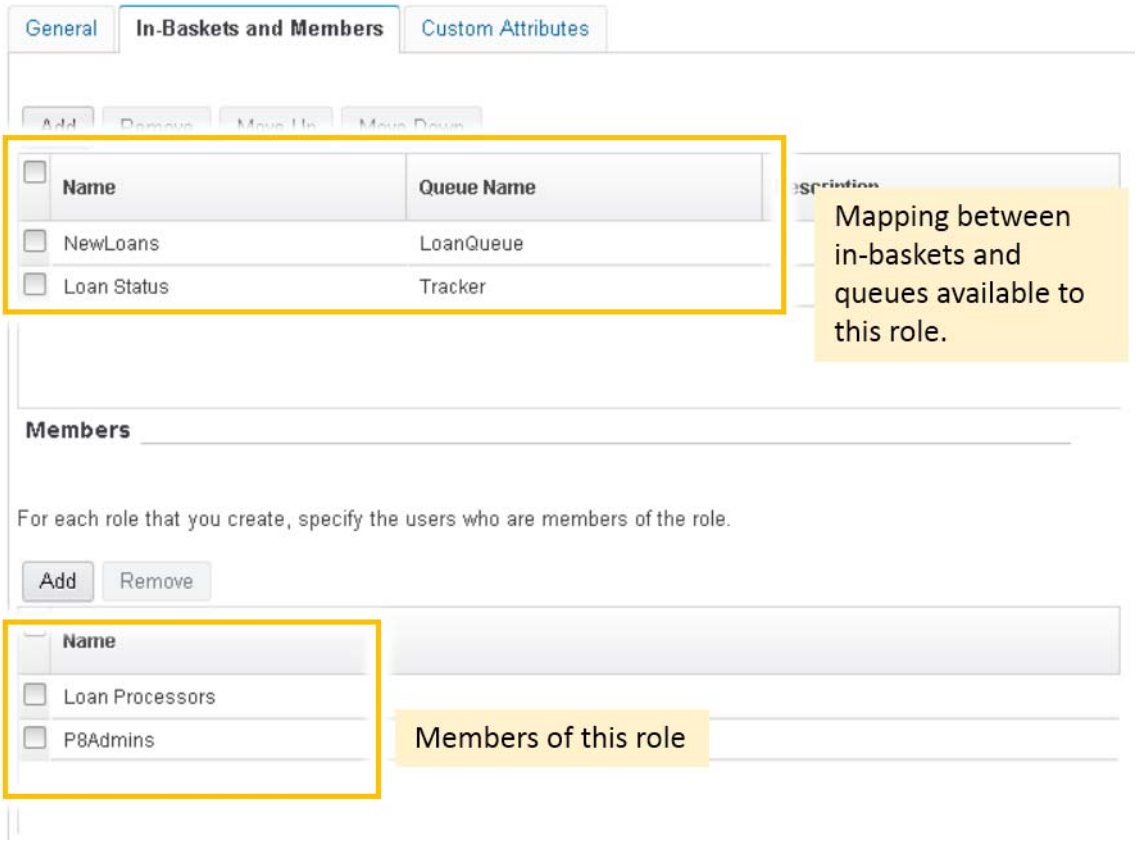
Name	Source	Permission Type	Permission Group
CEadmins	Direct	Allow	Full Control
Loan Business Analysts	Direct	Allow	Use object store
Loan Business Users	Direct	Allow	Use object store
Loan Guests	Direct	Allow	Use object store
Loan Managers	Direct	Allow	Use object store
Loan Officers	Direct	Allow	Use object store
Loan Operations	Direct	Allow	Use object store
Loan Processors	Direct	Allow	Use object store
Loan System Administrators	Direct	Allow	Use object store
Loan Underwriters	Direct	Allow	Use object store
P8Admins	Direct	Allow	Full Control

Procedure 2: Review the application space settings

In this procedure, you review the application space settings, including the roles and in-baskets that are assigned to those roles. Within a desktop environment only a user who is a member of a role

can view the associated in-baskets. You are logged on to Administration Console as p8admin. You are viewing the LoanProcess object store.

1. Expand Administrative > Workflow System > Isolated Regions > LoanProcessingReg10 > Application Spaces.
2. Click the Loans application space.
3. Open the Roles tab.
4. Confirm that two roles are defined: Clerk and Loan Processor.
5. Inspect the Loan Processor role:
   a. Open the Loan Processor role.
   b. Open the In-baskets and Members tab
   c. Review the in-basket and queue mapping.
   d. Review the members list..



   e. Click Cancel to close the Edit Role window.
6. Inspect the Clerk role:
   a. Open the Clerk role.
   b. Open the In-baskets and Members tab.
   c. Review the in-basket and queue mapping.

d. Review the members list.

e. Click Cancel to close the Edit Role window.

f. Leave Administration Console open.

Procedure 3: Inspect Queue and Roster security

In this procedure, you inspect the security settings on the user queues, work queues, and rosters. You are logged on to Administration Console as p8admin. You are viewing the LoanProcess object store.

1. Inspect LoanRoster security:
   a. Expand LoanProcessReg10 > Rosters.
   b. Open LoanRoster.
   c. Open the Security tab of LoanRoster.
   d. Verify that no users are specified.
2. Inspect Inbox security:
   a. Expand User Queues.
   b. Open the Inbox queue.
   c. Open the Security tab of Inbox.
   d. Verify that no users are specified.
3. Inspect Tracker security:
   a. Open the Tracker queue.
   b. Open the Security tab of Tracker.
   c. Verify that no users are specified.
4. Log out of Administration Console.
5. Close Firefox.

Lesson 2.2. Configure workflow system security

Overview

Why is this lesson important?

You are configuring a workflow system to use as a testing environment for a workflow application. You must configure security for the new test system.

Activities

User accounts

Type	User ID	Password
Workflow system administrator	p8admin	IBMFileNetP8
Windows logon	Administrator	passw0rd
Loan Processor	pat	filenet
Loan Officer	olivia	filenet
Loan Guest	gabe	filenet

Note

Passwords are always case-sensitive. User names are not case-sensitive. Many user names on the student system use only lowercase letters.

Checkpoint: Summarize the security findings

You inspected the security settings for the object store, user queues, work queues, roster. You also inspected the application space. The results are shown in the following table. Use the information that is provided to answer security-related questions.

Object	User information	Notes
Object store	CEAdmins	Full control. Workflow system administrator group, Workflow configuration group. P8admin is a member.
	Loan Business Analysts Loan business users Loan Guests Loan Managers Loan Officers Loan Operations Loan Processors Loan System Administrators Loan Underwriters	Use object store.
	P8Admins	P8admin is a member.
Loan Processor role	Loan Processors P8Admin	NewLoans in-basket- LoanQueue LoanStatus in-basket - Tracker
Clerk role	olivia P8Admin	Olivia is in the Loan Officer group. MyWork - Inbox LoanStatus - Tracker
Inbox	No security defined.	User queue
LoanQueue	No security defined	Work queue
LoanRoster	No security defined	Roster

Questions

Select the best answer for each question. Answers are provided in Appendix C, "Checkpoint solutions," on page C-1.

1. Who, besides P8Admin, can see work in LoanQueue?
   a. No one
   b. Loan Guests
   c. Clerks
   d. Loan Processors

2. Who, besides P8Admin, can track work items?
   a. No one
   b. Loan Guests
   c. Clerks
   d. Loan Processors
3. Who, besides P8admin, can launch a workflow?
   a. Any authenticated user
   b. Loan Guests
   c. Clerks
   d. Loan Processors
4. If you sign in as a Loan Processor, which **queues** would you be able to see?
   a. NewLoans, MyWork
   b. MyWork, LoanStatus
   c. LoanQueue, Tracker
   d. None.
5. If you sign in as Olivia, which in-baskets would you be able to see?
   a. NewLoans, MyWork
   b. MyWork, LoanStatus
   c. LoanQueue, Tracker,
   d. None.

Add groups to the workflow system

Introduction

In this exercise, you configure security on the workflow system to allow specific groups to have limited access to work.

Scenario

You need to add two groups to the workflow system. Currently, both groups have object store access, but neither group has access to any work items.

The following conditions must be met:

- Loan Underwriters must be able to create and process workflows.
- Loan Managers must be able to process and track work.
- Loan Guests must have no access.

User accounts

Type	User ID	Password
Workflow system administrator	p8admin	IBMFileNetP8
Windows logon	Administrator	passw0rd
Loan Processor	pat	filenet
Loan Officer	olivia	filenet
Loan Guest	gabe	filenet
Loan Underwriter	uma	filenet

Verification

You must log on as a user from each group to verify that the correct security settings are applied.

Procedures

Procedure 1: Security check

In this procedure, you log on to the Process Loans application to see the current security for each group.

1. Review Loan Underwriter access:
   a. Using Firefox, log on to the Process Loans application as a Loan Underwriter.
      - User name: `uma`
      - Password: `filenet`
   b. Open the Work View.
   c. Note the in-baskets that you can see or work with.
   d. Log out of Process Loans.
2. Use the same steps to review Loan Manager access.
   - User name: `Mary`
   - Password: `filenet`
3. Use the same steps to review Loan Guest access.
   - User name: `Gabe`
   - Password: `filenet`
4. As Gabe, launch a workflow.
   a. Open the Browse view.
   b. Open the Workflows folder.
   c. Launch the New Loans Processing workflow.
   d. Enter any values that you want. The purpose of the test is to determine whether you can launch a workflow.
5. Log out of the Process Loans application.

Note

Recall that the first step in the workflow goes to the workflow initiator. Although Gabe can launch workflows, Gabe has no access to the inbox. The workflow cannot be further processed.

Procedure 2: Configure work queue security

In this exercise, you configure security on the LoanQueue work queue. If no one is assigned to the queue, access is granted to anyone with object store access. You must add Loan Underwriters to the queue. However, you must also add Loan Processors and Loan Managers.

1. Start Firefox if it is not already started.

2. Log on to Administration Console for Content Platform Engine as p8admin:
   a. Use the ACCE bookmark: `http://ecmedu01:9080/acce`
   b. User name: `p8admin`
   c. Password: `IBMFileNetP8`
3. Open the LoanProcess object store.
4. Expand Administration > Workflow System > Isolated Regions > LoanProcessReg10 > Work Queues.
5. Click LoanQueue.
6. Open the In-baskets tab.
7. Confirm that NewLoans in-basket belongs to LoanQueue.

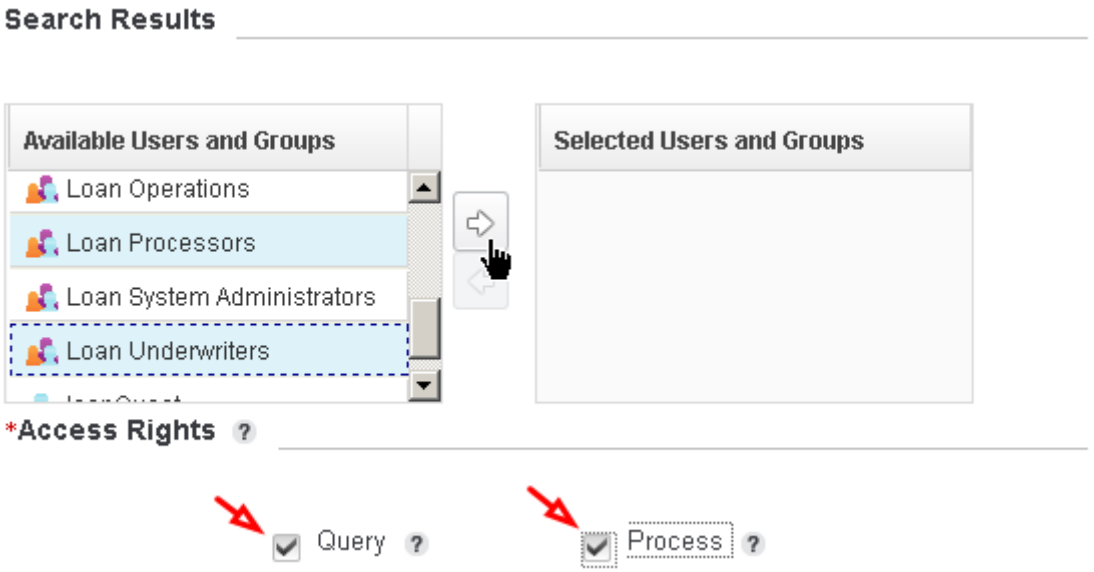
Information

This tab is where you configure in-baskets for the queues.

8. Open the Security tab.
9. Add workers to LoanQueue:
   a. Click Add.
   b. Type loan in the search field and then click Search.

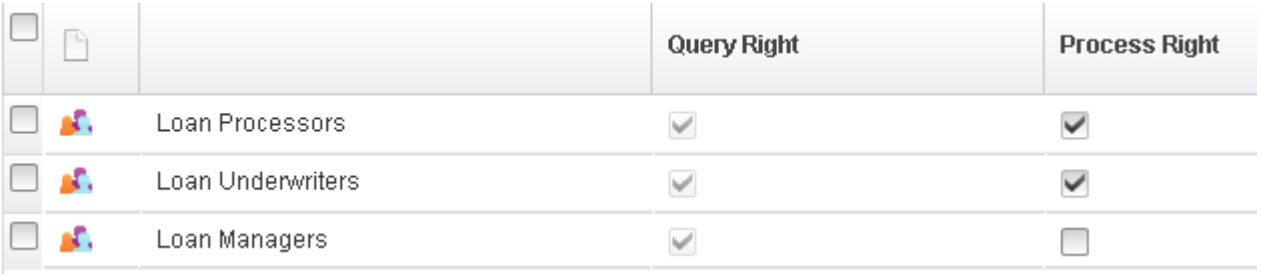
   c. Select Loan Processors and Loan Underwriters.
   d. Click the arrow to move the group into the Selected Users and Groups field.
   e. Check the Query and Process options.

f. Click OK.



g. On the LoanQueue page, click Save to save your changes.

10. Add Loan Managers to the LoanQueue with Query access only.
    a. Click Add.
    b. Find Loan Managers group.
    c. Check only the Query option and leave the Process option clear.
11. Verify your settings:



12. Click Save.

Procedure 3: Configure user queue security

You must provide Loan Managers, Loan Processors, and Loan Underwriters permissions to view and process personal work items. You must also provide Loan Managers with access to the Tracker queue, so that they can track work. You are logged on to Administration Console as P8admin. You are viewing the LoanProcess object store.

1. Expand User Queues.
2. Select Inbox.
3. Open the In-baskets tab.
4. Confirm that the MyWork in-basket belongs to the Inbox user queue.

5. Open the Security tab.
6. Use the data table to configure security on the Inbox user queue.

Group	Permissions
Loan Managers	Query, Process
Loan Processors	Query, Process
Loan Underwriters	Query, Process

7. Save your changes to the Inbox queue.
8. Select Tracker.
9. Confirm that the Loan Status in-basket is associated with the Tracker queue.
10. Use the data table to configure security on the Tracker user queue.

Group	Permissions
Loan Managers	Query, Process

11. Save your changes to the Tracker queue.

Procedure 4: Configure Roster security

Users must be able to create objects in the roster to launch workflows. A user who can create a workflow does not always need to process the workflow after it is created.

1. Expand Rosters.
2. Select LoanRoster.
3. Use the data table to configure.

Group	Permissions
Loan Managers	Query
Loan Processors	Query, Create
Loan Underwriters	Query, Create

4. Save your changes to LoanRoster.

Procedure 5: Manage the Loan Processor role

In this procedure, you must manage the roles and in-baskets from the application space.

1. Expand the Application Spaces folder.
2. Open the Loans application space.
3. Open the Roles tab.
4. Click Loan Processor.
5. Open the In-Baskets and Members tab.
6. Add Loan Managers to this role.
7. In the In-Baskets area, add the MyWork in-basket to this role.
8. Save your changes.

Procedure 6: Add a Loan Underwriter role

In this procedure, you add a role for Loan Underwriters.

1. Click New.
2. In the New Role window, enter the following information.

Tab	Field	Value
General	Name	Loan Underwriters
In-Baskets and Members	In-baskets	NewLoans MyWork
	Members	Loan Underwriters

3. Save your changes to the Loans application space.
4. Log off of Administration Console.

Procedure 7: Retransfer the workflow

Roster create permissions do not take effect until after a new version of the workflow definition is transferred.

1. Use Firefox to open the Process Loans desktop.
   a. On the Mozilla Firefox browser window.
   b. Go to the URL: `http://ecmedu01:9080/navigator/?desktop=ProcessLoans`
   c. Log in as the P8 administrator.
      - User name: `p8admin`
      - Password: `IBMFileNetP8`
2. Open the New Loans Processing workflow in Process Designer.
3. Click File > FileNet > FileNet Checkin.
4. Click Finish.

Information

You must check in a new version of the workflow before you can transfer it.

5. Transfer the New Loans Processing workflow.
   a. Select File > Transfer Workflow Collection.
   b. Click OK to use the existing workflow name.
   c. Click Finish to accept all defaults and complete the transfer process.
   d. Click Close to close the successful transfer message.

6. Close Process Designer.
   a. Click File > Exit.
   b. Select Cancel Checkout.
   c. Click OK.

Procedure 8: Test security

User	Group	Password	Roles	In-baskets	Launch?
Pat	Loan Processors	filenet	Loan Processor	NewLoans Loan Status MyWork	Yes
uma	Loan Underwriters	filenet	Loan Underwriter	NewLoans MyWork	Yes
Mary	Loan Managers	filenet	Loan Processor	New Loans Loan Status MyWork	No
Gabe	Loan Guests	filenet	none	none	No

1. Log in to the Process Loans application as each user (see the table).
2. From the Work View, confirm that the user can see the correct in-baskets.
3. From the Browse View, launch the New Loan Processing workflow.
4. Compare your results with the table.

Unit 3. Maintain the Workflow System

Unit overview

Lessons

Requirements

The activities in this unit assume that you have access to the student system configured for these activities.

System start

Your student system should be started. If it is not started, then perform the startup steps in Appendix A, "Start and Stop System Components".

Lesson 3.1. Use Administrative Tools for Maintenance

Overview

Why is this lesson important?

You are administering a workflow system. You can use several Workflow system administration tools. You need to quickly identify which tool to use for any monitoring, troubleshooting, or maintenance task.

Activities

Identify workflow system administration tools

Introduction

In this lesson, you learned about workflow system maintenance tools. For each scenario, identify the tool that you can use to accomplish a task.

For each question, indicate the correct answer or the best answer.

1. Which tool can you use to search for work in progress?
   a. Process Services Ping Page.
   b. System Dashboard
   c. Process Administrator
   d. Process Configuration Console
2. Before your database administrator can back up the workflow system database tables, you must lock the isolated region. Which tool do you use?
   a. Process Administrator
   b. Process Configuration Console
   c. System Dashboard
   d. Administration Console for Content Platform Engine
3. Configuration of queues, rosters, and event logs was formerly accomplished by using _____ but is now accomplished by using _____.
   a. Process Administrator, System Dashboard
   b. Process Configuration Console, Process Administrator
   c. Process Administrator, Administration Console for Content Platform Engine.
   d. Process Configuration Console, Administration Console for Content Platform Engine
4. Misuse of which administration tool can cause work item corruption, compromise data integrity, or loss of data?
   a. vwtool
   b. System Dashboard
   c. Process Administrator
   d. Process Services Ping page.

Lesson 3.2. Monitor with the Process Services Ping page

Overview

Why is this lesson important to you?

You are administering a workflow system. As part of your maintenance schedule, you scan the Process Services Ping page to ensure that the workflow system is fully operational.

Activities

- Use the Process Services Ping Page, on page 3-9

User accounts

Type	User ID	Password
Workflow system administrator	p8admin	IBMFileNetP8
Windows logon	Administrator	passw0rd

Note

Passwords are always case-sensitive. User names are not case-sensitive. Many user names on the student system use only lowercase letters.

Use the Process Services Ping Page

Introduction

In this exercise, you explore the Process Services Ping page and use it to quickly access information about your workflow system.

Procedures

Procedure 1: Open the Process Services Ping Page

In this procedure, you open the Process Services Ping page and review the detailed information provided.

1. Open Firefox if it is not already open.
2. Open the PE Ping bookmark.
   - http://ecmedu01:9080/peengine/IOR/ping
   - User name: p8admin
   - Password: IBMFileNetP8
3. Locate the following information:
   - Product name
   - Build Version
   - JVM
   - Classpath
   - Log file location
   - Database

Procedure 2: Find the Content Platform Engine server log files

The Ping page shows the location of the Content Platform Engine server log files. You can quickly get to the log files without having to memorize this path.

1. Locate the log file location information on the ping page.
2. Open a new Windows Explorer window.
3. Go to the log file location.

Hint

You can copy/paste the log file location information.

4. Verify that you can see the log files.
   - p8_server_error.log
   - pesvr_system.log
   - pesvr_trace.log

Procedure 3: Use helpful links

The Process Services Ping page contains several helpful links. These links might be useful for troubleshooting situations. In this procedure, you open each link to review the information on each page.

1. Scroll to the bottom of the Process Services Ping page.
2. Open the System link.

- The top of this page provides general information about your environment.
- PE Daemons shows active Process Services daemons.
- Scrolling down is an Other Message cell that shows a thread dump. This information is a minimized Java dump to show the state of the JVM at the instant that the page was opened.

Information

IBM Support can compare multiple thread dumps to identify hung threads that cause the system to perform slowly.

3. Click the Back button on the browser.
4. Open the Async Tasks link.

- This page provides real-time information about currently running asynchronous tasks, such as upgrade, peverify, and configuration transfer.

5. Click the Back button on the browser.
6. Open the Component Manager Logs link.

- This page provides the log files that Process Service component queues generate.

7. Click the Back button on the browser.
8. Open the Component Manager Stats link.

- You can use the Component Queue Processing Time Information to identify components that are performing slowly.

9. Open the remaining two links if you want.
10. Close Firefox.

Lesson 3.3. Monitor the Process Engine with Dashboard

Overview

Why is this lesson important to you?

Your workflow application is in production with daily activity. You monitor the workflow system by using System Dashboard to ensure continued workflow throughput and system performance.

Activities

Important

The Activities preparation provides data on the student system that you can observe and work with. Perform the procedures in the Activities preparation section before completing the lesson activities in this unit.

User accounts

Type	User ID	Password
Workflow system administrator	p8admin	IBMFileNetP8
Workflow application user	oscar	filenet
Windows logon	Administrator	passw0rd

Note

Passwords are always case-sensitive. User names are not case-sensitive. Many user names on the student system use only lowercase letters.

Activity preparation: Launch workflows

Introduction

Your system does not yet have any workflow activity, so you must create some workflow system activity. To create activity, you are going to launch instances of a simple workflow. You must perform this activity preparation before attempting the lesson activities in this unit.

Procedures

Procedure 1, "Launch and process workflows," on page 3-15

Procedure 1: Launch and process workflows

1. Start Mozilla Firefox.
2. Open the Workflow Author Desktop bookmark.

   URL: http://ecmedu01:9080/navigator/?desktop=WorkflowAuthordesktop
3. Log on to IBM Content Navigator Workflow Author Desktop as p8admin.
   - User Name: `p8admin`
   - Password: `IBMFileNetP8`
4. Open the Workflows folder of the LoanProcess object store.
5. Select the Basic Loan Processing Workflow.
6. Launch 8 instances of this workflow:
   a. Click Actions > Workflow > Launch Workflow.
   b. For each workflow, enter the customer name and loan amount:

Customer Name	Loan Amount
Aberdeen	1000
Broadmoor	2000
Caesar	3000
Dullman	4000
Eberhardt	5000
Fells	6000
Gustav	7000
Hannibal	8000

   c. Click Launch Workflow.
7. Log out of Workflow Author Desktop.
8. Close Firefox.

Monitor with System Dashboard

Introduction

In this activity, you use IBM System Dashboard to view Listener data. You view the system status. You disconnect a Listener and then reconnect it.

Procedures

Procedure 1: Define a cluster

In this procedure, you define a cluster to monitor the system.

1. Start IBM System Dashboard for ECM.
   a. Click Start > All Programs > IBM FileNet P8 Platform > System Dashboard> Dashboard.

Information

No data is shown in the Average Response Time chart or Current Status chart on the Summary tab. No data is reported because the student system does not yet have clusters.

2. Define a cluster:
   a. Click the Clusters tab.
   b. Click New.
   c. In the Add Cluster window, type C1 as the cluster name, and click OK.
3. Specify the servers in the cluster:
   a. On the Clusters tab, select the cluster that you defined, and click Edit.
   b. Click Add to add a host.
   c. In the Add Host field, type `ecmedu01`.

d. Accept the default number for the Primary Listener Port, 32775.

e. Click OK to enter the server information.

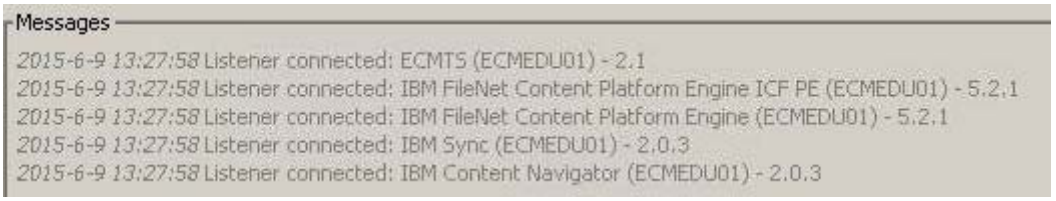
f. Type 60 in the Interval field.

Important

In general, leave the default interval (900 seconds) if possible. Do not set the interval lower than 120 seconds to avoid system performance degradation.

g. Click OK to save the C1 cluster.

h. Verify that you see messages in the Messages area that indicate a connection.



Information

Connection messages are displayed in the Messages pane at the bottom of the Dashboard console. Each message identifies a component with an active Listener on the hosts in the cluster.

ECMTS is the ECM Text Search services listener.

IBM Sync is the Sync and Share services listener.

4. Verify that the following listeners are connected:
   - ECMTS (Content Search Services)
   - IBM FileNet Content Platform Engine (ECMEDU01) - 5.2.1
   - IBM FileNet Content Platform Engine ICF PE (ECMEDU01) - 5.2.1
5. Save the cluster.
   a. Click File > Save Clusters.
   b. In the Save window, browse to the My Documents folder.
   c. Type C1 as the file name.
   d. Click Save.

Procedure 2: View system overview

The Summary tab provides instant view of the response time and CPU load of a selected server.

1. In the IBM System Dashboard for ECM window, open the Summary tab.

2. Select the C1 cluster from the Cluster menu.
3. Select ecmedu01 from the server menu.
4. Observe the Average Response Time and Current Status charts.
5. Locate the scroll bar under the Average Response Time chart.
6. Use the scroll bar to see all of the listeners represented.
7. Change the Time Range setting:
   a. Select a start time of -4 hours; then observe the Average Response Time graph.
   b. Select a start time of -1 day; then observe the Average Response Time graph.

Procedure 3: Check component status

Use Listener options from the Details view to check whether an application on a server is running and to check how long the application has been running. The Dashboard is open and the C1 cluster is loaded.

1. In the IBM System Dashboard for ECM window, open the Details tab.
2. Double-click the C1 cluster node to expand it.
3. Expand the ecmedu01 host node.

Information

A container node represents each component that a Listener monitors. This container node is the Listener node, and its menu is the Listener menu. The Listener node has the name of the monitored component.

4. Check whether the Content Platform Engine is running.
   a. Right-click the Listener node for *IBM FileNet Content Platform Engine*.
   b. Click Request heartbeat.
   c. Verify that you see a new message in the Message area that shows that the listener is up.
5. Check whether Process Services is running.
   a. Right-click the Listener node for *IBM FileNet Content Platform Engine ICF PE*.
   b. Click Request heartbeat.
   c. Verify that you see a new message in the Message area that shows that the listener is up.
6. Check how long the FileNet P8 Content Engine application has been running.
   a. Right-click the Listener node for *IBM FileNet Content Platform Engine*.
   b. Click Request uptime.
   c. Verify that a message reports how many seconds the Listener has been up (running).

7. Check how long the Process Services have been running:
   a. Right-click the Listener node for *IBM FileNet Content Platform Engine ICF PE*.
   b. Click Request uptime.
   c. Verify that a message reports how many seconds the Listener has been up (running).

Note

The Content Services and Process Services start at different times.

Procedure 4: View counter data

Each Listener provides data at each sampling interval. You can view the activity on the disk, RPC calls, and other information.

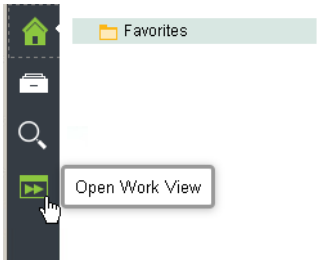
1. On the Details tab, expand *IBM FileNet Content Platform Engine ICF PE*> Disk > Reads.
2. Observe the Count, Rate Per Second, and Total Count columns.
3. Open and view other counter-data:
   - IBM FileNet Content Platform Engine ICF PE > CPU > Busy
   - IBM FileNet Content Platform Engine ICF PE > CPU > jvm_free_memory
4. Verify that the times in the Time column are configured at 60-second intervals:
   a. Scroll to the bottom of the Performance Data table.
   b. Observe that a new row is added every 60 seconds.
   c. Observe that the times are recorded at 60-second intervals.
5. Leave Dashboard running, but minimized.

Procedure 5: View workflow activity

In this procedure, you generate some workflow activity and then view the results in System Dashboard.

1. Generate workflow activity:
   a. Open Firefox.
   b. Log on to Workflow Author Desktop as a loan officer:
      - User name: oscar
      - Password: `filenet`

c. Open the Work View.



d. Open the Loan Officer Inbasket. Eight work items are in this inbasket.

e. Open the first work item.

f. Select the *Info OK* response.

g. Complete four more work items by using the same response.

h. Complete two more work items by using the *More Info Needed* response.

i. Log out of Workflow Author Desktop.

2. View workflow processing CPU load from System Dashboard:

   a. Restore System Dashboard.

   b. On the Details tab, expand to view the following node: IBM FileNet Content Platform Engine ICF PE > CPU > Busy.

   c. Scroll to the bottom of the data table.

   d. Confirm that the CPU Busy time increased when you generated workflow activity.

   e. Review the recent activity in the following nodes:

      - IBM FileNet Content Platform Engine ICF PE > CPU > Memory.
      - IBM FileNet Content Platform Engine ICF PE > CPU > User.

Procedure 6: View data as a chart

Viewing information in table format is useful, but to get a more visual context for the data, you can view it in the form of a chart. In this procedure, you use System Dashboard to create graphical charts.

1. Right-click the node: IBM FileNet Content Platform Engine ICF PE > CPU > Busy.
2. Select Chart Event Data.
3. You can drag the corner of the chart to make it larger or click the Maximize button in the top right corner.
4. Find the point in the graph that shows the recent workflow activity.
5. Review the charts for the following nodes:

   - IBM FileNet Content Platform Engine ICF PE > CPU > Memory.
   - IBM FileNet Content Platform Engine ICF PE > CPU > User.
   - IBM FileNet Content Platform Engine ICF PE > CPU > jvm_free_memory.

6. Close the charts.

Procedure 7: Disconnect a listener

Use this procedure to disconnect the Listener from the application that it is monitoring and review the results. You are in the Details view, with the C1 node and ecmedu01 expanded.

1. Right-click the *IBM FileNet Content Platform Engine ICF PE* node and click Disconnect this listener.
2. Verify that the Listener node for *IBM FileNet Content Platform Engine ICF PE* is no longer listed.
3. Verify that a disconnect message for the node is displayed in bold text in the Messages pane.

Procedure 8: Use the Alerts view for important messages

Use the Alerts view to check for the critical messages, such as a disconnected Listener.

1. Click the Alerts tab.
2. Verify that the same message that you see in bold text in the Messages pane is also listed in the Urgent Messages pane.

Information

The Alerts tab shows important messages that do not scroll up out of view as they do in the Messages pane.

3. Select the message in the Urgent Messages pane and click Dismiss.
4. Verify that the Critical disconnection message in the Messages pane at the bottom is still listed.

Procedure 9: Reconnect a Listener

Reload the C1 cluster to reconnect to the Listener for the Content Services.

1. Exit System Dashboard.
2. Restart System Dashboard.
3. Load the C1 cluster.
   a. Click File > Open Clusters.
   b. Select the C1.xml cluster and click Open.
4. On the Summary tab, select C1.
5. Go to the Details view.
6. Expand the C1 node and the ecmedu01 host node.
7. Verify that all running components with an active Listener on the ecmedu01 server have a Listener node under ecmedu01, including *IBM FileNet Content Platform Engine ICF PE*.
8. Verify that the connection messages in the Messages pane for the listed components, including a connection message for *IBM FileNet Content Platform Engine ICF PE*.
9. Leave System Dashboard open for the next exercise.

Create Dashboard Archives and Reports

Introduction

In this activity, you use all the reporting features of IBM System Dashboard. You create a report template and then verify the template works s designed by using it to run a report. You then archive and report Listener data.

Procedures

Procedure 1: Create a report template

In this procedure, you configure a report template by selecting the counters to be included in the report content.

1. Start IBM System Dashboard if it is not already started.
2. Create a report template;
   a. Open the Reports tab.
   b. Click New.
   c. Name the template: `CPE Template`.
   d. Click OK.
3. Select data to be included in the report:
   a. Click Edit.
   b. Expand C1 > ecmedu01 > IBM FileNet Content Platform Engine ICF PE > CPU.
   c. Click Add With Children.
4. Click OK to complete edits.
5. Save the report template:
   a. Click File > Save Report Templates As.
   b. Browse to My Documents.
   c. Type `CPE_Template` as the template name.
   d. Click Save.

Procedure 2: Run a report

In this procedure, you modify the report template to accommodate the current need for data, and then run and examine the report.

1. From the Reports tab, select the report template, CPE_Template.
2. Click Run.
3. Specify the report parameters in the CPE Template window:
   a. Select C1 > ecmedu01 > IBM FileNet Content Platform Engine ICF PE.
   b. Select the following options for the report in the Options pane:
      - Environment
      - Average
      - Sum
   c. Type 1 in the Length in hours field.
4. Save the report as a file:
   a. Click the ellipsis button (...) next to the Output To field.
   b. Browse to My Documents.
   c. Type CPE_Report for the file name.
   d. Click Save.
5. Click Run.

Procedure 3: Examine the report

1. Using Windows Explorer, go to My Documents.
2. Open CPE_Report.csv by using Notepad ++.

Information

The data is presented in the following sequence:

- Environment variables
- Metric headings
- Data for the duration specified
- The average and sum of each metric

3. Close the report file.

Procedure 4: Archive and report Listener data

In this procedure, you archive the data that the Listener collected within the last 48 hours. Afterward, you run a report of the archived data.

1. Archive the collected Listener data by using the archive defaults:
   a. In the System Dashboard, open the Details tab.
   b. Expand C1 > ecmedu01.
   c. Right-click IBM FileNet Content Platform Engine ICF PE and then click Archive history.
   d. Browse to My Documents.
   e. Type `CPE_Archive` for the file name.
   f. Click Save.
   g. Wait for the *History archived* message.
   h. Click OK.

Information

The CPE_Archive file is a proprietary binary file that is used to generate views and reports of archived data.

2. Add the archive file to the Archives cluster.
   a. From the Details view, click File > Open Archive.
   b. Select My Documents > CPE_Archive.
   c. Click Open.
   d. Wait for the archive to open.
   e. Double-click the Archives cluster that is displayed in the tree view pane.
   f. Expand the ecmedu01 > IBM FileNet Content Platform Engine ICF PE node.

Note

The label for the IBM FileNet Content Platform Engine ICF PE container in the Archives cluster is red and contains the message currently unavailable. This message exists because the node is not displaying data from an active Listener connection.

3. View the archived data by selecting and expanding nodes under the IBM FileNet Content Platform Engine ICF PE container.

Procedure 5: Run a report on archived data

1. Open the Reports tab.
2. Select the CPE_Template and then click Run.
3. Expand the Archives > ecmedu01 node.
4. Select IBM FileNet Content Platform Engine ICF PE.
5. Select all of the options in the Options pane.
6. Type 2 in the Length in hours field.
7. Click the ellipsis (...) beside the Output To field.
8. Browse to My Documents.
9. Type `CPE_Archive_Report` as the file name.
10. Click Save and then click Run.
11. Close System Dashboard.

Procedure 6: Inspect a report on archived data

1. Use Windows Explorer to go to My Documents/
2. Open CPE_Archive_Report.csv by using Notepad ++.
3. Inspect the file.
4. Close the file when you are finished.

Lesson 3.4. Monitor with vwtool

Overview

Why is this lesson important to you?

Your workflow application is in production with daily workflow activity. You monitor the system with vwtool to ensure continued workflow throughput and system performance.

Activities

- Monitor with vwtool, on page 3-29

User accounts

Type	User ID	Password
Workflow system administrator	p8admin	IBMFileNetP8
Windows logon	Administrator	passw0rd

Note

Passwords are always case-sensitive. User names are not case-sensitive. Many user names on the student system use only lowercase letters.

Monitor with vwtool

Introduction

In this exercise, you use vwtool to monitor various isolated region parameters.

Procedures

Procedure 1: Start vwtool

In this procedure, you start vwtool by using a command window. You connect to region 5 using the P8ConnP5 connection point as P8Admin, a member of the workflow system administrators group.

1. Open a Command window.
   a. Click Start.
   b. If the Command Prompt icon is displayed, click it.
   c. Otherwise, click Run and then type `cmd` in the Run field and then press Enter.
2. Go to the vwtool location:

   ```
   cd C:\Program Files\IBM\FileNet\ContentEngine\tools\PE
   ```

3. Start vwtool:

   ```
   vwtool P8ConnP5 -Y p8admin+IBMFileNetP8
   ```

Note

To save time, you can use the desktop icon to start vwtool from now on.

Procedure 2: View configuration details

Use the configdetails command to get a high-level overview of the workflow system.

1. At the `<vwtool:5>` prompt, type `configdetails` and press Enter.

2. Type y to create a hardcopy and press Enter.
3. Type y to accept the default file location and press Enter.
4. Type p and press Enter. The command continues to display information without stopping.
5. Note the output file location that vwtool displays.
6. Go to the output file location.
7. Open sysConfigDetails[time stamp] file by using Notepad++.
   a. Right-click the file.
   b. Select Edit with Notepad++.
8. Review the following information:

   Regions

   Tablespaces

   Ports used

   Session timeout

   ISI options for region 5

   The schema name for isolated region 5.

   Queues

   Rosters
9. Close Notepad++.

Procedure 3: View system load status

1. At the <vwtool:5> prompt, type `loadstatus` and press Enter.

   The performance statistics for the isolated region are displayed.
2. Use the scroll bar as necessary to help find the following items in the report:
   - Executed Regular Steps
   - Executed System Steps
   - Work Object Inject RPCs
   - Lock Work Object RPCs
   - Lock work object errors
3. Read the help description for each of these report items.
   a. On a system with Internet access, open the IBM Knowledge Center in a browser window.

Note

Your student system does not have Internet access. You must use a separate system to view FileNet P8 Platform documentation.

b. Go to FileNet P8 Platform 5.2.1>Administering>Administering Content Platform Engine>Defining the workflow system>Administrative tools>vwtool>Command quick reference>loadstatus>RPC and error counters.

Procedure 4: View memory size of region objects

You use the vwtool dump command to obtain the size of workspace memory, work performer class memory, and instruction sheet (workflow map) size. The dump command applies to a specific, isolated region.

1. Ensure that vwtool is already started and connected to region 5.
2. View workspace memory size for region 5.
   a. Type `dump` and press Enter.

      The options for the dump command are listed.

   b. Type `s` and press Enter.

      Command prompt: `Work space id (CR = latest)`

   c. Press Enter.

      Command prompt: `Authored or runtime form (a,r CR=a)`

   d. Type `r` and press Enter.

      Command prompt: `Summary, Raw, siZe or CDL format? (s, r, z or CR=c)`

   e. Type `z` and press Enter.

      The approximate number of bytes and the number of objects are displayed for the workspace.
3. View the size of the work performer class memory for the LoanOfficer queue.
   a. Type `dump` and press Enter.
   b. Type `c` and press Enter.
   c. Press Enter to choose the latest workspace ID.
   d. Type `LoanOfficer` and press Enter.
   e. Type `z` and press Enter.

      The approximate number of bytes and the number of objects are displayed for the class.

4. View the size of the default instruction sheet, Workflow. (An instruction sheet corresponds to a workflow map.)
   a. Type `dump` and press Enter.
   b. Type `i` and press Enter.
   c. Press Enter to choose the latest work space ID.
   d. Type `r` to choose the runtime form.
   e. Type `WorkObjectEx` as the work class name and press Enter.
   f. Type `Workflow` and press Enter.
   g. Type `z` and press Enter to specify the size values for the instruction sheet.

      The approximate number of bytes and the number of objects are displayed for the instruction sheet.

Note

You can repeat the most recent command with all arguments by entering the equal sign (=) and then pressing Enter. Double sets of quotation marks (“”) indicate empty values. You can use this format when creating scripts to run in vwtool.

Procedure 5: View system version and configuration

In this procedure, you view the system software version, system server configuration, and region configuration information by using various vwtool commands.

1. Ensure that vwtool is already started and connected to region 5.
2. View the software version of the Process Engine.
   a. Type `version` and press Enter.
   b. Look for the following items in the output:
      - DB2 LUW Blob (BLOB size in megabytes)
      - dap521.234 (software version of the Process Engine server)
3. View VWService and region configuration information.
   a. Enter the `config` command, and then type a space character and press Enter to show the entire report.
   b. Look for the following items in the output:
      - Latest WorkSpace
      - Blob size
      - Logging options for region events
      - Physical table names for queues, rosters, and logs in the region.

Procedure 6: View mapping between process views and database views

The Views command provides information about queues, rosters, and logs. You can see the names of each queue, roster, and log in the system, and the physical tablespace name for each. Use this command to learn about the names of various views. You can view more information about each view by using more commands, such as rosterconfig.

1. Type `views` to get t a list of all views.

   Views are displayed. The last column displays table names. The table names indicate the type of view.

2. Confirm that can distinguish between the following views:

   Queues
   Rosters
   Logs

3. Confirm that you can find the table name for any view.

Procedure 7: View roster, queue, and log configurations

In this procedure, you view configuration information for rosters, queues, and logs.

1. View a roster configuration:
   a. Type `rosterconfig` and press Enter.
   b. Type `LoanRoster` and press Enter.
   c. Press Enter (not to show system field definitions).
   d. Locate the following information for LoanRoster:

      Roster name
      Schema name
      Physical table name
      Database view name

2. View a queue configuration with work inbasket classes:
   a. Type `queueconfig` and press Enter.
   b. Type `LoanManager` and press Enter.
   c. Type `n` and press enter.
   d. Type `y` and press enter.
   e. Locate the following information about LoanManager:

      Physical table name
      Field names
      Field types

   f. Type `t` to terminate.

3. View a log configuration:
   a. Type `logconfig` and press Enter.

b. Type LoanLog and press Enter.

c. Type y and press Enter.

d. Locate the following information about LoanLog:

   Event log name
   Physical table name
   System and user field names

4. Type `quit` and then press Enter to exit vwtool.
5. Close the command window.

Lesson 3.5. Maintain event logs

Overview

Why is this lesson important to you?

Your workflow system has accumulated many event log entries in the workflow system database tables. You must archive and purge the events logs to free up database space.

Activities

User accounts

Type	User ID	Password
Workflow system administrator	p8admin	IBMFileNetP8
Windows logon	Administrator	passw0rd

Note

Passwords are always case-sensitive. User names are not case-sensitive. Many user names on the student system use only lowercase letters.

View event logs by using Administration Console

Introduction

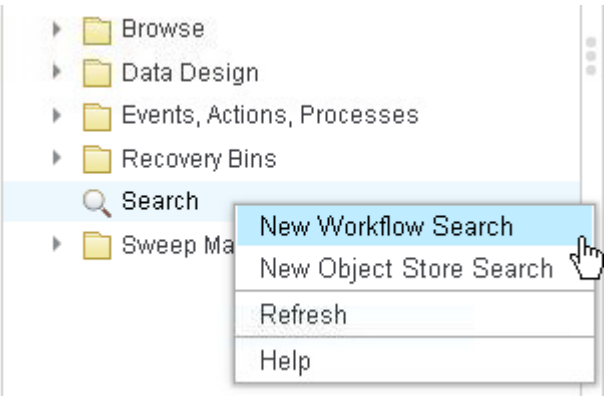
You can use Administration Console for Content Platform Engine to perform tasks that previously required Java applets. In this exercise, you use Administration Console for Content Platform Engine to search for and view event logs. These logs were created at the beginning of this unit when you performed the preparation activity.

Procedures

Procedure 1: Search for all events

1. Start Firefox.
2. Open the ACCE bookmark or type the URL in the address field:

   `http://ecmedu01/9080/acce`
3. Log on as P8admin:
   - User name: `P8Admin`
   - Password: `IBMFileNetP8`
4. Open the LoanProcess object store.
5. Right-click Search and then select New Workflow Search.



6. Set P8ConnP5 as the selected Connection point.
7. In the Search result type field, select Events.
8. Confirm that the Workflow structure field changed to show Event log.
9. In the Workflow Structure name field, select DefaultEventLog.

10. Click Count Matches.

Information

The message shows how many events are currently logged in the system. Use Count Matches to get number of matches before you run the search. If the number is large, then you know that a full search might affect performance. In this instance,

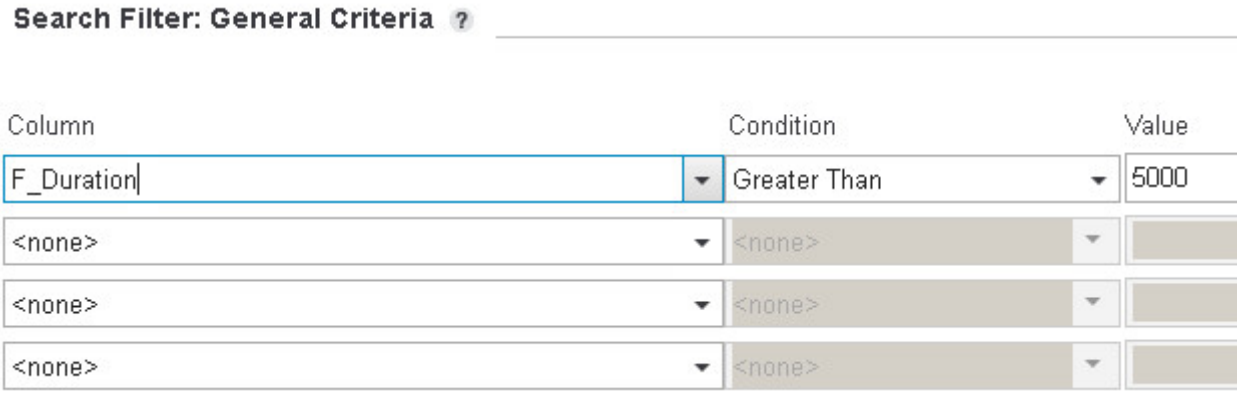
11. Click OK.
12. Click Run.
13. Use the vertical and horizontal scroll bars to see all of the columns and rows.
14. Close the Search Results tab.

Procedure 2: Find long duration events

You can search for events that have long durations. Long duration values can show where workflows are not being processed efficiently. The New Workflow Tab is open.

1. In the Search Filter: General Criteria area, select the following criterion:

   F_Duration is greater than 5000.



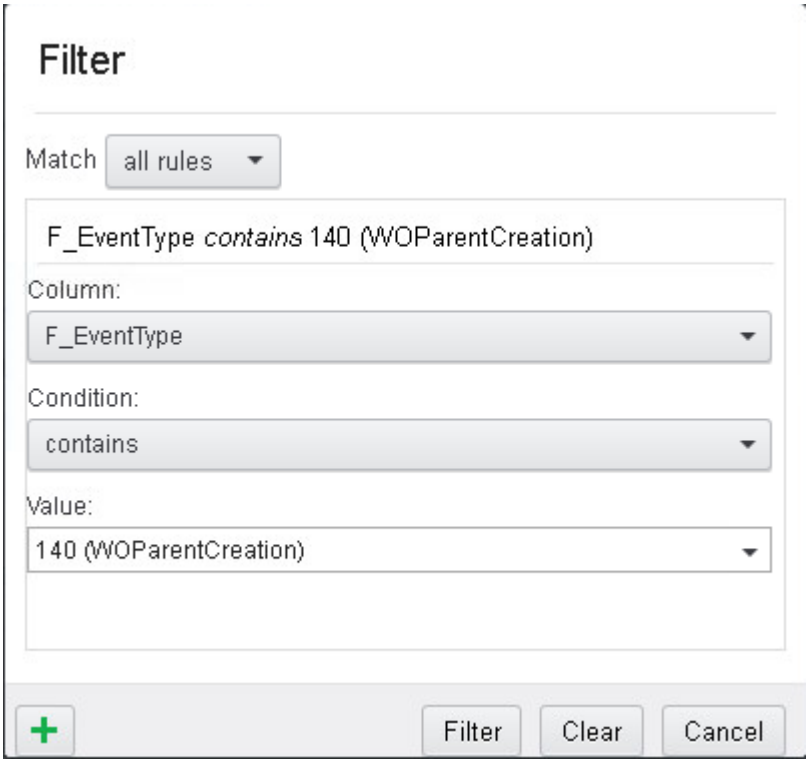
2. Click Count Matches.
3. Click Run.
4. Review all the columns, paying special attention to the F_Duration column.
5. Close the Search Results tab.
6. Select <none> from the first column menu to clear the search criteria.

Procedure 3: Filter event log entries

You can use filters to focus on events that you are interested in. For example, you want to find the workflow start events, you can filter for only the start event category. You can also combine filters by using Boolean operators.

1. Click Run to rerun the search without any filter criteria.
2. Click the Define Filter button.

3. From the Column menu, select *F_EventType.*
4. From the Condition column, select *equal*.
5. From the Value column, select *140 (WOParentCreation).*



6. Click Filter.
7. Observe the filtered events.
8. Combine filters to see events that are related to employee responses:
   a. Click the Filter icon.
   b. From the Match menu, select Any rule.
   c. Enter the following rules. Click the Plus sign (+) button to add a second rule.

Column	Condition	Value
F_Response	contains	Info OK
F_Response	contains	More Info Needed

9. Click Filter.
10. Review the results. If you see zero results, ensure that the filter Match column shows Any rule.
11. Close the Search Results tab.
12. Leave Administration Console open for the next exercise.

View event logs by using Process Administrator

Introduction

In this activity, you use Process Administrator to view existing event logs. These logs were created at the beginning of this unit when you performed the preparation activity.

Procedures

Procedure 1: Start Process Administrator

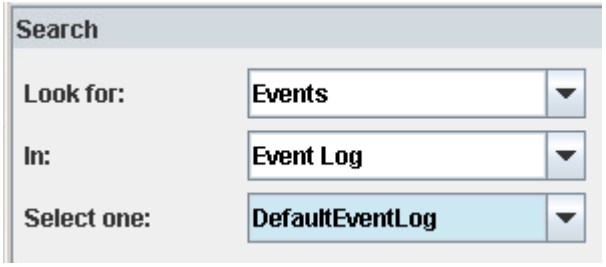
Event logs can be viewed with Process Administrator. You are logged in to Administration Console for Content Platform Engine as P8Admin. The LoanProcess object store is open.

1. Go to Administrative > Workflow System > Connection Points > P8ConnP5.
2. Right-click P8ConnP5 and select Administer Work Items.

Procedure 2: Search for event log entries

In this procedure, you search the event log for log entries.

1. Search for events:
   a. Select Events from the Look for menu.
   b. Select the DefaultEventLog from the Select one menu.



   c. Click Search Count to find out how many events are currently logged.
   d. Click OK.
   e. Click Find Now.

Procedure 3: Examine event log entries

In this procedure, you study the event log entries and explore the event log interface.

1. Scroll down the list of event log entries.

2. Look for event categories in the F_EventType column:

   140 - Workflow launched.

   100 - Trace events

   360 - End service

3. Move the F_EventType column:

   a. Select the heading of the F_EventType column.

   b. Drag the column to the left of the F_WobNum column.

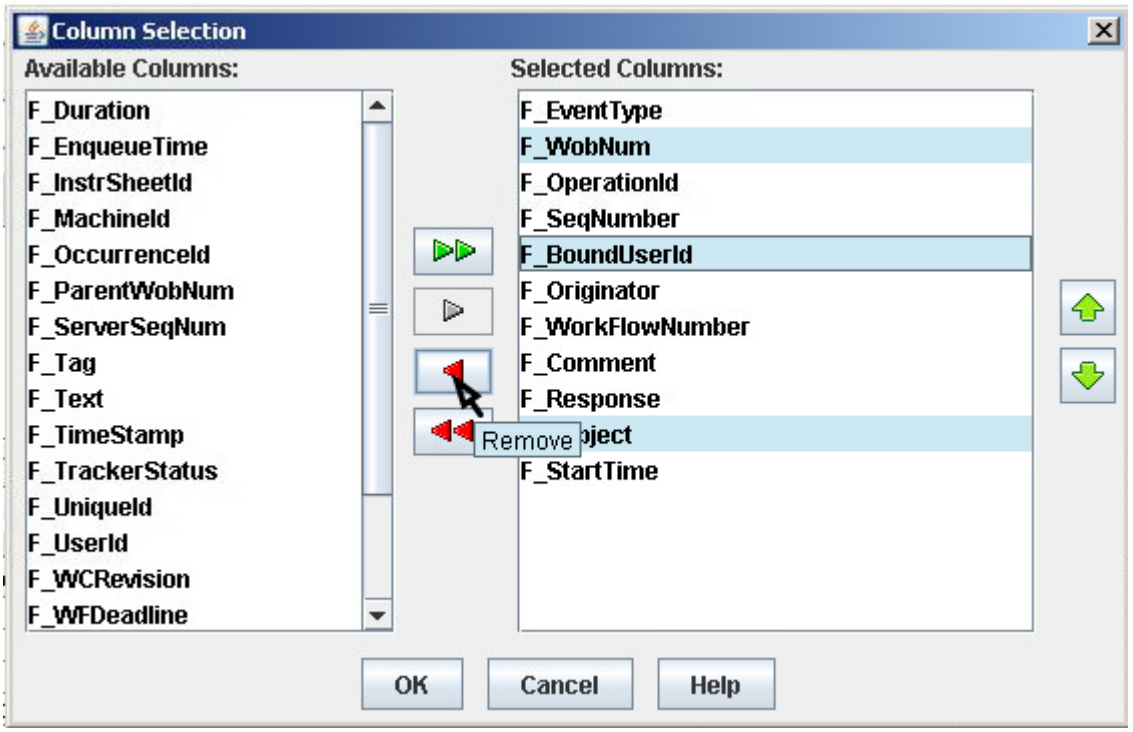
4. Hide columns:

   a. Click the Show/Hide Columns button on the far right.

   b. Multi-select the following columns (hold the CTRL key to select multiple items).

   - F_WobNum
   - F_BoundUserID
   - F_Subject

   c. Click the left-pointing arrow to move these three columns to the Available Columns list.



   d. Select the F_StartTime column.

   e. Use the Up arrow to move the StartTime column to just beneath the F_EventType column.

   f. Click OK.

Note

You rearranged the columns that are displayed in the table. If you output the search returns to a file now, the output file is formatted the way that the columns are currently shown.

Procedure 4: Search for specific events

You can search the event logs for specific events. For example, if you want to find workflows that terminated abnormally, you can search for F__EventType 370 entries.

Note

Search fields are case-sensitive.

1. Search for *More Info Needed* responses:
   a. Select F_Response from the Search Fields menu.
   b. Type `More Info Needed` in the Value field. The field is case-sensitive.
   c. Click Insert.
   d. Click Search Count.
   e. Click OK.
   f. Click Find Now.
   g. If you completed the Activity Preparation correctly, some results are displayed.
   h. Click Clear.
2. Search Count for abnormal terminations: F_EventType = 370.
3. Search Count for any exceptions: F_EventType = 170, 172, 174.

Hint

Use the OR operator to separate arguments.

Note

Zero returned records means that these errors did not occur.

4. Search Count for any end user operation abort: F_EventType = 390.

5. Click OK.
6. Optional: using the IBM Knowledge Center topic on Event logging categories, construct a search for any event that you believe might be in the event log table.
7. Close Process Administrator.
8. Log out of Administration Console.

Disable event categories

Introduction

In this exercise, you use Administration Console for Content Platform Engine to disable event categories. Disabling event categories reduces the number of event log entries, which can improve system performance.

Procedures

Procedure 1: Open the event logging options tab

Disable all event logging except those events that are required for Tracker. Consult the IBM Knowledge Center page titled Event logging categories to determine which events are required for Tracker.

1. Start Firefox.
2. Open the ACCE bookmark or type the URL in the address field:

   `http://ecmedu01/9080/acce`
3. Log on as P8admin:
   - User name: `P8Admin`
   - Password: `IBMFileNetP8`
4. Open the LoanProcess object store.
5. Go to Administrative > Workflow System > Isolated Regions.
6. Open P8Region5.
7. Open the Event Logging Options tab.

Procedure 2: Disable selective event logging options

1. In the System Messages area, clear the System message check box.
2. In the work item Messages area, clear the following check boxes:
   - Rules
   - Milestones
   - Trace Instruction
   - Termination
3. In the User-Defined Messages area, clear the following check boxes.
   - User-defined messages set 1
   - User-defined messages set 2.

4. Verify that only the following options are enabled:
   - Empty/System step completion
   - Creation
   - Exception
   - Administration message
   - Begin operation
   - End operation.

5. Click Save.
6. Click Close.
7. Leave Administration Console open for the next exercise.

Information

Workflows now generate fewer events.

Prune Events

Introduction

In this exercise, you output the event logs to a comma-separated value (CSV) formatted text file; then you use PELog to prune the event log.

Procedures

Procedure 1: Export the event logs

You want the logs for archiving purposes, but you do not need them in the database, where they can slow the system. Export event logs before you prune the event log records.

Note

In the previous procedure, you changed the default layout of the columns. For archiving purposes, it is best to maintain consistency between export files. Stopping and restarting Process Administrator resets the default column configuration.

1. Start Process Administrator from the P8ConnP5 connection point.
   a. Right-Click LoanProcess > Administrative > Workflow System > Connection Points > P8ConnP5.
   b. Select Administer Work Items.
2. Search for all events in the DefaultEventLog table.
3. Click File > Export to a File.
4. Save the file as C:\temp\[current date]Event Logs.
5. Accept the default comma delimiter.
6. Click OK.
7. Close Process Administrator.

8. Sign out of Administration Console for Content Platform Engine.
9. Close Firefox.

Procedure 2: Inspect the exported event log file

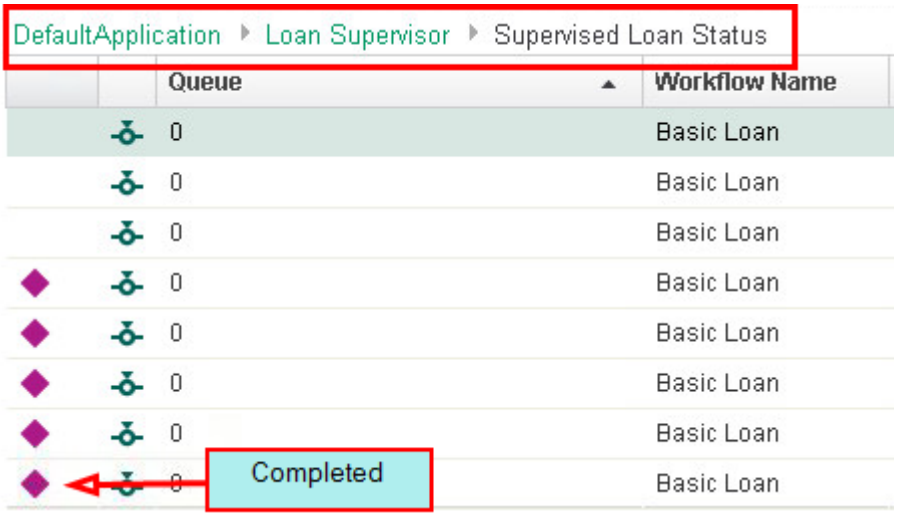
Briefly inspect the event log file.

1. Use Windows Explorer to go to C:\temp.
2. Use Notepad++ to open the event log file that you created in the previous procedure.
3. Close Notepad P++.

Procedure 3: Complete some workflows

1. Start Mozilla Firefox.
2. Open the Workflow Author Desktop bookmark.

   URL: http://ecmedu01:9080/navigator/?desktop=WorkflowAuthordesktop
3. Log on to IBM Content Navigator Workflow Author Desktop as p8admin.
   - User Name: `p8admin`
   - Password: `IBMFileNetP8`
4. Open the Work View.
5. Complete the work items in the Loan Processor queue:
   a. Open Loan Processor > Loan Processor Inbasket.
   b. Open a work item.
   c. Select the Complete response.
   d. Complete all work items in this queue.
6. Open the Loan Supervisor > Supervised Loan Status queue.
7. Verify that some workflows are completed and others are not.



8. Log out of Workflow Author Desktop.

Procedure 4: Search count of log entries

You are going to count the number of log entries before you begin deleting them so that you can find out how many entries were deleted. Firefox is open.

1. Open Administration Console for Content Platform Engine.
   a. Click the ACCE bookmark.
   b. Sign in using these credentials:
      -P8Admin
      -IBMFileNetP8
2. Open the LoanProcess object store.
3. Search for the event count:
   a. Right-click Search and select New Workflow search.
   b. Set P8ConnP5 as the selected Connection point.
   c. In the Search result type field, select Events.
   d. Confirm that the Workflow structure field has changed to show Event log.
   e. In the Workflow Structure name field, select DefaultEventLog.
   f. Click Count Matches.
4. Write down this number on a sheet of paper.
5. Minimize Firefox.

Procedure 5: Use PELog to prune terminated log entries

In this procedure, you use PELog to prune terminated log entries. Your student system does not have any old log entries, so to see the effects, you must use -Terminated 0 flag.

1. Open a command prompt.
   a. Click the Start menu.
   b. Click the Command Prompt if you see it.
   c. Otherwise, click Run and then type cmd in the Run field and then press Enter.
2. Enter the following commands:

```
cd C:\Program Files\IBM\FileNet\ContentEngine\tools\PE
pelog P8ConnP5 -Terminated 0 -Y P8Admin+IBMFileNetP8
```

3. Wait for PELog to complete.
4. Minimize the command prompt window.

Procedure 6: Verify that the event logs are deleted

When you used PELog with the -Terminated flag, all events and Tracker items from completed workflows were deleted. You are now going to find out how many events were deleted. Firefox is still open, but minimized. Administration Console for Content Platform Engine is open to the New Workflow Search page.

1. Restore Firefox.
2. Click Count Matches.
3. Confirm that there are fewer matches than before you ran PELog.
4. Subtract the new number of matches from the original number to get the number of deleted events.
5. Minimize Firefox.

Procedure 7: Run PELog with the -TimeOnly flag

The -TimeOnly option deletes events and Tracker items regardless of whether they are completed or not. Your student system does not have any old log entries, so you are going to use the -TimeOnly 0 flag, which deletes all log entries.

Important

In a production system, you rarely want to prune all log entries. In production, configure PELog to prune events older than a specified interval, such as 90 days.

Hint

In the command prompt, you can press the up-arrow to repeat the last command. You can then edit the command to change the flag.

1. Restore the command prompt window.
2. Enter the following command:

   ```
   pelog P8ConnP5 -TimeOnly 0 -Y P8Admin+IBMFileNetP8
   ```

3. When the operation is complete, close the command prompt window.

Procedure 8: Verify that the remaining event logs are deleted

In this procedure, you confirm that the logs are deleted. Firefox is still open, but minimized. Administration Console for Content Platform Engine is open to the New Workflow Search page.

1. Restore Firefox.
2. Click Count Matches.

3. Confirm that there are zero matches.
4. Log out of Administration Console.
5. Close Firefox.

Troubleshooting

If the Count Matches shows the same number of events as before, the information is still cached in the browser memory.

1. Log out of Administration Console.
2. Close Firefox.
3. Restart Firefox.
4. Rerun the event log search in Administration Console.

Lesson 3.6. Troubleshoot the system

Overview

Why is this lesson important to you?

You are administering a workflow system. If there is a system failure or a performance problem, you must be able to use the appropriate tools to collect more information about the problem.

Activities

- Enable fnlog4j, on page 3-57
- Enable trace logging, on page 3-61
- Enable Tracing with vwtool, on page 3-65

User accounts

Type	User ID	Password
Workflow system administrator	p8admin	IBMFileNetP8
Windows logon	Administrator	passw0rd

Note

Passwords are always case-sensitive. User names are not case-sensitive. Many user names on the student system use only lowercase letters.

Troubleshoot the workflow system checkpoint

Introduction

In this lesson, you learned about gathering information for troubleshooting For each scenario, identify the tool that you can use to accomplish a task.

For each question, indicate the correct answer or the best answer.

1. A user is unable to launch Process Designer. Select a logging method to collect information.
   a. Fnlog4
   b. Vwtool
   c. CE logs
   d. PE logs
2. A user is unable to see a work queue. Which trace options do you enable to troubleshoot the issue?
   a. Database access
   b. Stored Procedure Calls
   c. Inst. Sheet Interpreter
   d. Security calls

Enable fnlog4j

Introduction

In this exercise, you enable fnlo4j logging to troubleshoot Java applet-related issues.

Scenario

When a user tries to start Process Designer, a logon window opens. Although the user has proper authorization to use Process Designer, the Process Designer does not open.

Solution Overview

The problem is related to the Java applets, so you must enable fnlog4j to gather information that is related to this problem. You must find and edit the fnlog4j.properties file. You must then copy the file to the appropriate directory, then edit the file to start logging. After the logs have been generated, review the information. After you collect the information, disable logging.

In this lab environment, the client machine is the server. In a typical environment, you must also add the fnlog4j.properties file to the client system browser JRE library directory.

Procedures

Procedure 1: Copy the fnlog4j.properties file

1. Using Windows Explorer, go to the following location:
   - C:\Program Files\IBM\FileNet\ContentEngine\tools\PE\samples
2. Find the **fnlog4j.properties.sample** file.
3. Copy this file to the following location:
   - C:\Program Files\IBM\WebSphere\AppServer\java\jre\lib
4. Rename the file by deleting the .sample extension.

Procedure 2: Enable fnlog4j log options

By default, logging options are disabled in this file. To enable logging options, you edit the file by using a text editor and delete the "#" characters at the start of each option that you want to enable.

1. Right-click fnlog4j.properties.
2. Click Edit with Notepad++.
3. Optional: read the comments at the top of the file.
4. Enable the root logger:
   a. Locate the following lines:

```
#log4j.debug=true
#log4j.rootLogger=ERROR, CON, TXT
```

   b. Change the two preceding lines to the following lines:

```
log4j.debug=true
log4j.rootLogger=DEBUG, CON, TXT
```

Note

The two changes were to remove the pound sign "#" character from both lines, and to change ERROR to DEBUG.

Important

Using the rootLogger enables all log4j logs. This option burdens the system with creating verbose logs. After you reproduce the error, disable logging.

5. Configure the output location:
   a. Locate the following line:

```
log4j.appender.TXT.File=C:/tmp/pe.txt
```

   b. Change this line to the following line:

```
log4j.appender.TXT.File=C:/Temp/pe.txt
```

6. Save the file.
7. Close Notepad++.

Procedure 3: Create log activity

In this procedure, you generate some log activity by starting some Java applets.

1. Start Mozilla Firefox.

2. Open the Workflow Author Desktop bookmark.

   URL: http://ecmedu01:9080/navigator/?desktop=WorkflowAuthordesktop

3. Log on to IBM Content Navigator Workflow Author Desktop as p8admin.
   - User Name: `p8admin`
   - Password: `IBMFileNetP8`

4. Start Process Designer:
   a. Right-click the LoanProcess object store.
   b. Click Open Process Designer.
   c. When Process Designer is running, close Process Designer.

5. Log out of Workflow Author Desktop.
6. Close Firefox.

Procedure 4: Review the log file

1. Use Windows Explorer to go to C:\temp.
2. Edit pe.txt with Notepad++ to review the log entries.

Troubleshooting

If there is no pe.txt file in C:\Temp, check the following issues:

- The fnlog4j.properties file is in the correct location.
- The file extension was removed.
- The appender location was specified as C:/Temp.

If the file exists, but it is empty, check the following issues:

- The logger and appender statements are uncommented.
- The DEBUG setting was used for the rootlogger.

Procedure 5: Disable fnlog4j

In this procedure, you stop the logging. You delete the pe.txt log file to confirm that logging stopped.

1. Use Windows Explorer to go to the following location:
   - C:\Program Files\IBM\WebSphere\AppServer\java\jre\lib
2. Rename the fnlog4j.properties file to fnlog4j.properties.off.
3. Stop WebSphere.
   a. Open the WebSphere Admin folder on the desktop.
   b. Double-click Stop the Server 1.bat.

c. Wait for the batch file to complete.

4. Delete c:\temp\pe.txt.
5. Restart WebSphere:
   a. Double-click Start Server 1.bat.
   b. Wait for the batch file to complete.

Enable trace logging

Introduction

In this exercise, you use vwtool to configure trace logging options. You can set tracing options directly by using vwtool, or you can set tracing options by using the traceOptions file, which starts tracing when the system restarts. In this exercise, you practice both methods.

Procedures

Procedure 1: Set tracing options and view trace files

In this procedure, you configure the traceOptions file and activate tracing by using the vwtool `trace` command.

1. Move a copy of the traceOptions.sample file to the virtual server folder.
   a. Use Windows Explorer to go to the following location:

      C:\Program Files\IBM\FileNet\ContentEngine\tools\PE\samples
   b. Copy the traceOptions.sample file to the following location:

      C:\Program Files\IBM\WebSphere\AppServer\profiles\AppSrv01
   c. Delete the .sample extension from the file name.
2. Edit the traceOptions file to configure the wanted trace options.
   a. Edit traceOptions with Notepad++.
   b. Verify that the TRACE_BY_LOGFILE line does not start with a # character
   c. Ensure that the TRACE_BY_CONSOLE line does not start with a # character.
   d. Activate the following trace options by removing the preceding # character.
      - TRACE_DBI_MSGS
      - TRACE_DBI_OUT
      - TRACE_DBI_TRAN
   e. Save and close the file.
3. Start vwtool. On the desktop, double-click vwtool P8ConnP5.bat.

4. Type `trace`.

Note

You can start tracing now by restarting Process Services, but you can use the trace command to avoid a restart.

5. At each prompt, enter the appropriate command:

At this prompt	Enter this Command
Perform on all servers/single server (CR=a, s):	s
Enter server to trace (CR=default to the first server):	CR
Change tracing options?	CR
Turn off all tracing?	CR
Extract new options from the traceOptions file?	y

6. After vwtool displays the new trace status on server ECMEDU01/server, verify that double asterisks (**) precede the following trace options:
   - **TRACE_DBI_MSGS
   - **TRACE_DBI_OUT
   - **TRACE_DBI_TRAN

```
Trace options currently SET are marked with a double-asterisk (**).
Current trace settings for server ECMEDU01/server1:

    1.   Instr. Sheet Interpreter          27.   Stored Procedure Calls
    2.   Log Manager                       28.   Expression Parsing
    3. **Database access                   29.   RDB Objects
    4. **Database outputs                  30.   Application Space
    5. **Database transactions             31.   RDB Time
    6.   Object Svc RPCs                   32.   Archiver
    7.   Component Manager                 33.   Vwtime
    8.   Email notification                34.   Heartbeat
    9.   Exceptions                        35.   Case Analyzer Publishing
   10.   Security calls                    36.   Case Analyzer Collection
   11.   Workflow termination              37.   Case Analyzer Database
   12.   Transfer                          38.   Case Analyzer RPC
   13.   J2EE                              39.   Case Analyzer Upgrade
   14.   Step Processor                    40.   Case Analyzer OLAP
   15.   Rules                             41.   Case History Publishing
   16.   Envcache access                   42.   Case History Collect
   17.   XML Parser                        43.   Case History Database
   18.   Web Services                      44.   Case History RPC
   19.   API RPC                           45.   Case History Performance
   20.   API RPC Input                     46.   Case History Upgrade
   21.   API RPC Output                    47.   Event Exporter
   22.   API RPC Timing                    48.   Case Synchronization
   23.   API RPC Stack                     49.   Dynamic Task
   24.   Asynchronous RPC                  50.   Business Object Update
   25.   Asynchronous tools                51.   Debug
   26.   Farming
```

7. Minimize the vwtool window.

Procedure 2: View trace logs

1. Locate the trace log file:
   a. Use Windows Explorer to go to the following location:

C:\Program Files\IBM\WebSphere\AppServer\profiles\AppSrv01\FileNet\server1

2. Edit the pesvr_trace.log file with Notepad++.
3. Confirm that the time stamps for each line are consistent with the time that you started tracing.
4. Confirm that the messages are all related to database operations. For example:

   `DBI_OUT, DbResult get wasNull = false`

5. Close Notepad++ when you are finished reviewing the files.

Procedure 3: Observe the growth of the trace log file

In Windows Explorer, the server1 folder is still open on your desktop.

1. Note the size of the pesvr_trace.log file.
2. Press F5 to refresh the folder.
3. Note the size of the pesvr_trace.log file again.

Information

By default, trace log files are set to grow to 200 MB and to generate up to three files before rolling over. You can change appender settings in the traceOptions file.

Important

Trace logging can slow system performance. The more trace logs that are enabled, the greater the effect on performance.

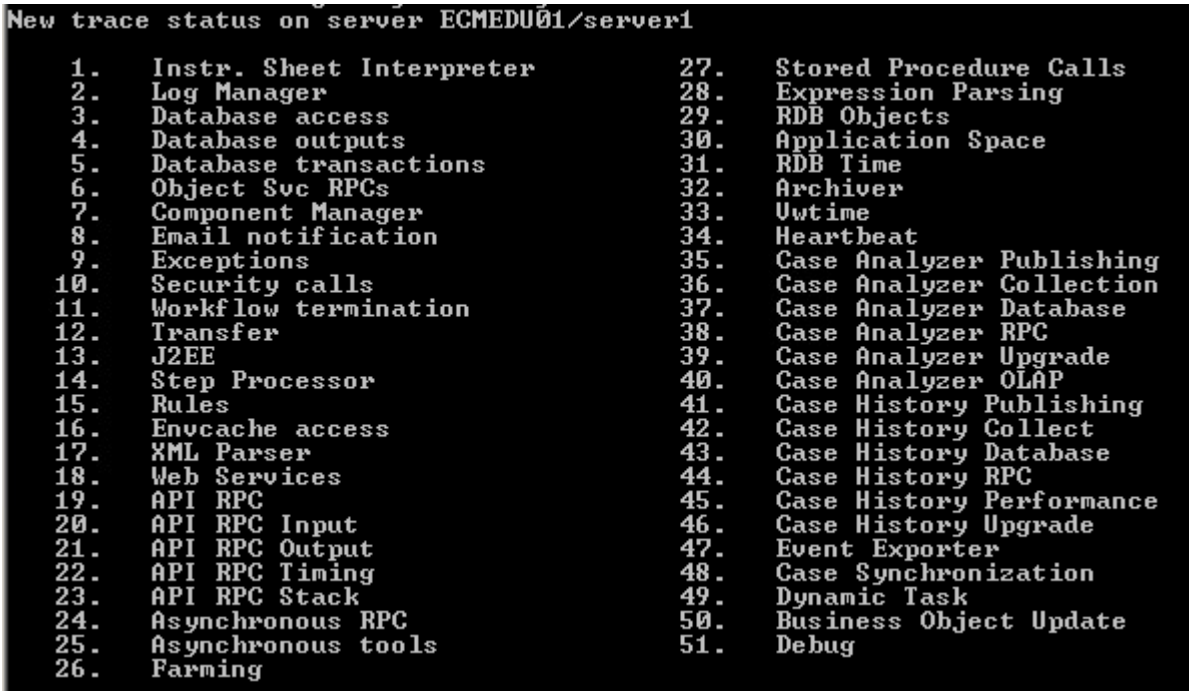
Procedure 4: Stop tracing

After you use tracing to gather targeted data, you must stop trace logging. In this procedure, you stop trace logging by removing the traceOptions file and rerunning the trace command. The vwtool window is still open from the previous procedures.

1. In vwtool, rerun the `trace` command.
2. Enter the following commands at each prompt.

At this prompt	Enter this Command
Perform on all servers/single server (CR=a, s):	s
Enter server to trace (CR=default to the first server):	CR
Change tracing options?	CR
Turn off all tracing?	y

3. Verify that the tracing status shows no trace options with double asterisks (**).



4. Type `exit` to close vwtool.
5. Close the command window.

Procedure 5: Optional: verify that tracing is stopped

You can verify that vwtool stopped tracing by observing that the trace log file has no new entries.

1. Use Windows Explorer to go to the following location:

   C:\Program Files\IBM\WebSphere\AppServer\profiles\AppSrv01\FileNet\server1

2. Edit the pesvr_trace.log file with Notepad++
3. Scroll to the bottom.
4. Note the time stamp on the last entry.
5. Close Notepad++.
6. Wait a minute.
7. Reopen the file with Notepad++.
8. Confirm that the last entry did not change.

Procedure 6: Delete the traceOptions file

Delete the traceOptions file to prevent the resumption of tracing when the system restarts.

1. Use Windows Explorer to go to the location of the traceOptions file:

   C:\Program Files\IBM\WebSphere\AppServer\profiles\AppSrv01

2. Delete the traceOptions file.

Enable Tracing with vwtool

Introduction

You can use vwtool to start and stop trace logging without using the traceOptions file. Without the traceOptions file, tracing does not automatically start again if the process services are restarted.

Procedures

Procedure 1: Select tracing options in vwtool

1. On the desktop, double-click vwtool P8ConnP5.bat.
2. Type `trace`.
3. At each prompt, enter the corresponding command:

At this prompt	Enter this Command
Perform on all servers/single server (CR=a, s):	s
Enter server to trace (CR=default to the first server):	CR
Change tracing options?	CR
Turn off all tracing?	CR
Extract new options from the traceOptions file?	CR
Enter numbers of trace options to toggle. Multiple numbers may be entered separated by blanks.	3 4 5

4. Confirm that the following trace options are active:
    - **TRACE_DBI_MSGS
    - **TRACE_DBI_OUT
    - **TRACE_DBI_TRAN

Procedure 2: Disable trace-logging

Disable trace-logging with vwtool. Vwtool is still open.

1. Type `trace`.
2. At each prompt, enter the corresponding command:

At this prompt	Enter this Command
Perform on all servers/single server (CR=a, s):	s
Enter server to trace (CR=default to the first server):	CR
Change tracing options?	CR
Turn off all tracing?	y

3. Confirm that all tracing options are disabled.
4. Exit vwtool.
5. Close the command window.

Unit 4. Manage Work in Progress

Unit overview

Lessons

Requirements

The activities in this unit assume that you have access to the student system configured for these activities.

System start

Your student system should be started. If it is not started, then perform the startup steps in Appendix A, "Start and Stop System Components".

Lesson 4.1. Search for work

Overview

Why is this lesson important?

A workflow participant tries to locate a work item in a public queue, but cannot find it. The user calls you, the workflow administrator, for help. You need to search for work in progress.

ABC Bank has received a large number of loan applications. As the workflow administrator, you need to search for workflows and work items with certain loan IDs in order to resolve issues with these items.

Activities

User accounts

	Type	User ID	Password
	Operating system	administrator	passw0rd
	Workflow administrator	p8admin	IBMFileNetP8
	Workflow users	mary matt	filenet

Note

Passwords are always case-sensitive.

Note

Unless otherwise noted, use Firefox to access student system URLs.

Activity Preparation

Important

This activity is required to proceed with the lesson exercises.

Introduction

In order to search for work, some workflows need to be launched to create work in the isolated region. In this activity, you transfer and then launch a workflow multiple times and partially process some work items to create work in progress. This activity creates that data that you use for the rest of this unit.

Procedures

Procedure 1: Transfer a workflow

Use the following procedure to transfer a workflow definition and launch several workflows so that you have some data to work with in the rest of the activities.

1. Open Firefox.
2. Use the bookmark to open Workflow Author desktop.
3. Log on as the workflow system administrator:
   - User name: `p8admin`
   - Password: `IBMFileNetP8`
4. Open Process Designer.
   a. Right-click the LoanProcess object store.
   b. Select Open Process Designer.
5. Transfer the workflow to be used:
   a. Click File > Open and locate and open the following file:

`C:\Labs\Case Foundation 5.2.1 Administration\Manage Work in Progress\Manage Work in Progress Workflow.pep`

b. Click File > Transfer Workflow Collection.

Add the workflow to the LoanProcess > Workflows object store folder with the document title Manage Work in Progress Workflow.

c. Click Close in the message window.

d. Click File > Exit and select *Cancel the checkout*.

e. Click OK.

Procedure 2: Launch workflow instances

In this procedure, you create eight instances of the workflow that are going to be used throughout this unit. You are logged on to Workflow Author Desktop as p8admin, viewing the LoanProcess object store.

Note

The property values are important, so take care to type them exactly as shown. The values are also case-sensitive.

1. Open the Workflows folder.
2. Launch eight instances of Manage Work In Progress workflow using the following data table and steps.

customer_name	Interest_rate	loan_amount	loan_id	loan_term
John	4.5	100000	L001	30
Marvin	4.9	200000	L002	30
Angela	5.1	300000	L003	20
Tara	5.2	350000	L004	30
Anita	5.5	430000	L005	20
Rupert	4.5	120000	L006	15
Ava	4.6	140000	L007	15
Mia	5.1	230000	L008	30

a. Right-click Manage Work in Progress Workflow.

b. Click Workflow > Launch Workflow.

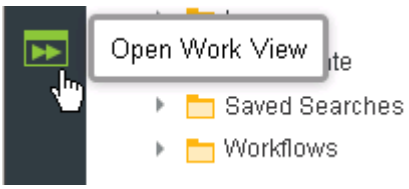
c. Enter the values from the row in the Workflow Data table.

d. Click Launch Workflow.

Procedure 3: Process workflows

In this procedure, you process the first five workflows so that they are in different queues and states.You are logged on to Workflow Author Desktop as p8admin.

1. Open the Work view.



2. Open Loan Officer > Loan Officer Inbasket. Verify that you see the eight work items listed.
3. Open each of the first five work items and process them according to the following table.

customer_name	loan_id	Response for the work item
John	L001	Approved
Marvin	L002	Approved
Angela	L003	Reject
Tara	L004	Send to Management
Anita	L005	Send to Management

Note

When you complete a work item, it leaves the queue, so you always select the top work item in the queue.

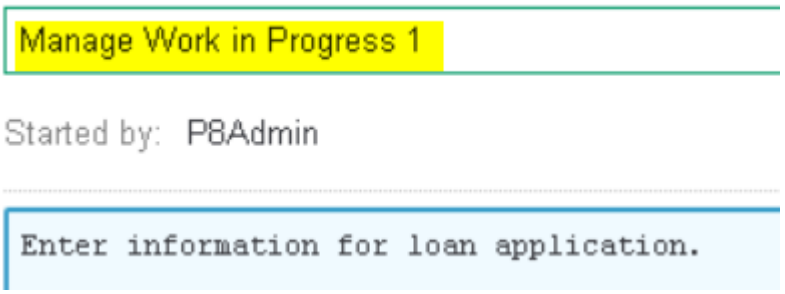
4. Confirm that at least three work items remain in the LoanOfficer inbasket.

Procedure 4: Launch a workflow with a different subject field

In this procedure, you launch a workflow with a different subject field. You are still logged on to Workflow Author Desktop as p8admin. You are in the Work View.

1. Open the Browse view.
2. Launch another instance of the Manage Work In Progress workflow.

3. In the Submit Loan Application window, do the following.
   a. Type `Manage Work in Progress 1` in the Subject field.



   b. Fill in the data fields as shown in the following table.

customer_name	Interest_rate	loan_amount	loan_id	loan_term
Jim	4.5	100000	L009	30

   c. Click Launch Workflow.

Procedure 5: Launch a workflow with multiple participants

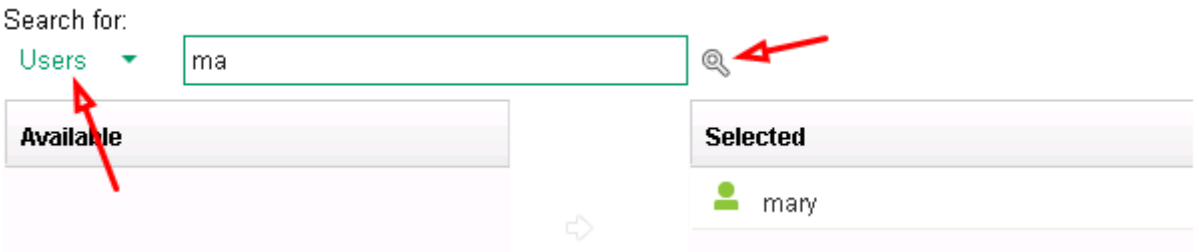
In this procedure, you launch a workflow with multiple participants.

1. Launch another instance of the Manage Work In Progress workflow.
2. In the Submit Loan Application window, change the subject field to `Manage Work in Progress-Multiple Participants.`
3. Fill in the data fields as shown in the following table, but do **not** launch the workflow yet.

customer_name	Interest_rate	loan_amount	loan_id	loan_term
Rita	4.9	200000	L010	30

4. Change the LoanManagers field to have more than one participant.
   a. Click the LoanManagers link.

   b. Verify that the option to search for users is selected.



   c. Type `ma` in the *Starts with* field.
   d. Click the Search button.

e. Select `matt` from the Available Choices list.

f. Click *Add to selection*.

g. Click OK.

h. In the Submit Loan Application window, verify that the LoanManagers field has `mary, matt` as the value.

5. Click Launch Workflow.
6. Process the Verify Information task.
   a. Open the Work view.
   b. Open Loan Officer > Loan Officer Inbasket.
   c. Open the work item with the name *Manage Work in Progress-Multiple Participants*.
   d. On the Verify Information window, select *Send to Management* from the Responses list.
7. Log out of Workflow Author Desktop.

Procedure 6: Process a task as a loan manager

1. Log on to Workflow Author Desktop as a loan manager:
   - User name: `mary`
   - Password: `filenet`
2. Open the Work View.
3. Open the Inbox. The inbox contains three work items.
4. Process the first item with the subject *Manage Work in Progress*.
   a. Open the first *Manage Work in Progress* work item.
   b. Click Accept Loan Application.
5. Log out of Workflow Author Desktop.

Procedure 7: Complete all steps for one workflow

1. Log on to Workflow Author Desktop as p8admin.
   - User name: `p8admin`
   - Password: `IBMFileNetP8`
2. Open the Work View.
3. Open Loan Supervisor > Inbox.
4. Open the work item with the step name of Loan Rejected.
5. Verify that the value for the loan_id is L003 and that the customer_name is Angela.
6. Click Complete to finish processing this workflow.
7. Log out of Work Author Desktop.

Note

You have launched 10 workflows and processed some work items so that you have workflows in different stages of completion. You search for these workflows and work items in the following activities.

Search for work

Introduction

This exercise gives you the opportunity to practice searching for work using the Process Administrator application.

Procedures

Procedure 1: Open Process Administrator

1. Log on to Administration Console for Content Platform Engine as a workflow system administrator.
   a. In Firefox, open the ACCE bookmark.
   b. Log on as p8admin
      - User name: `p8admin`
      - Password: `IBMFileNetP8`
2. Open the LoanProcess object store.
3. Expand Administrative > Workflow System > Connection Points.
4. Right-click P8ConnP5 and then click Administer Work items. Process Administrator opens.

Procedure 2: Search for workflows

In this procedure, you search for the workflows that you launched in the Activities preparation activity. Process Administrator is open.

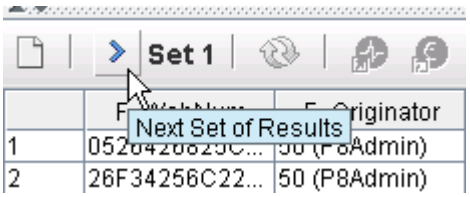
Note

Because LoanRoster has only a few workflows, you can easily look through the results. In a production environment, a similar search might return thousands of workflows. You typically use search criteria to narrow the search.

1. In the Search window, set up the following search criteria.
   a. Select Workflows in the *Look for* list.
   b. Select Workflow Roster from the *In* list.
   c. Select LoanRoster in the *Select one* list.
   d. Select the *Read only (exposed fields)* option for the Search mode.
   e. Type 5 in the *Max returned per set* field.
2. See how many workflows are in LoanRoster before you run the search.
   a. Click Search Count and verify that at least nine records match the search criteria, because you launched 10 workflows and completed one.
   b. Click OK to close the Search Count window.
3. Examine the search results.
   a. Click Find Now.
   b. Verify that the workflows that you launched in the Activities preparation activity for this lesson are returned by the search.

      Tip: You can expand the F_Subject column width by sliding the column separators in the column heading area.

      Because you have completed all the steps for the workflow with loan_id L003, it does not exist in the roster and is not returned by the search.
   c. Click the *Next Set of Results* button to view the next set of five search results.



   d. Notice that only eight columns for data fields, including F_Subject, customer_name, and loan_id, are displayed.
4. Leave Process Administrator open for the next procedure.

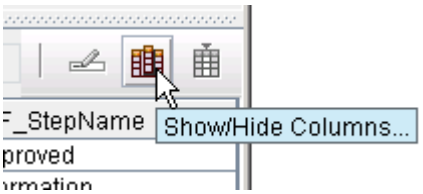
Procedure 3: Configure how search results are presented

Use the following instructions to customize the presentation of the current results set and make it easier to locate specific items.

1. In Process Administrator, set up the following search criteria.

Item	Value
Look for	Workflows
In	Workflow roster
Select one	LoanRoster
Search Mode	Edit (all fields)
Max returned rows per set	20

2. Run the search and view the results.
   a. Click Find Now to run the search.
   b. In the search results pane, scroll to the right as necessary and verify that, because the Edit search mode was used, **all** of the workflow data fields are displayed.
3. Customize the way that the results are displayed for this search.
   a. Click the Show/Hide Columns button in the results pane toolbar to open the Column Selection window.



   b. Move all of the property names from the Selected Columns list to the Available Columns list by clicking the red, double left arrow button between the two lists.
   c. Configure the Selected Columns list to include only the following items and arrange the items in the order listed.
      - customer_name
      - loan_amount
      - Interest_rate
      - loan_term
      - F_StepName

Note

You can use the Shift and Ctrl keys to select multiple items in the two lists. Use the right and left arrow buttons between the lists to move items from one list to the other. Select one or more items in the Selected Columns list and use the up and down arrow buttons to put the items in the desired order.

d. After the data fields are listed in the correct order, click OK to close the Column Selection window.

4. Examine the search results and verify that only the selected columns are displayed and are arranged in the order specified in step 3.
5. Leave Process Administrator open for the next procedure.

Note

The method of customizing the search results performed in this procedure applies only to the current search. The default set of columns is displayed the next time the Find Now button is used.

Procedure 4: Search for work items in a queue

In this procedure, you search for work items waiting to be processed in the LoanOfficer queue.

1. In Process Administrator, set up the following search criteria.

Item	Value
Look for	Work items
In	Work Queue
Select one	LoanOfficer
Search Mode	Read only
Max returned rows per set	20

2. Click Search Count to see how many work items are in the LoanOfficer queue before you perform the search.
3. Run the search and view the results.
   a. Click Find Now to run the search.
   b. You did not process the workflows with loan_id values of L006 through L009 after launching the workflows in the Activities preparation activity. Verify that these are waiting in the LoanOfficer queue.
4. Leave Process Administrator open for the next procedure.

Procedure 5: Search for workflows using exposed field values

1. In Process Administrator, set up the following search conditions.

Item	Value
Look for	Workflows
In	Workflow Roster
Select one	LoanRoster
Search mode	Read only

2. Set up a search expression on the Criteria tab.
   a. Verify that the *Use index* field is set to <default>.

b. In the Search Fields list, select *F_Subject (String)*.

c. In the Operator field, select *is equal*.

d. In the Value field, type `Manage Work in Progress`.

Tip: The search value is case-sensitive.

e. Click Insert and confirm that the expression is added to the search condition field.

3. Run the search and review the results.

a. Click Find Now to display the search results.

b. Verify that all the items returned in the search results have *Manage Work in Progress* as the value for the F_Subject field.

c. Verify that the two workflows that you launched that had different subjects are not listed.

4. Add a second search condition in the search pane to further refine the search.

a. Verify that the expression created in step 3 is still visible in the search condition field.

b. On the toolbar above the search condition field, click AND.

c. Verify that the word *and* is added after the first expression in the search condition field.

d. In the Search Fields list, select *customer_name (String)*.

e. In the Operator field, select *like*.

f. In the Value field, type `A%`.

Tip: The value is case-sensitive.

g. Click Insert and verify that the new expression matches the following.

```
F_Subject = 'Manage Work in Progress' and customer_name like 'A%'
```

5. Run the new search and review the results.

a. Click Find Now to display the search results.

b. Verify that each of the items returned in the search results has *Manage Work in Progress* as the value for the F_Subject field, and that all of the customer_name values start with the letter “A”.

c. Verify that fewer search results are returned from the second search than the first because of the extra search condition.

Procedure 6: Use an index in a search

On your student system, an index exists in the LoanRoster so that you can more efficiently perform a search using the loan_id property. In this procedure, you use the index value to narrow the search results and also to sort the results based on that index.

1. On the Criteria tab of Process Administrator, click Clear to remove the search expression from the previous procedure.

2. Set up the following search conditions.

Item	Value
Look for	Workflows
In	Workflow Roster
Select one	LoanRoster
Search mode	Read only (exposed fields)
Criteria tab	
Search Fields	F_Subject (String)
Operator	is equal
Value	Manage Work in Progress

1. Run the search and examine the results.
   a. Click Find Now to display the search results.
   b. Verify that there are at least seven items in the search results, with loan_id values ranging from L001 to L008.
   c. Look at the loan_id column and verify that the search results are **not** listed in order based on the loan_id property values.

Important

The workflow for loan_id L003 does not exist in the roster because you completed all the steps for it.

2. Add an index condition to the existing search.
   a. Select *LoanID (loan_id + F_WobNum)* in the *Use index* list.
   b. Click Advanced to open the *Specify index values* window.
   c. Click the cell for the Min row in the loan_id column and type `L001` for the value.
   d. Click the cell for the Max row in the loan_id column and type `L005` for the value.
   e. Click OK to close the *Specify index values* window.
3. Run the search and examine the results.
   a. Click Find Now to display the search results.
   b. Verify that only workflows that have loan_id values from L001 to L005 are included in the results.
   c. Look at the loan_id column and verify that the search results are listed in order based on the loan_id property values.

Procedure 7: Search for work by date and time

Use this procedure to create a search that looks for work items based on the date and time that they were created.

1. Set up the following search conditions in Process Administrator, but do **not** run the search yet.

Item	Value
Look for	Work Items
In	Work Queue
Select one	LoanOfficer
Search mode	Read only (exposed fields)

2. Add a date and time to the search criteria.
   a. Select the Criteria tab and select *F_CreateTime (Time)* from the Search Fields list.
   b. Select *is greater than or equal* from the Operator list.
   c. In the Value field, type yesterday's date and a time in the following format:

      `3-25-11 6:00 am`

   d. Click Insert. An error message for invalid date and time format is displayed.
   e. Click OK.
   f. Change the Value field to use one of the valid formats. Refer to the following excerpt from the IBM FileNet P8 Information Center topic for valid date and time formats.

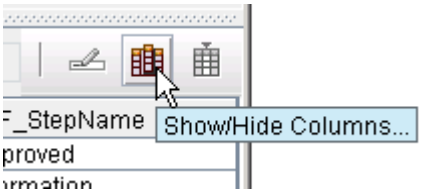
      Valid date/time formats

Format	Example
M/d/yy h:mm a	3/15/00 3:20 pm
M/d/yy h:mm:ss a	3/15/00 3:20:35 pm
EEEE, MMM d, yyy h:mm:ss a z	Thursday, June 25, 2000 3:25:33 am PDT
MMM d, yyyy h:mm:ss a	June 25, 2000 3:25:33 am
MMMM d, yyyy h:mm:ss a z	June 25, 2000 3:25:33 pm PDT
MMMM d, yyy h:mm a	June 25, 2000 3:25 am
MMMM d, yyy h:mm:ss a	June 25, 2000 3:25:35 am
M/d/yy h:mm:ss a z	6/25/00 3:33:25 am PDT

   g. Click Insert.
   h. Notice that the date and time is converted to a system-generated number in the search condition field after you successfully insert the date condition. The system generated number is the number of seconds from midnight of January 1, 1970.

3. Run the search and examine the results:
   a. Click Find Now.

b. Use the Show/Hide columns button to select the columns to view.



Show/hide columns	
Selected Columns (Arrange in the order specified.)	loan_id customer_name loan_amount F_CreateTime

c. Verify that the results contain only items that match the date criteria.

Procedure 8: Search for work assigned to a user

Use this procedure to determine what work items are in the user mary's user queue, and to open one of the items in Process Tracker.

1. Clear any existing search criteria, and then set up the following search conditions in Process Administrator, but do **not** run the search yet.

Item	Value
Look for	Work Items
In	User Queue
Select one	Inbox(0)
Search mode	Edit (all fields)
Criteria tab	
Search Fields	F_Subject (String)
Operator	is equal
Value	Manage Work in Progress (The value is case-sensitive.)

2. Limit the search to the inbox of the user mary.
   a. On the Users tab, click inside the *Starts with* field, type `ma`, and then click the Search button  .
   b. Select the user mary in the Available Users pane.
   c. Click the single right arrow between the two panes and then verify that the user mary is listed in the *Limit search to users* pane.
3. Run the search and examine the results.
   a. Click Find Now to display the search results.
4. Configure the way the search results are presented.
   a. Click the Results Options tab.

b. Configure the Selected Columns list to include only those items in the following list. Arrange the items in the order listed.

- F_QueueWPClassId
- F_Subject
- F_BoundUser

Hint

Use the Shift and Ctrl keys to select multiple items. Use the right and left arrow buttons between the two panes to move items from one pane to the other. Select one or more items in the Selected Columns pane and use the up and down arrow buttons to put the items in the order shown in this step.

5. Click Find Now.
6. Examine the results.
   a. Verify that for the item returned, the F_BoundUser column has `59 (mary)` as the value and the F_QueueWPClassId column has `2 (Inbox)` as the value.
7. View the workflow history for the work item returned by the search.
   a. Select the row for the returned work item by clicking the far left cell in the row.
   b. Click the Open Tracker button above the search results to start Process Tracker.

      Tip: The Process Tracker window might open behind other windows. If you don't see the window, look on the Windows taskbar for the Process Tracker task.
   c. Verify that the current step is ManagementApproval, as shown by the placement of the hourglass symbol next to the step icon on the process map.
   d. The unlocked symbol indicates that the work item is not locked because the user mary is not working on that item.
   e. Click the Management Approval step on the map to ensure that it is selected.
   f. On the General tab in the *View by* panel in the right pane, verify that the status is *In progress* and the Step Status shows that the user mary is listed as the participant.
   g. In the left pane, select the Workflow History tab (located near the bottom of the Process Tracker window) to display the steps that have been completed and are in progress for this work item.
   h. Explore other tabs and the information displayed in Process Tracker.
   i. Close Process Tracker and leave Process Administrator open for the next procedure.

Procedure 9: Locate multiple work items from the same workflow

In the Activities preparation, you launched a workflow with the loan_id value of L010, which had multiple participants specified at the Management Approval step.

In this procedure, you run two searches in order to verify that a single workflow with multiple participants can have multiple work items at the same step.

1. Set up the following search conditions in Process Administrator.

Item	Value
Look for	Workflows
In	Workflow Roster
Select one	LoanRoster
Search mode	Edit (all fields)
Criteria tab	
Search Fields	loan_id (String)
Operator	is equal
Value	L010
Show/Hide columns	
Selected Columns	loan_id F_Subject F_WobNum F_WorkFlowNumber

2. Run the search and examine the results.
   a. Click Find Now to display the search results.
   b. Verify that one workflow is returned.
3. Modify the search to look for work items.
   a. In the *Look for* field of the search, select Work Items.
   b. Set up the rest of the search as indicated in the previous table.
4. Run the search and examine the results.
   a. Click Find Now to display the search results.
   b. Verify that three work items are returned with the loan_id value of L010.
   c. Verify that each work item has a unique F_WobNum value.
   d. Confirm that all work items have the same value for F_WorkFlowNumber and that the value is the same as the F_WobNum of the root work item.

      The root work item is waiting in the Delay(0) system queue.
   e. Look at the Queue and F_BoundUser columns and verify that two of the work items are in users' inboxes.

Information

When you have a step with multiple participants in a workflow, one work item is created for each participant for that step, and another work item, called the root work item (used for system implementation reasons), waits in the Delay queue.

5. Close Process Administrator and log out of Administration Console for Content Platform Engine.

Lesson 4.2. Modify work

Overview

Why is this lesson important?

A customer has submitted a loan application and the loan is being processed. He wants to change the loan amount in his application. As the workflow system administrator, you need to search for this work item and change the value of the loan amount.

Activities

User accounts

	Type	User ID	Password
	Workflow system administrator	p8admin	IBMFileNetP8
	Workflow user	mary	filenet
	Workflow user	olivia	filenet

Note

Passwords are always case-sensitive.

Note

Unless otherwise noted, use Firefox to access student system URLs.

Modify work items

Introduction

This exercise allows you to practice using Process Administrator to access work items and make changes to them.

Procedures

Procedure 1: Modify a single work item

In this procedure, you modify a workflow field value for a single work item.

1. On your student system, log in to Administration Console for Content Platform Engine as p8admin
2. Open Process Administrator from the LoanProcess Object Store.
3. Run a search using the conditions in the following table.

Item	Value
Look for	Work Items
In	Workflow Roster
Select one	LoanRoster
Search mode	Edit (all fields)
Criteria tab	
Search Fields	loan_id (String)
Operator	is equal
Value	L005 (The value is case-sensitive)

4. Lock the work item.
   a. In the search results pane, select the row for the returned item.
   b. Click the Lock Selection button  to lock the work item.
5. Change the value of the loan_amount property for the work item.
   a. Click the value in the loan_amount column.
   b. Click the Edit Field Values button  . The Edit Fields window opens.
   c. Type `400,000.0` in the Value field and click OK to close the window.
   d. Verify that the value has changed in the loan_amount column in the results pane.
6. Click the Save Selected Changes button  to save the changes.
7. Click Unlock Selection to unlock the work item.

8. Rerun the search and verify that the property value shows 400,000.

Procedure 2: Modify multiple work items

In this procedure, you modify a data field value for multiple items simultaneously.

Information

For this and other exercises, you use Internet Explorer and Firefox as separate browser instances because they do not share browser authentication information.

1. Use Process Administrator to run an Edit mode search to return all of the work items in the LoanOfficer queue. Use the search conditions in the following table.

Item	Value
Look for	Work Items
In	Work Queue
Select one	LoanOfficer
Search mode	Edit (all fields)

2. Lock all of the work items found.
   a. Click the far left cell to select the row for the first item. The first row is highlighted.
   b. Shift-click anywhere in the row for the last item. All rows are highlighted.
   c. Click the Lock Selection button and verify that the lock status column shows that all of the items are locked by the current user.
3. Change the value of the Interest_rate property for all of the work items at one time.
   a. Locate the Interest_rate column and use the shift-click method to select all of the values in that column.
   b. Confirm that none of the Interest_rate values is 4.4.
   c. Click the Edit Field Values button. The Edit Fields window opens.
   d. Type `4.4` in the Value field and click OK.
   e. Verify that the value has changed in the Interest_rate column for each work item in the search results pane.
4. Click the Save Selected Changes button to save the changes, and then unlock the work items.
5. Minimize the Process Administrator window and the Administration Console window.
6. Verify that the values have changed in the work items in the public inbox.
   a. Double-click the Internet Explorer shortcut to open a second browser window.
   b. Go to Workflow Author Desktop and log in to as the user olivia.

Hint

You can drag bookmarks from Firefox to the Favorites bar in Internet Explorer.

- http://ecmedu01:9080/navigator/?desktop=WorkflowAuthordesktop
- User name: `olivia`
- Password: `filenet`

c. Open the Work View.

d. Go to LoanOfficer Inbasket and open any of the work items.

e. Verify that the value in the Interest_rate field has the value that you entered in Process Administrator.

f. Click Cancel.

g. Log out of Workflow Author Desktop.

h. Close Internet Explorer.

7. Leave the Firefox windows open for the next procedure.

Procedure 3: Modify a workflow group

Use the following procedure to add a workgroup participant to a work item.

1. Use Process Administrator to run an Edit mode search to return the work items with the loan_id value of L007. Use the following search criteria.

Item	Value
Look for	Work Items
In	Workflow Roster
Select one	LoanRoster
Search mode	Edit (all fields)
Criteria tab	
Search Fields	loan_id (String)
Operator	is equal
Value	L007 (The value is case-sensitive.)

2. In the results pane, locate the LoanManagers column and verify that *mary* is the only name listed for that workflow group.
3. Select the work item in the results pane and then lock the work item.
4. Add a user to the LoanManagers workflow group that is assigned for this work item.

a. From the Tasks menu, select Workflow Groups.

b. Confirm that the user mary is listed in the Selected Users pane in the Manage Workflow Groups window.

c. Type `ma` in the *Starts with* field and then click the Search button.

d. Select the user mabel from the Available Users list and then click the single right arrow to move the user name to the Selected Users pane.

e. Click OK to close the Manage Workflow Groups window.

f. Verify that the value in the LoanManagers column has changed to `mabel;mary.`

Notice that the pencil icon and the lock icon are displayed for the work item. These icons indicate that the modification that you have made is not yet saved and that the item is still locked.

5. Save the selected change.
6. Unlock the work item.
7. Verify that the value has changed in the work item in the public inbox.
   a. Open Internet Explorer and log in to Workflow Author Desktop as the user olivia.
      - User name: `olivia`
      - Password: `filenet`
   b. Open the Work View.
   c. Go to LoanOfficer Inbasket.
   d. Open the *Manage Work in Progress* work item for loan L007.
   e. Verify that the LoanManagers field has both mabel and mary listed.
   f. Click Cancel.
   g. Log out of Workflow Author Desktop and then close Internet Explorer.
8. Close Process Administrator and log out of Firefox.
9. Close Firefox.

Lesson 4.3. Process and manage work

Overview

Why is this lesson important?

A work item is waiting for some missing information. As the workflow system administrator, you need to add the information and complete the workflow.

An employee is out sick. As the workflow administrator, you need to reassign all work items in this employee's Inbox to another employee.

Activities

- Process and manage work, on page 4-31

User accounts

Type	User ID	Password
Workflow system administrator	p8admin	IBMFileNetP8
User	mabel	filenet
User	mary	filenet
User	matt	filenet
User	olivia	filenet

Note

Passwords are always case-sensitive.

Note

Unless otherwise noted, use Firefox to access student system URLs.

Process and manage work

Introduction

This exercise allows you to practice using Process Administrator to process and manage work.

Procedures

Procedure 1: Complete a work item

In this activity, you use Process Administrator to find and complete a work item.

1. Log in to Administration Console for Content Platform Engine as p8admin and open Process Administrator from the Loan Process object store.
   - User name: `p8admin`
   - Password: `IBMFileNetP8`
2. Run a search of the LoanRoster to return the current work item for the loan L002.

Item	Value
Look for	Work Items
In	Workflow Roster
Select one	LoanRoster
Search mode	Edit (all fields)
Criteria tab	
Search Fields	loan_id
Operator	is equal
Value	L002

3. Select the work item in the results pane and click Tasks > Complete Work.

   Tip: If the Complete Work command is not available, select *Edit (all fields)* as the search mode and run the search again.
4. In the Complete Work window, select the work item in the *Selected work* field.
5. In the *Enter comments* field, type `Sent loan status update to the customer.`
6. Click OK to complete the work item.

7. Click Find Now to reexecute the search and to refresh the search results pane.
8. Verify that the work item is not found.
9. Leave Process Administrator open for the next procedure.

Important

The workflow is complete, is no longer available in the roster, and is removed from the results pane.

Procedure 2: Lock a work item

In this procedure, you lock a work item so that you can practice using Process Administrator to unlock it.

1. Ensure that the following conditions are true:
   - You are signed in to Administration Console as the p8admin user.
   - The Administration Console is open in Firefox.
   - Process Administrator is open.
2. Use Internet Explorer to log in to Workflow Author Desktop as the user olivia.
   - URL: http://ecmedu01:9080/navigator/?desktop=WorkflowAuthordesktop
   - User name: `olivia`
   - Password: `filenet`
3. Lock a work item by simulating a client workstation problem occurring while a user has a work item open.
   a. Open the Work View.
   b. Open the Loan Officer Inbasket.
   c. Open a work item with the name *Manage Work in Progress*. Note the customer_name value for the work item.
   d. Leave this window open to keep the work item locked.

Important

Do **not** close the window. The window must remain open to ensure that the work item is locked.

Procedure 3: Unlock a work item

Use Process Administrator to find and unlock a work item.

1. In Process Administrator, click New Search to reset the Criteria and Results Options tabs.

2. Set up the following search conditions to find locked work items.

Item	Value
Look for	Work Items
In	Work Queue
Select one	LoanOfficer
Search mode	Edit (all fields)
Criteria tab	
Search Fields	F_LockUser (Integer)
Operator	not equal
Value	0

3. Run the search and examine the results.
   a. Click Find Now to display the search results.
   b. Verify that the F_LockUser column has the value `61 (olivia)` and that the customer_name value matches the work item you opened, confirming that this work item is the one that you locked.

Important

The Process Engine uses integers to identify users and workflow groups, and the user olivia has been assigned the number 61 by the system. If you need to perform a search for a specific user or workflow group, you can use the `environment` command in vwtool to look up the ID for the user or group.

4. Unlock the locked work item.
   a. Select the row for the locked item.
   b. Notice that when you select the item, the Unlock Selection button is disabled, but the Lock Selection button is available.
   c. Click the Lock Selection button. A window opens indicating that the item is already locked by a different user.
   d. Click OK to override the lock.
   e. Verify that the F_LockUser column now lists *p8admin* as the user that has the item locked.
   f. Click the Unlock Selection button.
5. Run the same search again and verify that there are no search results.
6. Leave Process Administrator open for the next activity.
7. Close the step processor window that you left open in Internet Explorer.
8. Log out of Workflow Author Desktop, but leave Internet Explorer open.

Procedure 4: Verify assigned work

Use the following procedure to assign work from a public queue to a specific user and to reassign work that is in a user's inbox to a different user.

1. Ensure that you are signed in to Administration Console as the p8admin user.
2. Use Internet Explorer to log on to Workflow Author Desktop as p8admin.
   - User name: `p8admin`
   - Password: `IBMFileNetP8`
3. Verify that the Loan Officer public inbox contains a work item for the loan L007.
   a. In Workflow Author Desktop, open the Work View.
   b. Open Loan Officer > Loan Officer Inbasket.
   c. Verify that a work item named *Manage Work in Progress* is listed with a Loan ID value of L007.

Important

If the work item for loan L007 does not exist, choose another work item, make a note of the Loan ID value, and use that value instead of L007 in steps 4 and 13.

4. Log out of Workflow Desktop.
5. Verify that the inbox for the user mary contains a work item for the loan L010.
   a. Using Internet Explorer, log on to Workflow Author Desktop as the user mary.
      - User name: `mary`
      - Password: `filenet`
   b. Open the Work View.
   c. Open the Inbox.
   d. Open the *Manage Work in Progress-Multiple Participants* work item.
   e. Verify that the loan_id value is L010 and then click Close.
   f. Log out of Workflow Author Desktop.
   g. Close Internet Explorer.

Procedure 5: Reassign work

1. Use Process Administrator to run the following search in order to return the work items for the loans L007 and L010.

Item	Value
Look for	Work Items
In	Workflow Roster
Select one	LoanRoster
Search mode	Edit (all fields)
Criteria tab	
`loan_id = 'L007' or loan_id = 'L010'` (The loan_id values are case-sensitive.)	
Results Options tab	
Selected Columns	loan_id

2. In the search results pane, select the work item found in the LoanOfficer queue.
3. From the Tasks menu, select Assign/Reassign Work.
4. Select the work item in the From field at the top of the Assign/Reassign window.
5. Change the participant assignment to the user olivia.
   a. In the *Starts with* field, type `oli` and then click the Search button.
   b. Select olivia in the To field and click OK to assign the work to the user olivia.
6. In the search results pane, select the work item found in the inbox for the user mary.

   The Queue column value is `Inbox(0)`, and the F_BoundUser value is `59 (mary)`.
7. From the Tasks menu, select Assign/Reassign Work.
8. Select the work item for mary in the From field.
9. Change the participant assignment to the user mabel.
   a. In the *Starts with* field, type `ma` and then click the Search button.
   b. Select mabel in the To field and click OK to reassign the work to the user mabel.
10. Verify that the inbox for the user olivia contains a work item for the loan L007.
    a. Open Internet Explorer and log on to Workflow Author Desktop as the user olivia.
    - User name: `olivia`
    - Password: `filenet`

    b. Go to Work View > Inbox and open the *Manage Work in Progress* work item.
    c. Verify that the loan_id value is L007 and then close the work item.
    d. Log out of Workfow Author Desktop, but do **not** close the window.
11. Verify that the inbox for the user mabel contains a work item for the loan L010.
    a. In Internet Explorer, log on to Workflow Author Desktop as the user mabel.

b. Go to Work View > Inbox and open the *Manage Work in Progress-Multiple Participants* work item.

c. Verify that the loan_id value is L010 and then close the work item.

12. Log out of Workflow Author Desktop, but do not close the window. You use this second browser window in the next procedure.

Procedure 6: Delete work items

The customer with loan_id L010 has decided to cancel the loan application. Use the following procedure to delete all of the work items associated with this loan application.

1. Verify that the inbox for the user matt contains a work item for the loan L010.

   a. In Internet Explorer, log on to Workflow Author Desktop as the user matt.

   - User name: `matt`
   - Password: `filenet`

   b. Go to Work View > Inbox and open the *Manage Work in Progress-Multiple Participants* work item.

   c. Verify that the loan_id value is L010 and then close the work item.

   d. In the second browser window, log out of Workflow Author Desktop, but do **not** close the window.

Note

In the previous procedure, you verified that the user mabel also has a work item for the loan L010 in her inbox.

2. Use Process Administrator to run a search in Edit mode that finds all of the work items in the LoanRoster that have the loan_id value of L010.

Look for	**Work Items**
In	Workflow Roster
Select one	LoanRoster
Search mode	Edit (all fields)
Criteria tab	
`loan_id = 'L010'` *(The loan_id values are case-sensitive.)*	
Results Options tab	
Selected Columns	loan_id

Information

The search returns three work items. When you have a step with multiple participants in a workflow, one work item is created for each participant for that step, and another work item (for system implementation reasons) waits in the Delay queue.

3. Delete all of the work items returned by the search.
   a. Select all the rows in the search results.
   b. Click Tasks > Delete Work.
   c. Click OK to confirm that you want to permanently delete the work items.
   d. Verify that the work items are removed from the search results pane.
4. Rerun the search to verify that the work items have been removed from the users' inboxes.

Procedure 7: Add a tracker to workflows

Use the following procedure to add a tracker to three active workflows.

1. Verify that the user mary is not a tracker for any active workflows.
   a. In the Internet Explorer browser window, log in to Workflow Author Desktop as the user mary.
      - User name: `mary`
      - Password: `filenet`
   b. Go to Work View > Supervised Loan Status and verify that no items are listed.
   c. Minimize but do **not** close the Internet Explorer browser window.
2. Use Process Administrator to run a search in Edit mode that finds all of the workflows in the LoanRoster that have loan_id values from L006 to L008, inclusive.

Look for	**Work Items**
In	Workflow Roster
Select one	LoanRoster
Search mode	Edit (all fields)
Criteria tab	
`loan_id >='L006' and loan_id <= 'L008'` (The loan_id values are case-sensitive.)	
Results Options tab	
Selected Columns	loan_id

3. Add mary as a tracker for these workflows.
   a. Select all of the workflows in the search results pane.
   b. Click Tasks > Trackers. The Manage Trackers window opens.

c. Click inside the *Starts with* field, type `ma`, and then click Search.

Important

If you do not see the *Starts with* search field in the Manage Trackers window, the IBM Content Navigator session has probably timed out. You need to close the open windows and start again at step 1.

d. Select the user mary in the Available Users pane.

e. Click the single right arrow between the two panes and then verify that the user mary is listed in the Selected Users pane.

f. Click OK to close the Manage Trackers window.

g. Close Process Administrator.

h. Log out of Administration Console.

i. Leave the Internet Explorer browser window open that is running Workflow Author Desktop where you signed in as the user mary.

4. Verify that the user mary has been assigned as a tracker to the workflows.

   a. Return to the browser window running the Workflow Author Desktop application where you signed in as the user mary.

   b. On the Work View > Supervised Loan Status page, click Refresh.

   c. Verify that the tracker items that you assigned mary to in the Process Administrator are listed.

5. Log out of Workflow Author Desktop and close the browser window.

Lesson 4.4. Manage workflow exceptions

Overview

Why is this lesson important?

A running workflow has encountered a business process exception, and there is a work item in the Conductor queue. As the workflow administrator, you must determine what caused the exception and enable the workflow to be completed.

Activities

User accounts

Type	User ID	Password
Workflow system administrator	p8admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

Note

Unless otherwise noted, use Firefox to access student system URLs.

Activities preparation

Important

This activity is required to continue with lesson exercises.

Introduction

In order to complete the activities for this lesson, you must launch a workflow that contains a workflow business processing exception. A sample workflow that contains an error has been provided. You launch this workflow in order to create a problem work item to use in the subsequent activities.

Procedures

Procedure 1, "Launch a workflow to create an exception," on page 4-41

Procedure 1: Launch a workflow to create an exception

Use the following procedure to launch a workflow that causes an exception.

1. Use Firefox to log in to Workflow Author Desktop as p8admin.
   - User name: `p8admin`
   - Password: `IBMFileNetP8`
2. Open Process Designer:
   a. Right-click the LoanProcess object store.
   b. Select Open Process Designer.
3. Open the Exception Workflow.pep file, located in C:\Labs\Case Foundation 5.2.1 Administration\Manage Work in Progress.
4. Transfer the workflow:
   a. Click File > Transfer Workflow Collection.
5. Complete the *Save the workflow definition to an object store* wizard using the values in the following table.

Item	Value
Object store > Folder	LoanProcess > Workflows
Document Title	Exception workflow
Security Settings	<Use default settings.>

6. Close Process Designer.
   a. Click File > Exit.
   b. Cancel the checkout when you are prompted.

7. Launch the Exception workflow.
   a. Open the Workflows folder.
   b. Right-click the Exception workflow.
   c. Select Workflow > Launch Workflow.
8. Complete the launch step processor by clicking Launch Workflow.

   The workflow data fields have been filled in for you. Do **not** modify them.

9. Log out of Workflow Author Desktop.

Manage a workflow exception

Procedures

Procedure 1: Identify a work item in an exception state

In this activity, you search for work items that are in an exception state.

1. Log on to Administration Console as p8admin.
   - User name: `p8admin`
   - Password: `IBMFileNetP8`
2. Open Process Administrator from the LoanProcess object store.
3. Perform a search of the Conductor queue, which is where workflow exceptions are sent.
   a. In Process Administrator, enter the search conditions specified in the following table and run the search.

Parameter	Value
Look for	Work Items
In	Work Queue
Select one	Conductor
Search mode	Edit (all fields)

4. In the search results pane, observe the exception icon that indicates that the work item is in an exception state.
5. Note the values of the following data fields for customer Julius C.
   - total_amount_due
   - number_of_payments
   - monthly_payment

Important

The workflow calculates the monthly_payment value using the following method:

monthly_payment = total_amount_due divided by number_of_payments

6. Leave Process Administrator open for the next procedure.

Procedure 2: View a work item information stack

In this activity, you view the information stack for a workflow in an exception state and determine the cause of the problem.

1. Select the work item in the results pane.
2. View the information stack for the work item.
   a. Right-click the work item and click View Information Stack.
   b. Select the work item in the top pane of the Information Stack window.
   c. Examine the information displayed in the Information Stack pane and answer the following questions:
      - At what step did the error occur?
      - What was the cause of the error?
3. Close the Information Stack window and leave Process Administrator open for the next procedure.

Procedure 3: Correct a workflow exception

In this activity, you correct the work item that is in an exception state in the Conductor queue and send the work item to complete its processing.

1. Ensure that the Process Administrator is open with the Julius C work item in the Conductor queue displayed in the results pane.
2. Modify the work item workflow field value.
   a. Use the skills that you learned in a previous lesson to change the value of the number_of_payments field from 0 to 12.
   b. Save the change.
   c. Unlock the work item.
   d. Use the skills that you learned in a previous lesson to complete the work item in Process Administrator.
   e. The corrected work item is sent back to continue in the workflow.
   f. Close Process Administrator.
3. Verify that the error is corrected by rerunning the search.
4. Close Process Administrator.
5. Log out of Administration Console and close the browser.

Unit 5. IBM Case Foundation 5.2.1: Component integration

Unit overview

Lessons

Unit dependencies

The activities in this unit must be performed in order.

The labs in this unit are independent of other units. However, prerequisite knowledge is assumed. It is recommended that the following courses be completed first:

- Case Foundation 5.2.1 - Introduction
- Case Foundation 5.2.1 - Configure the workflow system
- Case Foundation 5.2.1: Workflow security
- Case Foundation 5.2.1: Maintain the workflow system
- Case Foundation 5.2.1: Manage work in progress

System start

Your student system should be started. If it is not started, then perform the startup steps in Appendix A, "Start and Stop System Components".

Lesson 5.1. Component integration concepts

Overview

Why is this lesson important?

You are a workflow system administrator responsible for configuring and maintaining component queues in non-development environments. You need to be familiar with the function of component queues and the purpose they provide in FileNet workflow applications.

Activities

- "Test your knowledge of component integration: Quiz" on page 5-5
- "Prepare the student system for the exercises" on page 5-7

User accounts

	Type	User ID	Password
	Operating System	Administrator	passw0rd
	P8 administrator	p8admin	IBMFileNetP8

Note

Passwords are always case-sensitive.

Test your knowledge of component integration: Quiz

Introduction

For each question, indicate the correct answer.

1. Select the option that is not a purpose of component integration.

   a. Extend business functionality easily without full application development.
   b. Use existing Java business objects and components.
   c. Perform external functions from within a workflow.
   d. Provide integration for a component step processor.

2. Starting with the IBM Case Foundation 5.2 release, a new Component Manager Framework was introduced. Where does this framework run?

   a. Within the Content Platform Engine server.
   b. Within the Process Task Manager, running on a Workplace XT server.
   c. As a task within the Administration Console for Content Platform Engine.
   d. Within the Process Configuration Console.

3. IBM Case Foundation 5.2 supports Java components only. (T or F)?

4. Which of the following statements is not an advantage to using the new Component Manager Framework?

   a. Easier to administer and maintain.
   b. More control over the class path.
   c. More performance information and logs available.
   d. Does not require Application Engine servers.

5. Which one of the following elements is used in component queues for authentication?

   a. JNDI
   b. Active Directory
   c. JAAS
   d. Component Manager

6. A component is an operation that waits in a component queue for processing. (T or F)

7. Which of the following component integration elements sends a message to a queue in a JNDI QueueConnectionFactory?

   a. Process Task Manager
   b. Java adapter
   c. CE_Operations
   d. JMS adapter

8. The two Component Manager Frameworks, supported since the IBM Case Foundation 5.2 release, are fundamentally the same. (T or F)?

Prepare the student system for the exercises

Introduction

The student system is running Microsoft Windows 7 Operating system. The student system is configured as a single application server, running the FileNet P8 system, with three WebSphere Application Server profiles. For this unit, you use the application server profile for server1. You follow the steps in Procedure 1 to start the system components and validate that all necessary components are running.

Procedures

Procedure 1: Configure the JAAS credentials for CE_Operations

In this procedure, you configure the JAAS credentials for the component queue, CE_Operations. Starting with IBM Case Foundation 5.2, the CE_Operations is automatically created. However, the JAAS credentials might not be set correctly.

1. Open the Administration Console for Content Platform Engine.
   a. Open a Mozilla Firefox browser window.
      - Go to the URL: `http://ecmedu01:9080/acce`

   Tip: There is a bookmark defined for your convenience, ***ACCE***.

   b. Log in with a P8 administrator account.
      - Username: `p8admin`
      - Password: `IBMFileNetP8`
2. Open the object store **LoanProcess.**
3. In the left navigation pane, go to **Administrative > Workflow System > Isolated Regions > P8Region5 > Component Queues**.
4. Edit the JAAS credentials for CE_Operations.
   a. On the right, click the component queue, **CE_Operations**, to open the properties window.
   b. Select the **Adapter** tab.
   c. Change the JAAS credentials to:
      - Username: `p8admin`
      - Password: `IBMFileNetP8`
   d. Leave the configuration context blank.
5. Click **Save**.
6. Close the **CE_Operations** tab.

7. Log out of the administration console.
8. Close the browser window.

Lesson 5.2. Create and configure component queues

Overview

Why is this lesson important?

A Java component that calculates the monthly loan payment amount is deployed on your system by a developer. You need to create and configure a component queue in the isolated region to communicate with the Java component.

Activities

User accounts

	Type	User ID	Password
	P8 administrator	p8admin	IBMFileNetP8
	Service user	Oscar	filenet
	Loan Officer	Olivia	filenet

Note

Passwords are always case-sensitive.

Create a Java component queue

Introduction

In this exercise, you perform all the necessary steps to create a Java component queue. The component queue you create is using the new Component Manager framework.

Procedures

Procedure 1: Create a code module for the Java object

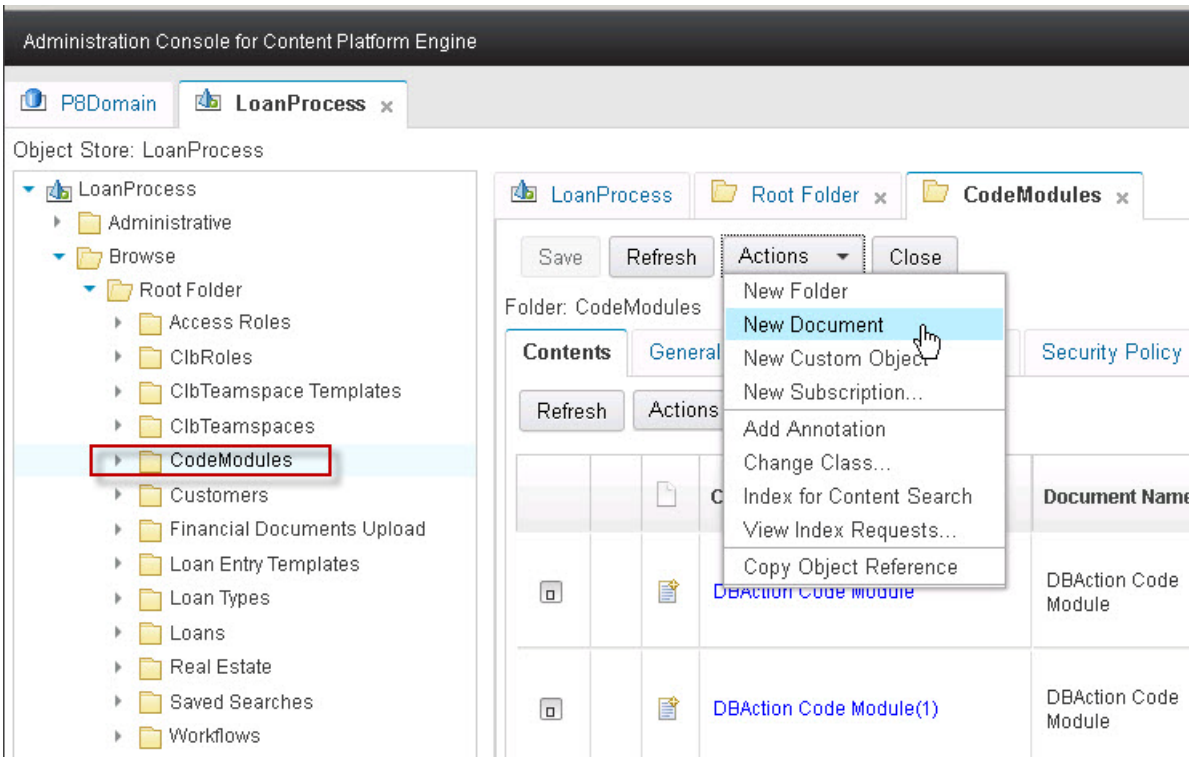
In the new Component Manager framework, you must create a code module for the Java JAR file before you can create a component queue.

1. Open the Administration Console for Content Platform Engine.
   a. Open a Mozilla Firefox browser window.
      - Go to the URL: `http://ecmedu01:9080/acce`

   Tip: There is a bookmark defined for your convenience, ***ACCE***.

   b. Log in with an account that has write privileges on the folder, **CodeModules**, in the object store.
      - Username: `p8admin`
      - Password: `IBMFileNetP8`
2. Open the object store **LoanProcess.**
3. On the left navigation pane, expand **Browse > Root Folder**.

4. Select **CodeModules**. On the right, click **Actions > New Document**.



   a. Use the data to complete the wizard. Accept defaults for fields that are not listed.

Item	Value
Document title	`Amortization`
Class	**Code Module**

5. Click **Next**.
6. Under **Content Elements**, click **Add**.
   a. Browse to:

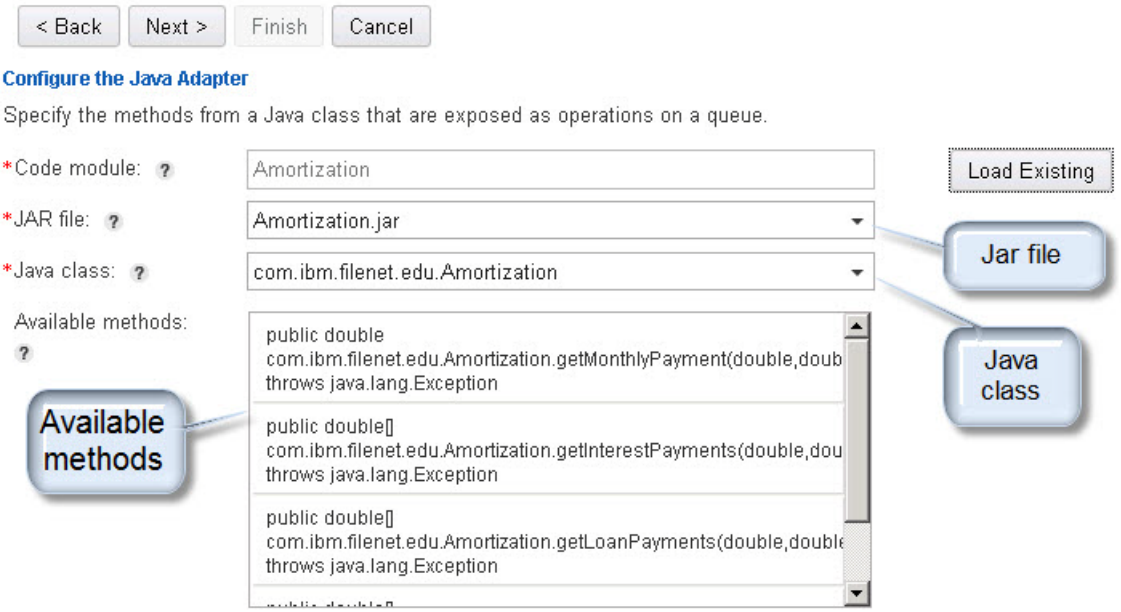
   `C:\Labs\Case Foundation 5.2.1 Administration\Component Integration\Amortization.jar`

   b. Click **Add Content**.
7. Click **Next**.
8. Continue clicking **Next** until you get to the **Summary** window.
9. Click **Finish**.
10. Close the window.
11. Refresh the **Code Modules** tab.
12. You see the Amortization code module listed.
13. Close the **Code Modules** tab.

Procedure 2: Create a Java component queue

In this procedure, you create a Java component queue with the Administration Console for Content Platform Engine.

1. Open the New Component Queue wizard.
   a. In the Administration Console for Content Platform Engine, expand **LoanProcess > Administrative > Workflow System > Isolated Regions > P8Region5**.
   b. Right-click **Component Queues**, and select **New Component Queue**.
      - Name: `Loan_Operations`
      - Adapter: Accept the default, Java Component.
      - Click **Next**.
2. On the **Configure the Java Adapter** window:
   a. Code Module: Click **Load Existing**.
   b. Select the code module, **Amortization**.
   c. The remaining fields are automatically populated, with information from the code module.



3. Click **Next**.
4. On the **Adapter Properties** window:
   a. Change the Polling interval to: `60000`.
   b. Click **Next**.
5. On the JAAS Credentials window:
   a. Enter a service user account:
      - Username: `oscar`
      - Password: `filenet`
      - Leave the Configuration context blank.

6. Click **Next**.
7. Review the information in the **Summary** window. When you are done, click **Finish**.
8. Wait until you see a **Success** message.
9. Close the window.

Procedure 3: Import the component queue operations

In this procedure, you use the Process Configuration Console to import the operations for the component queue.

Information

At the writing of this course, the only tool that supports the import of the component queue operations is Process Configuration Console. A future IBM Case Foundation 5.2.1 fix pack adds this feature to the Administration Console for Content Platform Engine.

1. Open the Process Configuration Console.
   a. In the Administration Console for Content Platform Engine, right-click **Workflow System** and select **Configure Workflow Settings**.

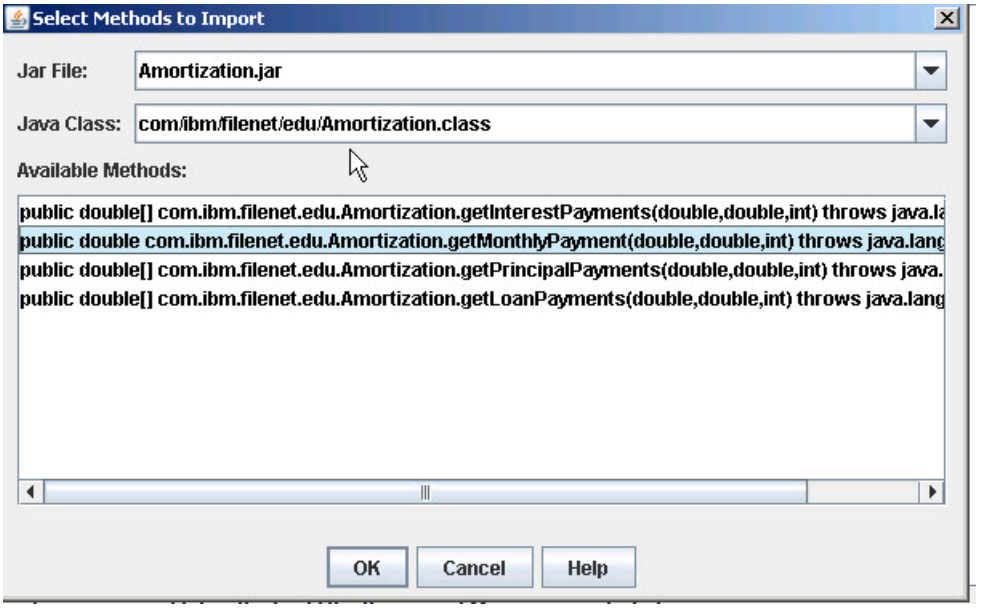
Note

The first time you open Process Configuration Console; it can take several minutes to open. You see a white screen for several seconds. Process Configuration console opens eventually.

2. Double-click **P8ConnP5**, on the left, to connect to the connection point and open it.
3. On the left, select the node, **Component Queues**.
4. On the right, double-click the component queue, **Loan_Operations**, to open the properties window.
5. Select the **Operations** tab.

6. Click the Import icon,  .

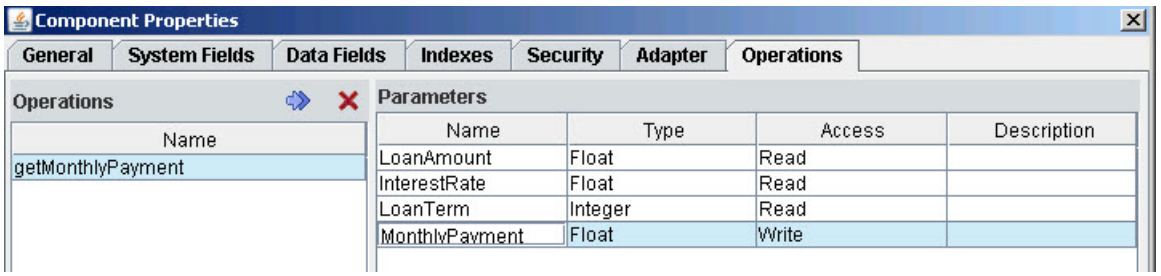
   a. Select the method, **getMonthlyPayment**.



   b. Click **OK**.

7. Rename the parameters to match the values in the table. To update a field, double-click the cell then replace the value:

Old parameter name	New parameter name
param1	`LoanAmount`
param2	`InterestRate`
param3	`LoanTerm`
return_value	`MonthlyPayment`



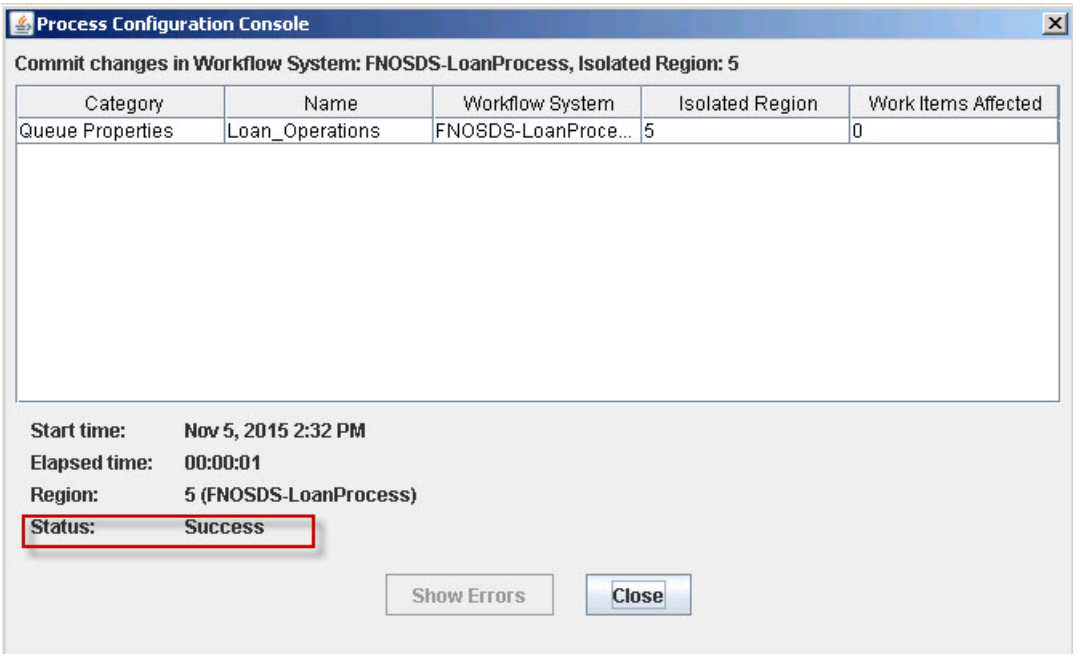
   a. Click **OK**.

8. Commit the changes.

   a. Click the Commit changes icon in the menu bar.

   b. Click **Continue** on the window that opens.

c. Click **Close** on the Status window.



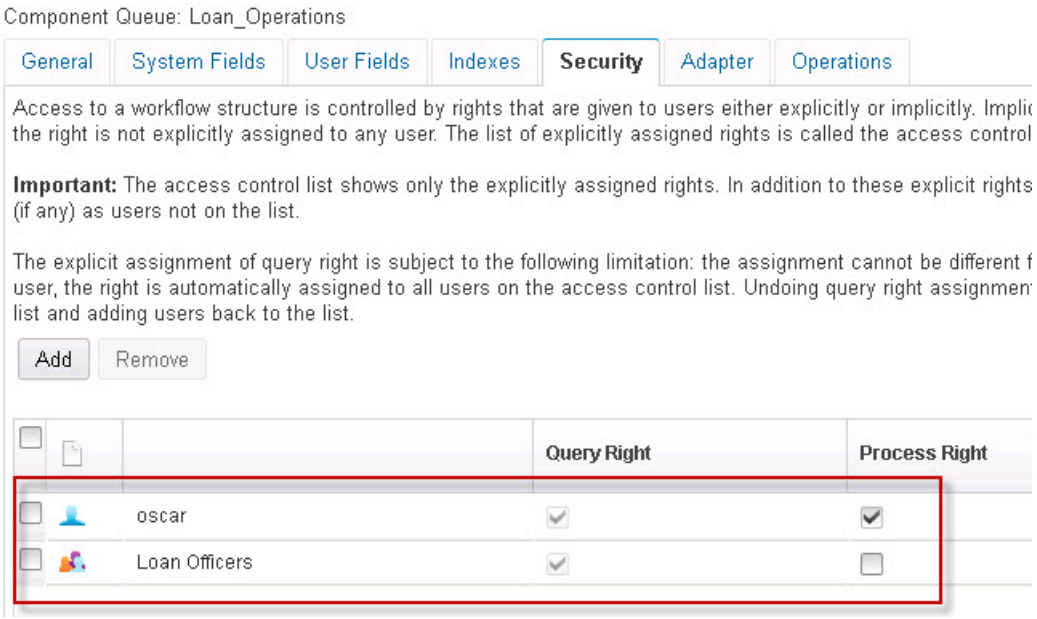
9. Close the Process Configuration console.

Procedure 4: Set security on the component queue

In this procedure, you set the query and process security on the component queue. Setting security on component queues is the same as setting security on work queues or user queues.

1. In the Administration Console for Content Platform Engine, open the **Loan_Operations** component queue.
2. Select the **Security** tab.
3. Grant the service user, configured in the JAAS credentials, query, and process rights. Query and Process rights are required for the component to be able to function.
   a. Click **Add**.
      - Type osc, in the search field.
      - Move **oscar** to **Selected Users and Groups**.
      - Under **Access Rights**, check **Query** and **Process**.
      - Click **OK**.
4. Grant the group, Loan Officers, query rights.
   a. Click **Add**.
      - Search for Loan.
      - Move **Loan Officers** to **Selected Users and Groups**.
      - Check **Query**, if it is not already checked.

- Click **OK**.



5. Click **Save**.
6. Click **Close**.
7. Log out of the administration console.
8. Leave the browser window open for the next exercise.

Verify the Java component queue

Introduction

In this exercise, you verify that the Java component queue that you created is functioning as expected. You will:

- Examine the Component Manager logs, available from the process services ping page.
- Verify the component queue configuration with vwtool.
- Verify the component queue functionality, by launching an instance of the workflow to ensure the component step functions as expected.

Procedures

Procedure 1: Examine the Component Manager logs

In this procedure, you open the Component Manager logs, available from the process services ping page and examine them to verify that the component queue that you created, is operational.

1. Open the Process services ping page.
   a. Open a new browser tab.
   b. Go to **Bookmarks > System Health > PE ping**.
   c. Log in as a user that is a member of the Workflow System Configuration group.
      - Username: `p8admin`
      - Password: `IBMFileNetP8`

2. Scroll down to the bottom of the page. You might have to scroll with the mouse, in addition to the scroll bar.

3. Examine the Component Manager run time logs.

   a. Click the link, **Component Manager Logs**.
   b. Notice the three components listed, **WSRequest**, **CE_Operations, and Loan_Operations**, the component queue that you created.

      - At the top of the log, all three component queues show a status of Terminated or stopped.

```
P8ConnP5:WSRequest
[LoanProcess.FNOSDS] CMR1.LoanProcess.FNOSDS_5.WSRequest DELAYED until another 862414ms , Region=5 [0 total processed.]
[LoanProcess.FNOSDS] CMR0.LoanProcess.FNOSDS_5.WSRequest marked as TERMINATED. , Region=5 [0 total processed.]
[LoanProcess.FNOSDS] CMDp.LoanProcess.FNOSDS_5.WSRequest_0 DELAYED until another 203500ms , Region=5 [0 total processed.]

P8ConnP5:CE_Operations
[LoanProcess.FNOSDS] CMR1.LoanProcess.FNOSDS_5.CE_Operations DELAYED until another 862414ms , Region=5 [0 total processed.]
[LoanProcess.FNOSDS] CMR0.LoanProcess.FNOSDS_5.CE_Operations marked as TERMINATED. , Region=5 [0 total processed.]
[LoanProcess.FNOSDS] CMDp.LoanProcess.FNOSDS_5.CE_Operations_0 DELAYED until another 208485ms , Region=5 [0 total processed.]

P8ConnP5:Loan_Operations
[LoanProcess.FNOSDS] CMR1.LoanProcess.FNOSDS_5.Loan_Operations DELAYED until another 862414ms , Region=5 [0 total processed.]
[LoanProcess.FNOSDS] CMR0.LoanProcess.FNOSDS_5.Loan_Operations marked as TERMINATED. , Region=5 [0 total processed.]
[LoanProcess.FNOSDS] CMDp.LoanProcess.FNOSDS_5.Loan_Operations_0 DELAYED until another 52497ms , Region=5 [0 total processed.]
```

      - As you scroll down to the bottom of the log, you see a change in the status of CE_Operations and WSRequest. The time corresponds to when you updated the JAAS credentials for the CE_Operations component queue.

```
2015/11/05 11:15:59.160 PEServer.init   CE_Operations   RegionMount     P8ConnP5        CMR0.LoanProcess.FNOSDS_5.CE_Operations:1
CMDp.LoanProcess.FNOSDS_5.CE_Operations_0       CMR1.LoanProcess.FNOSDS_5.CE_Operations CMDp.LoanProcess.FNOSDS_5.CE_Operations_0
CMR1.LoanProcess.FNOSDS_5.CE_Operations ADDED   312ms
2015/11/05 11:15:59.472 PEServer.init   WSRequest       RegionMount     P8ConnP5        CMR0.LoanProcess.FNOSDS_5.WSRequest:1
CMDp.LoanProcess.FNOSDS_5.WSRequest_0   CMR1.LoanProcess.FNOSDS_5.WSRequest     ADDED   0ms
```

      - Scroll to the end of the log. You see that the three component queues have **No items** in the queues.

```
2015/11/05 14:33:21.795 PESecondary2    CMR1.LoanProcess.FNOSDS_5.WSRequest     No items.       0ms
2015/11/05 14:33:21.795 PESecondary2    CMR1.LoanProcess.FNOSDS_5.Loan_Operations       No items.       0ms
2015/11/05 14:33:21.795 PESecondary1    CMR1.LoanProcess.FNOSDS_5.CE_Operations No items.       0ms
2015/11/05 14:36:10.30  PESecondary2    CMR1.OSDBUSER.FNOSDS_1.WSRequest        No items.       0ms
2015/11/05 14:36:10.514 PESecondary2    CMR1.Sales.FNOSDS_2.WSRequest   No items.       0ms
2015/11/05 14:36:30.108 PESecondary2    CMR1.OSDBUSER.FNOSDS_1.CE_Operations    No items.       0ms
2015/11/05 14:36:30.467 PESecondary2    CMR1.Sales.FNOSDS_2.CE_Operations       No items.       0ms
```

   c. You also see that Loan_Operations is updated and no longer TERMINATED.

d. When you are done examining the logs, click the back arrow on the browser window to go back to the process services ping page.

4. Examine the Component Manager Statistics.

   a. Right-click the link, **Component Manager Stats**, and select to open in a new tab.
   b. Select the new tab.
   c. Examine the row for the component queue, **Loan_Operations**.

Component Queues Processing Time Information -

Method	NTimes	NGood	NBad	Worst	When	Best	When	Avg	Total
CMDp.LoanProcess.FNOSDS_5.CE_Operations_0	66	66	0	10.0ms	2015.11.05 11:16:35	1.0ms	2015.11.05 14:38:18	2.64ms	0.17sec
CMDp.LoanProcess.FNOSDS_5.Loan_Operations_0	35	35	0	4.0ms	2015.11.05 14:22:29	1.0ms	2015.11.05 17:04:42	1.91ms	0.07sec
CMDp.LoanProcess.FNOSDS_5.WSRequest_0	66	66	0	15.0ms	2015.11.05 14:33:21	1.0ms	2015.11.05 17:03:43	2.18ms	0.14sec

   d. You explore the values in the different columns in a later exercise.

5. Examine the Component Processing details.

   a. In the process services ping page, right-click the link, **Component Processing Details**, and select to open in a new tab.
   b. Select the new tab.
   c. You see the server that is running component manager. No other information is listed since the components have not run any operations yet.

Important

If you are running in a clustered environment, each time you open the process services ping page you can connect to a different server.

6. Close the browser window and all the tabs.

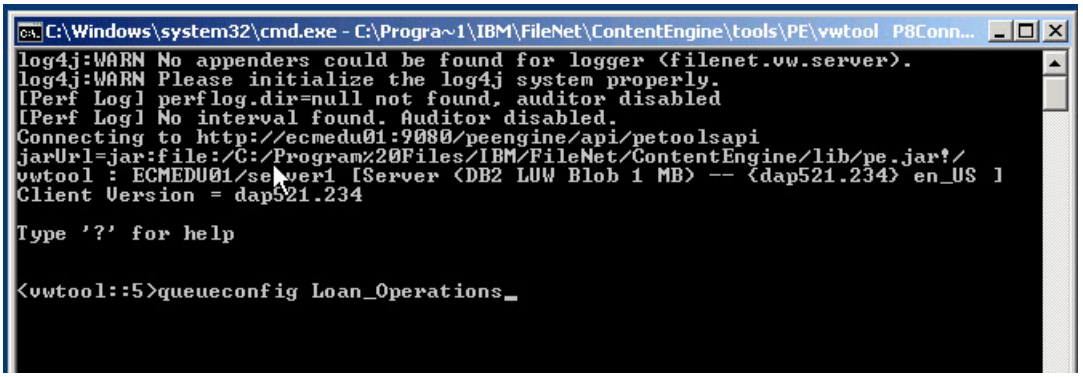
Procedure 2: Verify the component queue configuration with vwtool

In this procedure, you use vwtool to verify the component queue configuration for **Loan_Operations**. It is assumed that you are familiar with running vwtool.

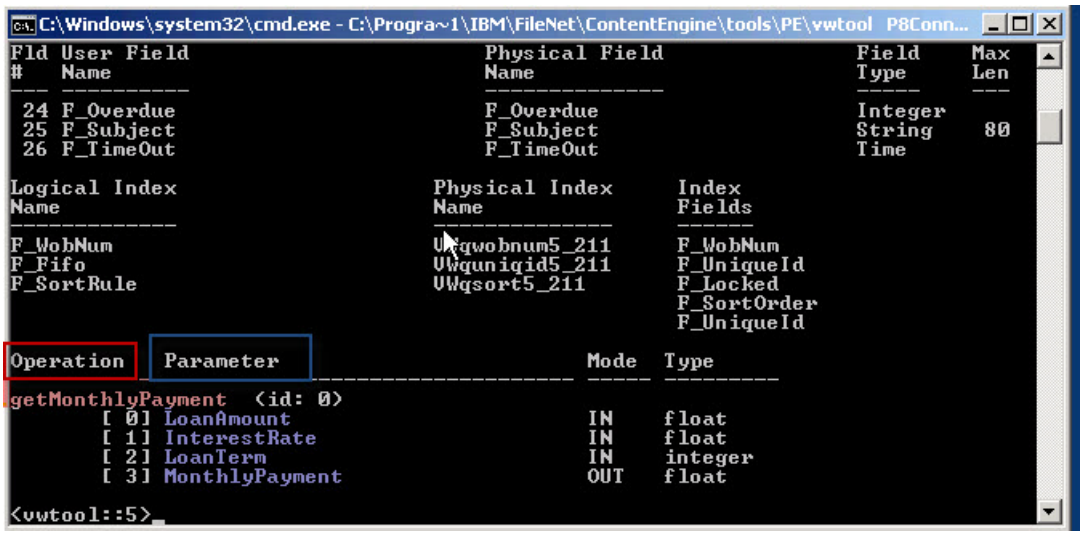
1. Open vwtool.

   a. On the desktop, double-click the shortcut, **vwtool P8ConnP5.bat**. The script automatically connects to the connection point and logs you in.

2. Verify the configuration with the queueconfig command.
   a. At the vwtool prompt, type: queueconfig Loan_Operations.



   b. Verify that the information at the end of the report, matches how you configured the component queue.



3. Type: q carriage return to exit vwtool.
4. Close the command prompt window.

Procedure 3: Verify the component queue functionality

In this procedure, you update, validate, transfer, and launch, a workflow definition that contains a component step that uses the component queue.

1. Open the Workflow Author desktop.
   a. Open a Mozilla Firefox window.
   b. In the Bookmarks menu, go to **Workflow Author desktop**. (It can take several minutes for the desktop to load, the first time it is opened).
   c. Log in as a user that has write privileges on the Workflows folder in the LoanProcess object store.
      - Username: p8admin
      - Password: IBMFileNetP8

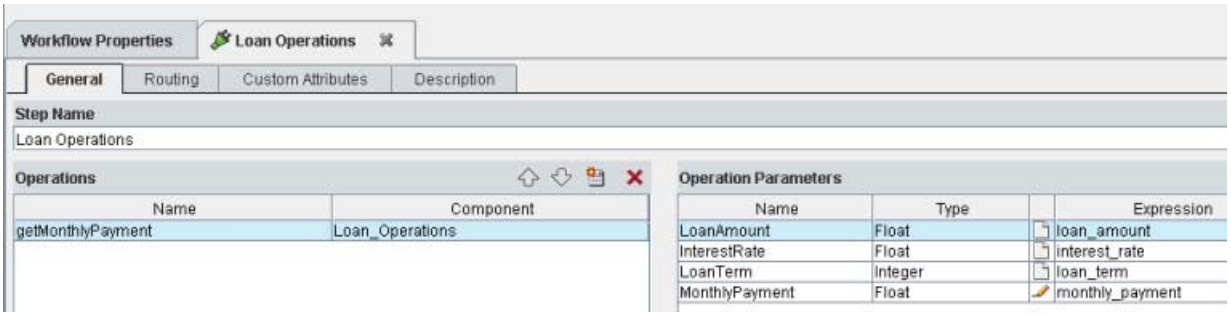
2. Update the workflow definition.
   a. Open Process Designer.
      - On the left, right-click LoanProcess and select Open Process Designer.

Note

The first time you open Process Designer; it can take several minutes to open, be patient. You see a white screen for several seconds, Process Designer eventually opens.

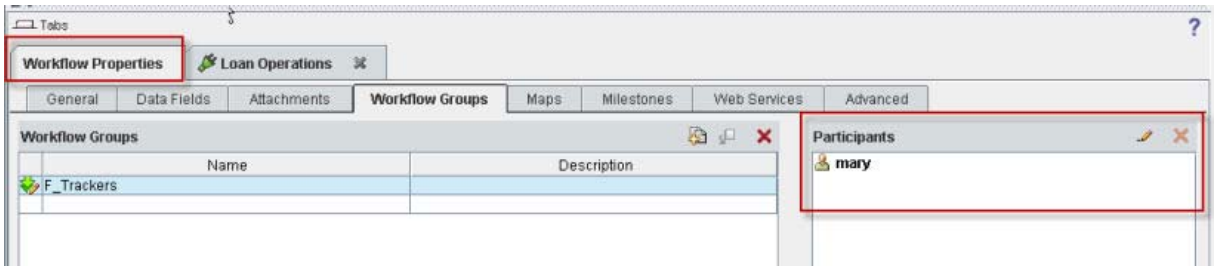
   b. Open the workflow definition.
      - Click **File > Open** and browse to the folder:

        `C:\Labs\Case Foundation 5.2.1 Administration\Component Integration`.
      - Select **Java Component Workflow.pep** and click **Open**.
   c. Review the use of the component queue in the workflow.
      - Click the component step, **Loan Operations**.
      - In the Properties pane at the bottom, ensure that you are at the **General** tab.
      - Verify that the **Operations** name and component match the configuration that you completed previously.
      - Verify that the operation parameter names, on the lower right, match the names that you specified.



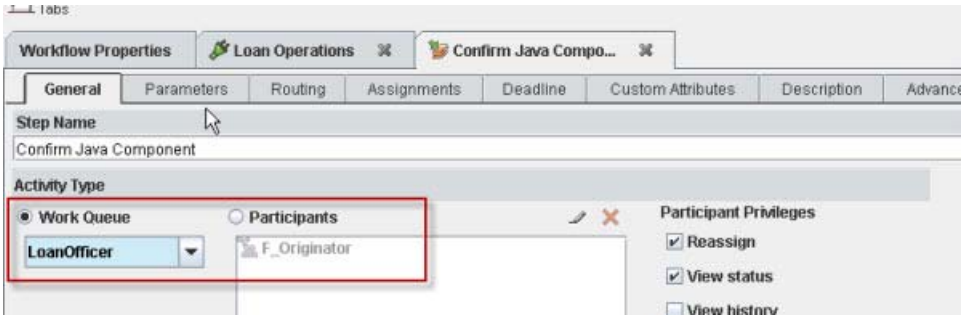
d. Change the user assigned to the trackers, **F_Trackers**.

- Select the Workflow Properties tab.
- Select the Workflow Groups.
- On the right, select **Administrator** and click the red X to delete it.
- Click the pencil icon, and add the user **mary**, a Loan Manager.



e. Modify the step, **Confirm Java Component**.

- Select the step, **Confirm Java Component**.
- Change Participants: **F_Originator** to Work queue: **LoanOfficer**.



3. Validate the workflow definition.

a. **File > Validate Workflow Collection**.
b. Close the message window, stating that the workflow validation was successful.

4. Transfer the workflow definition.

a. **File > Transfer Workflow Collection**.
b. Add the workflow to the folder, **LoanProcess > Workflows**.
c. Document title: `Java Component Workflow`.
d. Click **Finish**.
e. Close message window, stating that the transfer was successful.

5. Close the workflow definition and exit Process Designer.

a. **File > Close**.
b. Select, **Cancel the checkout**.
c. **File > Exit**.
d. Log out of the Workflow Author desktop.

6. Launch an instance of the workflow.
   a. Log in as a Loan Manager.
      - Username: Mary
      - Password: filenet
   b. Open the folder, **Workflows**.
   c. Right-click **Java Component Workflow** and select **Workflow > Launch Workflow**.
      - The fields are populated for you.
      - Notice that the initial value for the monthly payment field is **0**.
   d. Scroll down and click **Launch Workflow**, on the lower right corner.
   e. Log out of the desktop.
7. Verify the results.
   a. Log in as a Loan Officer.
      - Username: Olivia
      - Password: filenet
   b. Open the Work View. 
   c. Select the **Loan Officer Inbasket**.
   d. In the right pane, click the work item icon, or double-click the work item link, with the name **Java Component Test**.
   e. Verify that the **monthly_payment** field has the value, **567.79**.

Information

The component queue returns the value, which indicates that the component queue is functioning as expected.

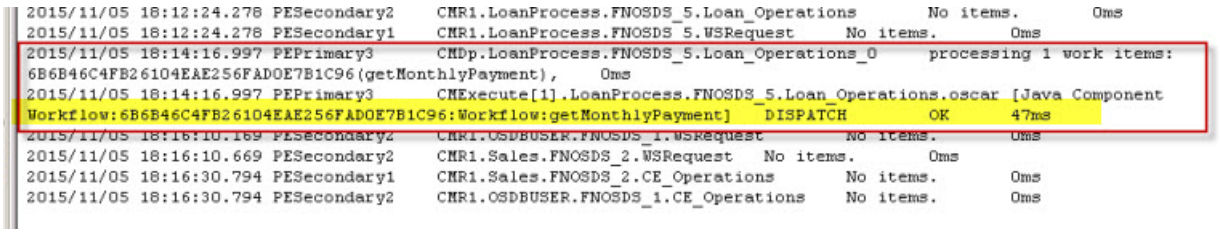
   f. Scroll down and click **Complete** to complete the step.
8. Log out of the Workflow Author desktop.

Procedure 4: Examine the updates to the Component Manager logs.

In this procedure, you examine the updates made to the Component Manager logs.

1. Open the Process services ping page.
   a. Open a new browser tab and go to **Bookmarks > System Health > PE ping**.
   b. Log in as a user that is a member of the Workflow System Configuration group.
      - Username: `p8admin`
      - Password: `IBMFileNetP8`
2. Scroll to the bottom and right-click the link, **Component Manager Logs**, and open link in a new tab.

3. Right-click the link, **Component Manager Stats**, and open link in a new tab.
4. Right-click the link, **Component Processing Details**, and open link in a new tab.
5. Open the Component Manager Logs tab.
   a. Scroll down to the bottom and examine all the entries added because of executing the component step in the **Java Component Workflow**. Verify the time stamp to make sure that you are at the bottom of the log.
   b. You see output similar to:



Important

The Component Manager run time log includes numerous information. As a workflow system administrator, who needs to verify that an operation executed successfully, you want to look for, "**processing x work items**" and the operation name, for example, **getMonthlyPayment**. For example, in the preceding screen capture, in the highlighted box, you see:

- **Workflow:**
- The workflow object number (wobnum) - the long hexadecimal number.
- **Workflow:getMonthlypayment** - the operation name.
- **DISPATCH** - indicates that the task was dispatched.
- **OK** - indicates that the task completed successfully.
- 47ms - the time it took to complete the operation.

6. Open the Statistics for Component Manager tab.
   a. Scroll down to the bottom of the table.
   b. Notice the rows for the **Loan_Operations**.

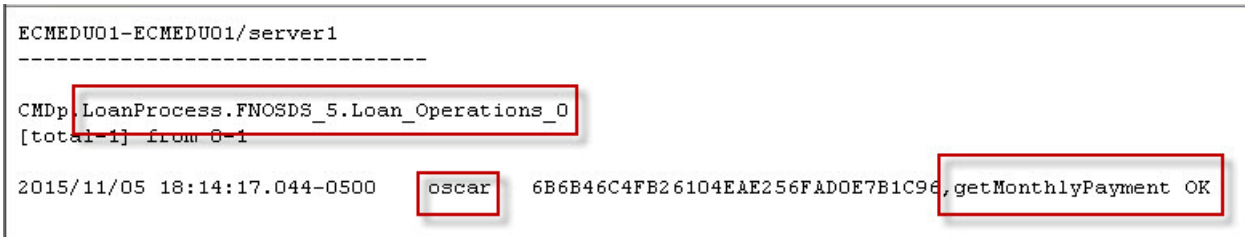
P8ConnP5:Loan_Operations:getMonthlyPayment	1	1	0	40.0ms	2015.11.05 18:14:17	40.0ms	2015.11.05 18:14:17	40ms	0.04sec
P8ConnP5:Loan_Operations:getMonthlyPayment:core	1	1	0	2.0ms	2015.11.05 18:14:17	2.0ms	2015.11.05 18:14:17	2ms	0sec
P8ConnP5:Loan_Operations:getP8Subject	53	53	0	67.0ms	2015.11.05 16:48:12	2.0ms	2015.11.05 18:17:17	10.06ms	0.53sec
P8ConnP5:Loan_Operations:load:com.ibm.filenet.edu.Amortization	2	2	0	43.0ms	2015.11.05 14:20:29	2.0ms	2015.11.05 14:33:21	22.5ms	0.04sec

c. The table describes what each column means:

Column name	Description
NTimes	The number of times the component queue is called.
NGood	The number of times the operation finished successfully.
NBad	The number of times the operation failed.
Worst	The worst performance time (longest) of the operation. **When** indicates when it happened.
Best	The best performance time of the operation. **When** indicates when it happened.
Avg	The average time to finish the operation.

7. Open the Component Processing Details tab.

   a. Notice the new entry. Here is a sample:



   b. You see;

   - The component queue, **Loan_Operations** is called.
   - The user oscar executed the operation (Oscar is the user configured in the JAAS credentials).
   - The operation **getMonthlyPayment** completed with a status of **OK**, indicating a successful completion.

8. Close the three tabs that you opened.
9. Leave the browser window open for the next exercise.

Stop and start the component queue

Introduction

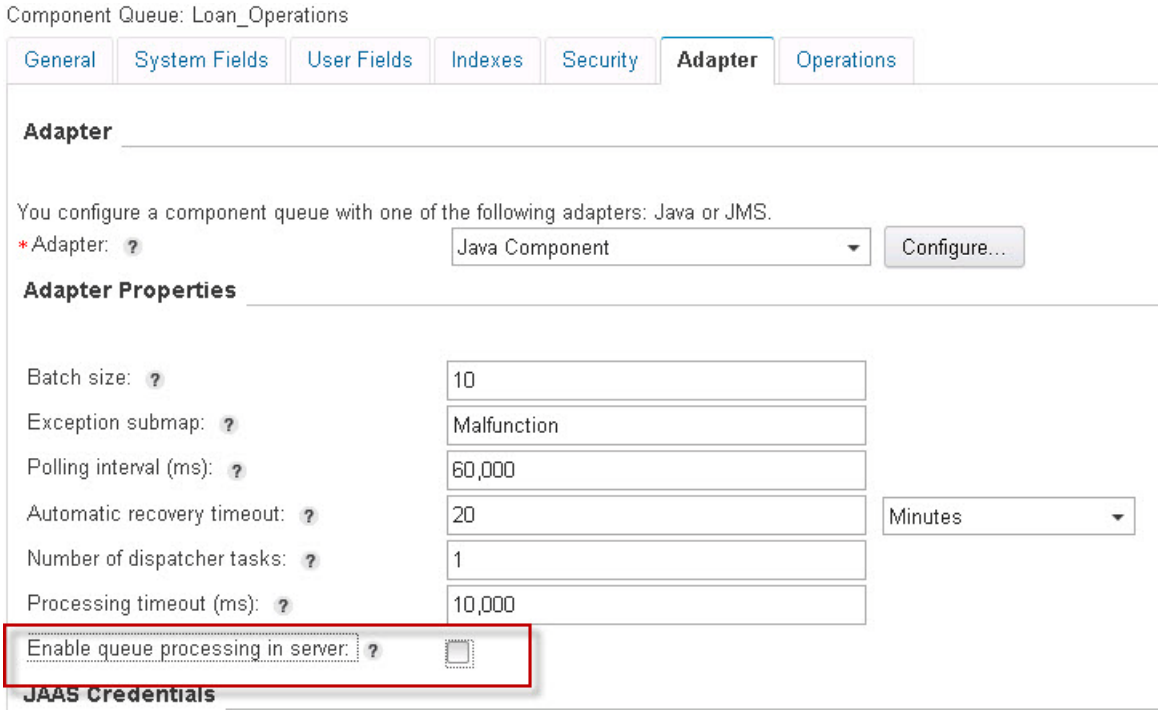
In this exercise, you: stop the component queue, check the status in the Component Manager logs, and start the component queue.

Procedures

Procedure 1: Stop the component queue

1. Open the Administration Console for Content Platform Engine.
   a. Open a new browser tab.
   b. Go to **Bookmarks > ACCE**.
   c. Log in as:
      - Username: `p8admin`
      - Password: `IBMFileNetP8`
2. Open the component queue, **Loan_Operations**.
   a. **LoanProcess > Administrative > Workflow System > Isolated Regions > P8Region 5 > Component Queues > Loan_Operations**.
3. Stop the component queue.
   a. Select the **Adapter** tab.

b. Clear the check box, **Enable queue processing in server**.



4. Click **Save**.
5. Leave the administration console open.

Procedure 2: Examine the Component Manager logs

1. Open the Component Manager Logs.
   a. Click the browser tab for the Component Manager Logs, and click the browser refresh to update the log.
      - If you do not have an existing Component Manager Logs tab open, open a new browser tab and go to the PE ping page.
   b. Scroll down to the bottom of the log
   c. When the component queue is stopped, you see a status of TERMINATED.

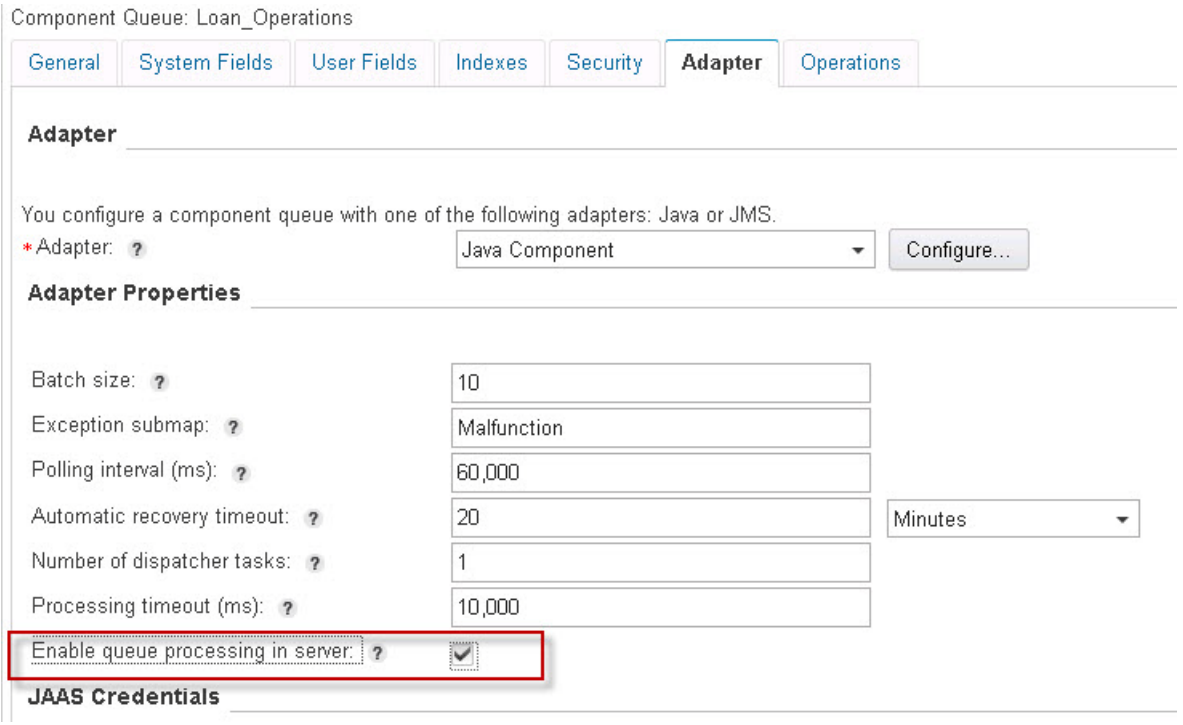
```
15/11/06 10:18:20.688 pool-10-thread-2        Loan_Operations RegionMount     P8ConnP5        Oms
15/11/06 10:18:20.688 pool-10-thread-2        Loan_Operations CMR1 LoanProcess.FNOSDS_5.Loan_Operations       TERMINATED      DELETED On
15/11/06 10:18:20.688 pool-10-thread-2        Loan_Operations CMRO LoanProcess.FNOSDS_5.Loan_Operations       TERMINATED      DELETED On
15/11/06 10:18:20.688 pool-10-thread-2        Loan_Operations CMDp LoanProcess.FNOSDS_5.Loan_Operations_O     TERMINATED      DELETED On
15/11/06 10:18:50.704 PESecondary1    CMR1.LoanProcess.FNOSDS_5.CE_Operations No items.       Oms
15/11/06 10:18:50.719 PESecondary2    CMR1.LoanProcess.FNOSDS_5.WSRequest     No items.       Oms
```

Information

In the new Component Manager Framework, the Content Platform Engine servers classify all work as tasks. The tasks share a common thread pool. You cannot stop the thread, so to stop a task from executing, the task is terminated/deleted to remove the task from the thread pool and ensure that the task is not executed.

Procedure 3: Start the component queue

1. Back in the Administration Console for Content Platform Engine, ensure that you are in the Adapter tab for the component queue, **Loan_Operations**.
2. Start the component queue.
   a. Select the check box, **Enable queue processing in server**.



3. Click **Save**.
4. Check the status in the Component Manager logs.
   a. Go to the Component Manager logs tab, that you have open and click the browser refresh.
   b. You see that **Loan_Operations** is Added.

```
1/06 10:18:50.719 PESecondary2     CMR1.LoanProcess.FNOSDS_5.WSRequest      No items.        0ms
1/06 10:31:38.961 pool-10-thread-1         CE_Operations    RegionMount      P8ConnP5         CMR1.LoanProcess.FNOSDS_5.CE_Operations
oanProcess.FNOSDS_5.CE_Operations_0        CMDp.LoanProcess.FNOSDS_5.CE_Operations_0        CMR1.LoanProcess.FNOSDS_5.CE_Operations UPDATE
1/06 10:31:38.961 pool-10-thread-1         WSRequest        RegionMount      P8ConnP5         CMR1.LoanProcess.FNOSDS_5.WSRequest
oanProcess.FNOSDS_5.WSRequest_0    CMDp.LoanProcess.FNOSDS_5.WSRequest_0    CMR1.LoanProcess.FNOSDS_5.WSRequest      UPDATED 0ms
1/06 10:31:38.961 pool-10-thread-1         Loan_Operations RegionMount      P8ConnP5         CMR0.LoanProcess.FNOSDS_5.Loan_Operations:1
oanProcess.FNOSDS_5.Loan_Operations_0      CMR1.LoanProcess.FNOSDS_5.Loan_Operations        CMDp.LoanProcess.FNOSDS_5.Loan_Operations_0
oanProcess.FNOSDS_5.Loan_Operations        ADDED    15ms
```

5. When you are done reviewing the logs, close the browser window and all the tabs.

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

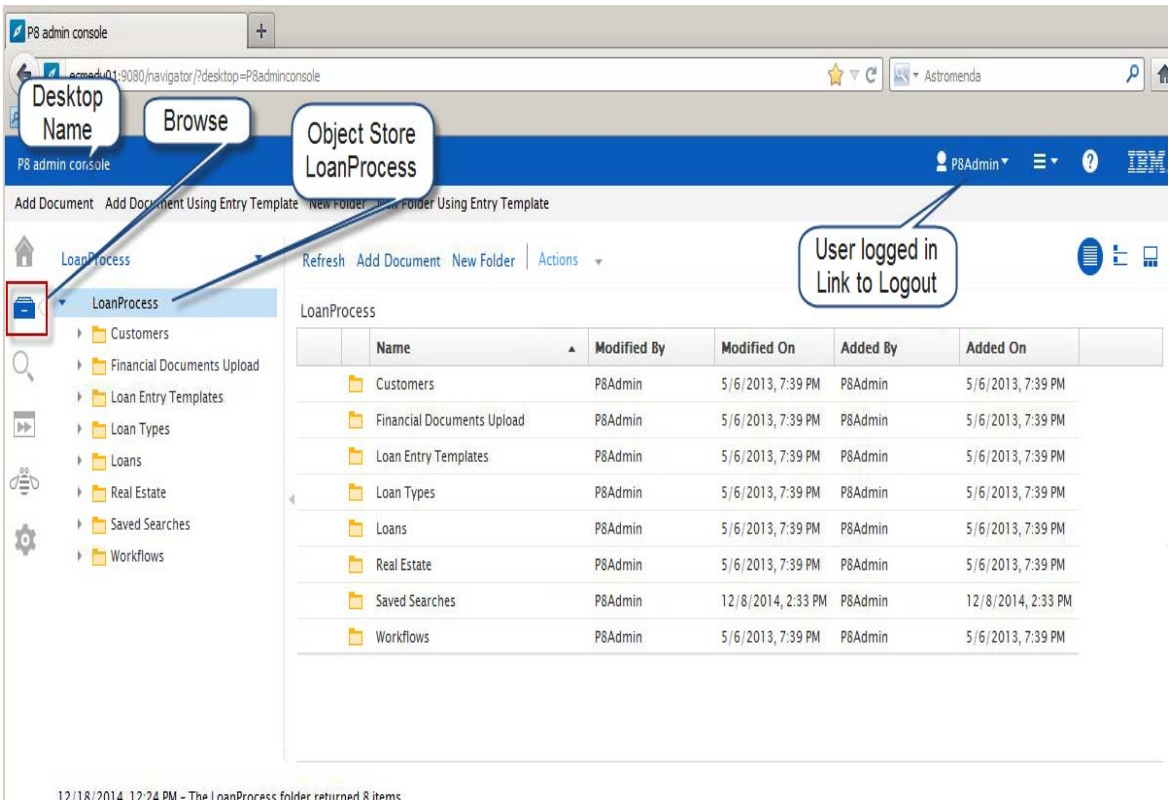
An IBM FileNet P8 Workflow system consists of one main engine, the Content Platform Engine, with two primary services, content and process services. In addition to the Content Platform Engine, a client application is required for the users and databases are required to store configuration information 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
      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.

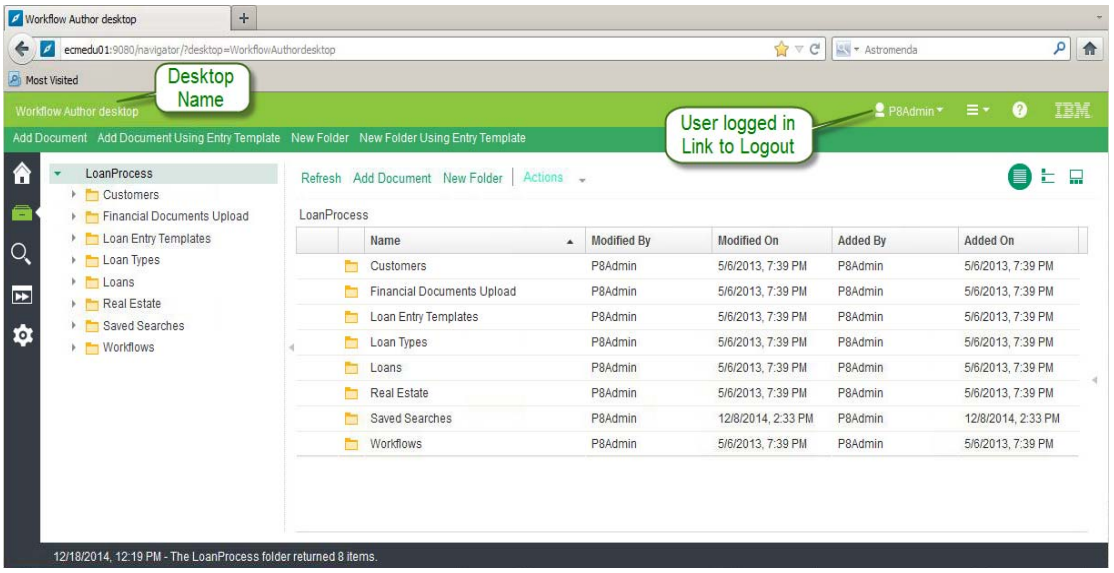
d. Logout of the P8 Admin console.

   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).

Appendix B. Solutions to exercises

This appendix contains the answers to exercises.

Lesson 1.1 Identify Workflow system concepts: Checkpoint

For each question, indicate the correct answer or the best answer.

1. What is a workflow system?

   a. A logical structure that contains isolated regions.

   b. A database that contains isolated regions.

   c. A logical structure similar to an object store but used for processing workflows.

   d. Another name for an isolated region.

   Answer = a

2. An object store can have multiple workflow system.

   True or **False**: **Answer = False**

3. Which of the following components are contained in an isolated region? (Select all that apply)

   a. Queues

   b. Event logs

   c. Application Spaces

   d. Connection points

   Answer = a, b, and c

4. What is the function of a work queue?

   a. Stores work items that are waiting to process by more than one user or an automated process.

   b. Stores work items that are waiting to be process by an individual.

   c. Stores workflows that are waiting to process by more than one user or an automated process.

   d. Allows the processing of a workflow step by an external entity.

   Answer = a

5. What is the function of a roster? (Select all that apply)

   a. Keep track of work in progress.

   b. Provide an efficient way to locate specific active workflows.

   c. Store work items that are waiting to process by an individual.

   d. Allows the processing of a workflow step by an external entity.

   Answer = a and b

6. When an isolated region is initialized, a number of default region objects are automatically created. (Select all that apply)

   a. DefaultRoster

b. DefaultApplication

c. DefaultIn-basket

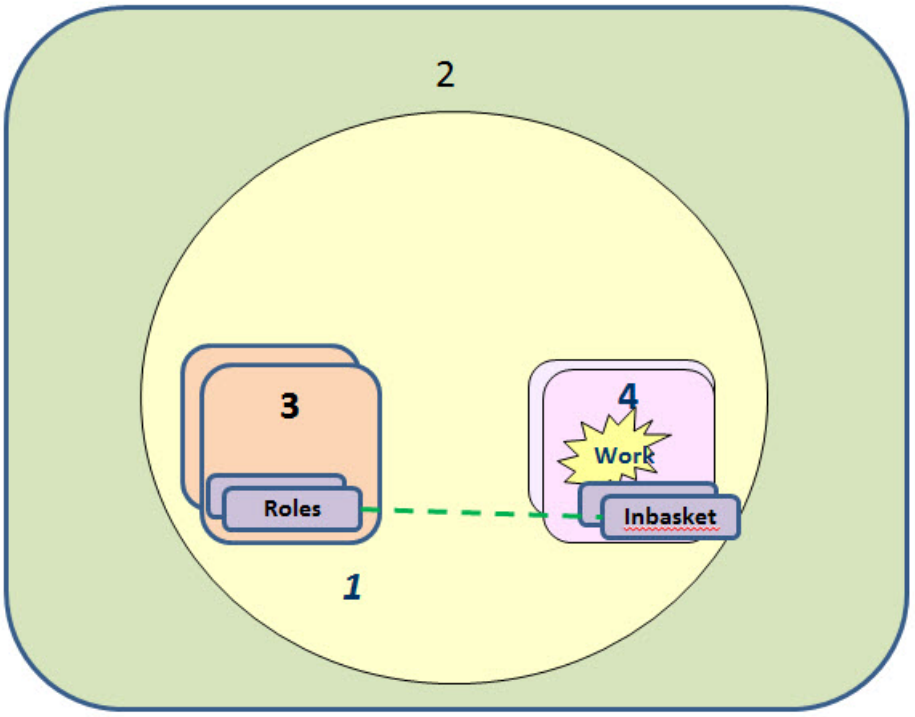
d. DefaultQueue

Answer = a and b

Lesson 1.1 Identify workflow system components: Checkpoint

Match the component name in the table to the component in the diagram.

Component Name
Queue
Isolated region
Application Space
Workflow system



Enter the component name, from the table, corresponding to the component number.

1. **Isolated region**
2. **Workflow system**
3. **Application space**
4. **Queue**

Lesson 1.3 Create isolated region objects

Procedure 4: Explore the isolated region objects with vwtool

In this procedure, you use the command-line tool, vwtool to validate the isolated region objects you created.

1. N/A
2. N/A
3. Use the queueconfig command to explore the **LoanQueue** configuration.
   a. <vwtool::10> `queueconfig LoanQueue <carriage return>.`
   b. What is the Queue type? ___**Process**_____
   c. What is the Physical table name? __**VWQueue10**_***217***_(the number varies)_
   d. What is the Database view name? __**VWVQ10**_**LoanQueue**_____
4. Use the queueconfig command to explore the **Inbox** configuration.
   a. <vwtool::10> `queueconfig Inbox <carriage return>.`
   b. What is the Queue type? ___**User centric**_____
   c. What is the Physical table name? ___**VWQueue10**_***199*** (number varies)_____
   d. What is the Database view name? ___**VWVQ10**_**Inbox**_____
5. Use the rosterconfig command to explore the **LoanRoster** configuration.
   a. <vwtool::10> `rosterconfig LoanRoster <carriage return>.`
   b. What is the Schema name? ____**LoanProcess**____
   c. What is the Physical table name? ___**VWRoster10**_***268*** (number varies)_____
   d. What is the Database view name? ___**VWVR10**_**LoanRoster**____
6. Use the logconfig command to explore the **LoanLog** configuration.
   a. <vwtool::10> `logconfig LoanLog<carriage return>.`
   b. What is the Schema name? ___**LoanPRocess**____
   c. What is the Physical table name? ___**VWLog10**_***217***____
7. Use the appspace command to explore the **NewLoans** configuration.
   a. <vwtool::10> `appspace NewLoans<carriage return>.`
   b. What is the ID? ___***217***_____

Lesson 1.4 Expose data fields

Procedure 5: Verify the exposed user fields with vwtool

You can see the user fields that are exposed with the administration console. The command-line tool, vwtool, can also be used to verify the exposed user fields. One advantage of using vwtool, is that you can capture a hardcopy of the output, which can be sent to IBM support as part of troubleshooting an issue.

1. N/A
2. N/A
3. Use the queueconfig command to explore the **LoanQueue** configuration.

<vwtool::10> queueconfig LoanQueue <carriage return>.

   a. Verify that the data fields that you defined for the queue are displayed.
   b. Record the Physical table name for the **LoanQueue**: _____
   c. Record the Physical Field Name for the data fields that you defined:
      - customer_name: **_customer_name_**
      - loan_amount: **__loan_amount_**
      - loan_id: **__loan_id____**
      - loan_date: **__loan_date_____**

Lesson 1.5 Define indexes

Procedure 6: View the indexes with vwtool

In this procedure, you use the command-line tool to view the indexes you created.

1. N/A
2. View the index that you created in the LoanQueue.
   a. At the <vwtool::10> prompt, type `queueconfig LoanQueue`.
   b. Observe the index that you created (Customer_index) is displayed at the end of the report in the Logical Index Name column, and that its index keys are displayed in the Index Fields column.
   c. Record the **Physical Index Name**. ____**VW**_**IND*81***__(number varies)___
3. View the index that you created in the LoanRoster.
   a. At the <vwtool::10> prompt, type `rosterconfig LoanRoster`.
   b. Observe the index that you created (Loan_index).
   c. Record the **Physical Index Name**. ____**VW**_**IND*79***_(number varies)__
4. View the index that you created in the LoanQueue.
   a. At the <vwtool::10> prompt, type `logconfig LoanLog`.
   b. Observe the index that you created (Loan_index).
   c. Record the **Physical Index Name**. _____**VW**_**IND*77***__(number varies)_
5. Leave the vwtool window open for the next procedure.

Appendix C. Checkpoint solutions

Questions

Select the best answer for each question.

1. Who, besides P8Admin, can see work in LoanQueue?
   a. No one
   b. Loan Guests
   c. Clerks
   d. Loan Processors

   Answer: d (Only Loan Processors are given access to that queue.)
2. Who, besides P8Admin, can track work items?
   a. No one
   b. Loan Guests
   c. Clerks
   d. Loan Processors

   Answer: d (Loan Processors are given access to Loan Status queue.)
3. Who, besides P8admin, can launch a workflow?
   a. Anyone
   b. Loan Guests
   c. Clerks
   d. Loan Processors

   Answer: a (LoanRoster is unrestricted.)
4. If you sign in as a Loan Processor, which **queues** would you be able to see?
   a. NewLoans, MyWork
   b. MyWork, LoanStatus
   c. LoanQueue, Tracker
   d. None.

   Answer: c (NewLoans and MyWork are in-baskets, not queues.)

5. If you sign in as Olivia, which in-baskets would you be able to see?
   a. NewLoans, Mywork
   b. MyWork, LoanStatus
   c. LoanQueue, Tracker,
   d. None.

   Answer: b (Olivia is individually allowed to view these queues.)

Appendix D. Checkpoint solutions

Exercise , "Identify workflow system administration tools," on page 3-5

In this lesson, you learned about workflow system maintenance tools. For each scenario, identify the tool that you can use to accomplish a task.

For each question, indicate the correct answer or the best answer.

1. Which tool can you use to search for work in progress?
   a. Process Services Ping Page.
   b. System Dashboard
   c. Process Administrator
   d. Process Configuration Console

   Answer: c

2. Before your database administrator can back up the workflow system database tables, you must lock the isolated region. Which tool do you use?
   a. Process Administrator
   b. Process Configuration Console
   c. System Dashboard
   d. Administration Console for Content Platform Engine

   Answer: d

3. Configuration of queues, rosters, and event logs was formerly accomplished by using _____ but is now accomplished by using _____.
   a. Process Administrator, System Dashboard
   b. Process Configuration Console, Process Administrator
   c. Process Administrator, Administration Console for Content Platform Engine.
   d. Process Configuration Console, Administration Console for Content Platform Engine

   Answer: d

4. Misuse of which administration tool can cause work item corruption, compromise data integrity, or loss of data?
   a. vwtool
   b. System Dashboard
   c. Process Administrator
   d. Process Services Ping page.

   Answer: a

Troubleshoot the workflow system checkpoint, on page 3-55

troduction

In this lesson, you learned about gathering information for troubleshooting For each scenario, identify the tool that you can use to accomplish a task.

For each question, indicate the correct answer or the best answer.

1. A user is unable to launch Process Designer. Select a logging method to collect information.
   a. Fnlog4
   b. Vwtool
   c. CE logs
   d. PE logs

   Answer: a
2. A user is unable to see a work queue. Which trace options do you enable to troubleshoot the issue?
   a. Database access
   b. Stored Procedure Calls
   c. Inst. Sheet Interpreter
   d. Security calls

   Answer: d

Appendix E. Solutions to exercises

This appendix contains the answers to the quiz in Lesson 1.1.

Test your knowledge of component integration.

1. d
2. a
3. F
4. b
5. c
6. F
7. d
8. T

Appendix F. Troubleshooting

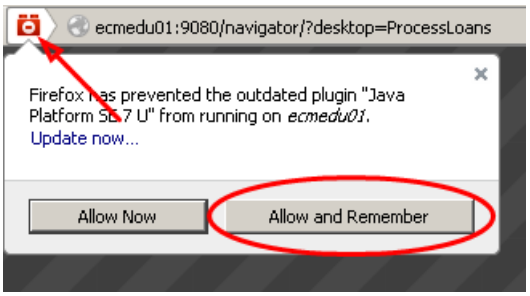
Appendix Overview

This appendix contains issues and resolutions.

Java plugin error

Some Content Platform Engine applications run as Java applets. When you launch them for the first time, you might see a Java plugin error. If you see a Java plug-in error message,

1. Click the red icon in the address bar.
2. Select Allow and Remember.



WebSphere Application Server error log

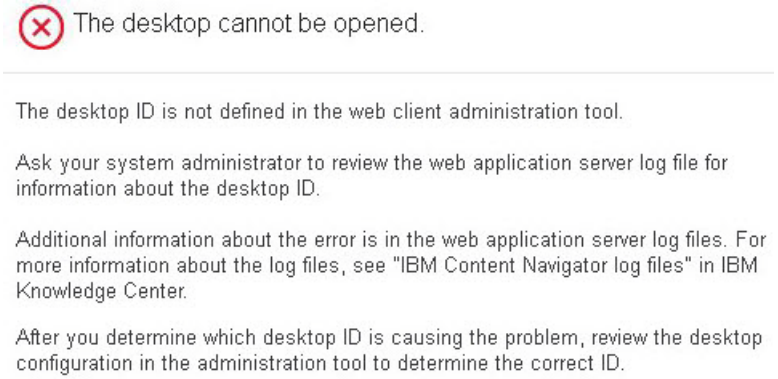
The IBM Content Navigator and Content Platform Engine applications are web applications that run on the WebSphere Application Server. If you encounter issues that are not covered in the issues, listed in the appendix, review the WebSphere Application Server error log.

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 attempt to launch a Content Navigator desktop and you get the error:



Cause

Content Navigator cannot find the desktop, identified by the desktop ID.

Resolution

Verify the URL that you entered to launch the desktop. Ensure that the desktop ID, following the equal sign is not misspelled, for example:

```
http://ecmedu01:9080/navigator/?desktop=ProccessLoans
```

The desktop ID, has an extra c in the name; it should be, ProcessLoans.

Issue

The P8 admin console or the Workflow author desktops 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.

Issue

You open an IBM Content Navigator desktop and do not get a login prompt.

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.

Administration Console for Content Platform Engine issue

Issue

You are working with the Administration Console for Content Platform Engine successfully. You get a message that states that you must be a member of the Process Administrators group.

Cause

The desktop was open for a long time, which can cause a session authentication timeout.

Resolution

Log out of the Administration Console for Content Platform Engine and close the browser window. Open a new browser window and open the Administration Console for Content Platform Engine.

Issue

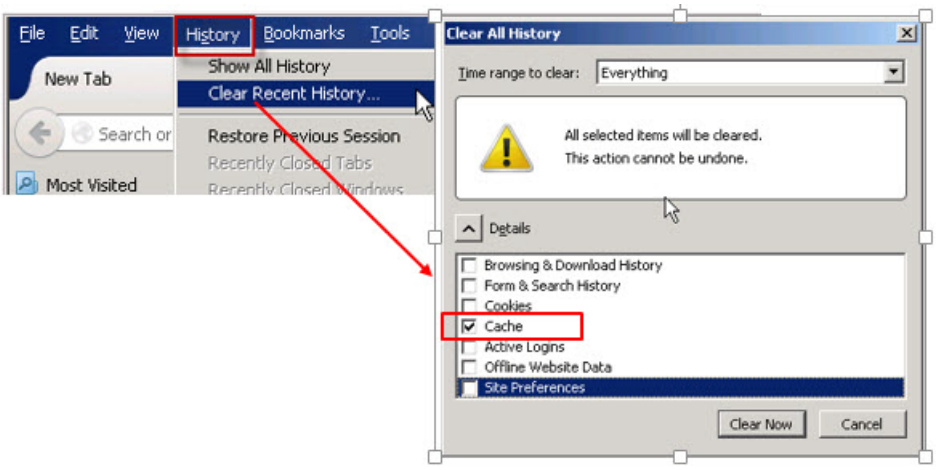
You have a browser tab open to the Administration Console for Content Platform Engine (ACCE). You refresh the tab, expecting to get a login prompt and nothing happens.

Cause

When you have ACCE and an IBM Content Navigator (ICN) desktop open in the same browser session, ICN attempts to share the logon credentials. Confusion occurs if you use different credentials for ACCE and the ICN desktop.

Resolution

Clear the browser cache.



On occasion it might be necessary to clear the cookies.

Issue

You are working with the Administration Console for Content Platform Engine successfully. You get a message that states that you must be a member of the Process Administrators group.

Cause

The desktop was open for a long time, which can cause a session authentication timeout.

Resolution

Log out of the Administration Console for Content Platform Engine and close the browser window. Open a new browser window and open the Administration Console for Content Platform Engine.

Process Designer tool issue

Issue

You open the Process Designer tool for the first time and you see a blank screen; it appears to be hung.

Cause

The first time that you open the Process Designer tool, all the Java applications need to be loaded into the Java cache.

Resolution

Be patient. The tool can take a few minutes to display.

Issue

You open the Process Designer tool from the Workflow Author desktop and you get screen that shows the plug-in is vulnerable and should be updated.

Cause

Mozilla Firefox is protecting against the Padding Oracle On Downgraded Legacy Encryption (Poodle) threat.

Resolution

Click the *Activate Java Platform SE 7 U* link, and select *Allow and Remember*.

Import the isolated region for Lesson 1.7

If you want to do the exercises in Lesson 1.7 without completing the Lessons in 1.3 - 1.6 or you encountered issues in the previous labs, follow the steps to import the isolated region.

1. Launch the Administration Console for Content Platform Engine.
2. Open the object store, **LoanProcess**.
3. Create the connection point, **NewLoansR10** and associate it with the isolated region, **LoanProcessReg10**, region number **10**.
   a. If the connection point and the isolated region exist, then initialize the isolated region.
4. Open the Process Configuration Console.
   a. Right-click the **Workflow System** node and select **Configure Workflow Settings**.
   b. Connect to the isolated region NewLoansR10(10).

5. Import the isolated region configuration.
   a. Right-click the **NewLoansR10(10)** node and select **Import from XML file**.
   b. Browse to:

   C:\Labs\Case Foundation 5.2.1 Administration\Configure workflow system\Export

   c. Select **NewLoansR10_export.xml**
   d. Leave the **Import Type** set to **Merge**.
   e. Click **Import**.
6. Close the Process Configuration Console.
7. Log out of the administration console.
8. Close the browser.

You can proceed with the Lesson 1.7 exercises.

•

Technotes

http://www.ibm.com/support/docview.wss?uid=swg27043131

http://www.ibm.com/support/docview.wss?uid=swg21963021

http://www.ibm.com/support/docview.wss?uid=swg21882893

Component Queue issues

Issue

You update a component queue adapter property with ACCE. The component behaves as if the change was not made, even though the updated value is displayed correctly. The issue occurs with component queue security updates as well.

Cause

There is a known bug in releases before IBM Case Foundation 5.2.1.3.

Resolution

There are multiple methods to resolve the issue. If you do not have the fix pack installed, you can:

- In Administration Console for Content Platform Engine, stop the component queue and save. Start the component queue and save.
- Repeat the update by using Process Configuration Console, then commit the changes.