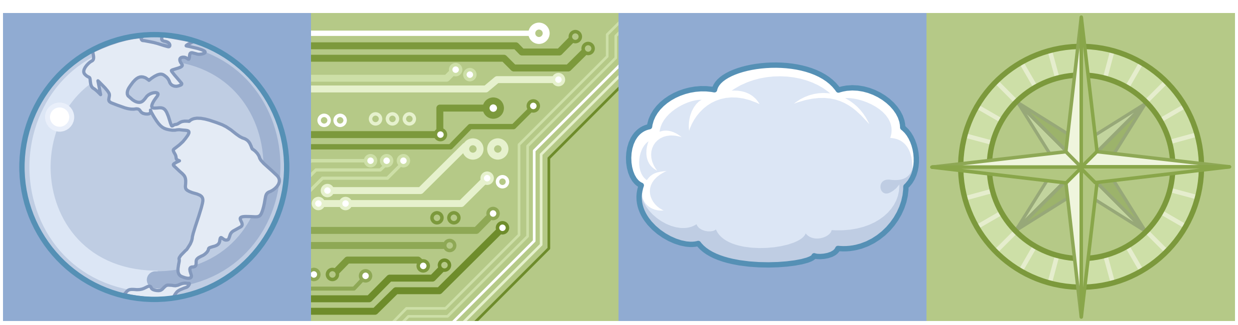
IBM Training

Student Exercises

IBM Case Foundation 5.2.1 Introduction

Course code F230G ERC 1.0



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Unit 1. IBM Case Foundation Introduction

Unit overview

This unit contains the following lessons.

Lessons

Unit dependencies

The activities in this unit must be performed in order.

This unit is independent of all other units.

Requirements

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

Lesson 1.1. Workflow fundamentals

Overview

Why is this lesson important to you?

As a workflow administrator, you:

- Help workflow participants to locate work and complete workflows.
- Respond to management decisions that require changes to workflows.
- Gather information about workflow activity.

As a workflow author you:

- Design FileNet workflow applications.
- Implement and test FileNet workflow applications.
- Communicate application details to the workflow administrator and possibly the application developer.

In order to do these tasks effectively, you need to be familiar with fundamental workflow elements and how they are used in FileNet Workflow applications.

Activities

- Identify workflow concepts: Written exercise, page 1-5
- Prepare your system for the student exercises: Walkthrough, page 1-7
- Identify elements in a workflow definition: Walkthrough, page 1-13

References

If you encounter any issues refer to, Appendix B, Troubleshooting, on page B-1

User accounts

Type	User ID	Password
IBM Content Navigator desktops: Workflow Author desktop & P8 Admin console	p8admin	IBMFileNetP8
Administration Console for Content Platform Engine	p8admin	IBMFileNetP8
Windows Server	Administrator	passw0rd

Note

Passwords are always case-sensitive. User names are not case-sensitive.

Identify workflow concepts: Written exercise

For each of the following questions, indicate the correct answer.

1. A new workflow application allows each participant to select work from the Inbox in the Work feature of the IBM Content Navigator desktop. The work is assigned to a specific user for processing.

   The Inbox is an example of?

   a. A component queue

   b. A user queue

   c. A work queue

   d. A work item

2. A workflow author saves a workflow, during development, to a file with a .pep extension in XML format. The file contains the specifications for the new workflow, including its process maps, steps, routes, and properties.

   What is this XML file called?

   a. Queue definition

   b. Work item

   c. Workflow definition

   d. Workflow roster

3. Which of the following workflow elements provides an efficient way to search for running workflows in a production IBM FileNet Workflow system?

   a. Event log

   b. Workflow flow

   c. Work item

   d. Workflow roster

4. Which of the following workflow elements is used to keep a record of workflow history in an IBM FileNet Workflow system?

   a. Event log

   b. Work queue

   c. Work item

   d. Workflow roster

Prepare your system for the student exercises: Walkthrough

Introduction

The Windows server image 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 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).

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.

4. If you have issues with starting the system components, you can need to stop and restart the components. Refer to `Appendix A - Start and Stop System Components`.
5. 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 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. 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 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.

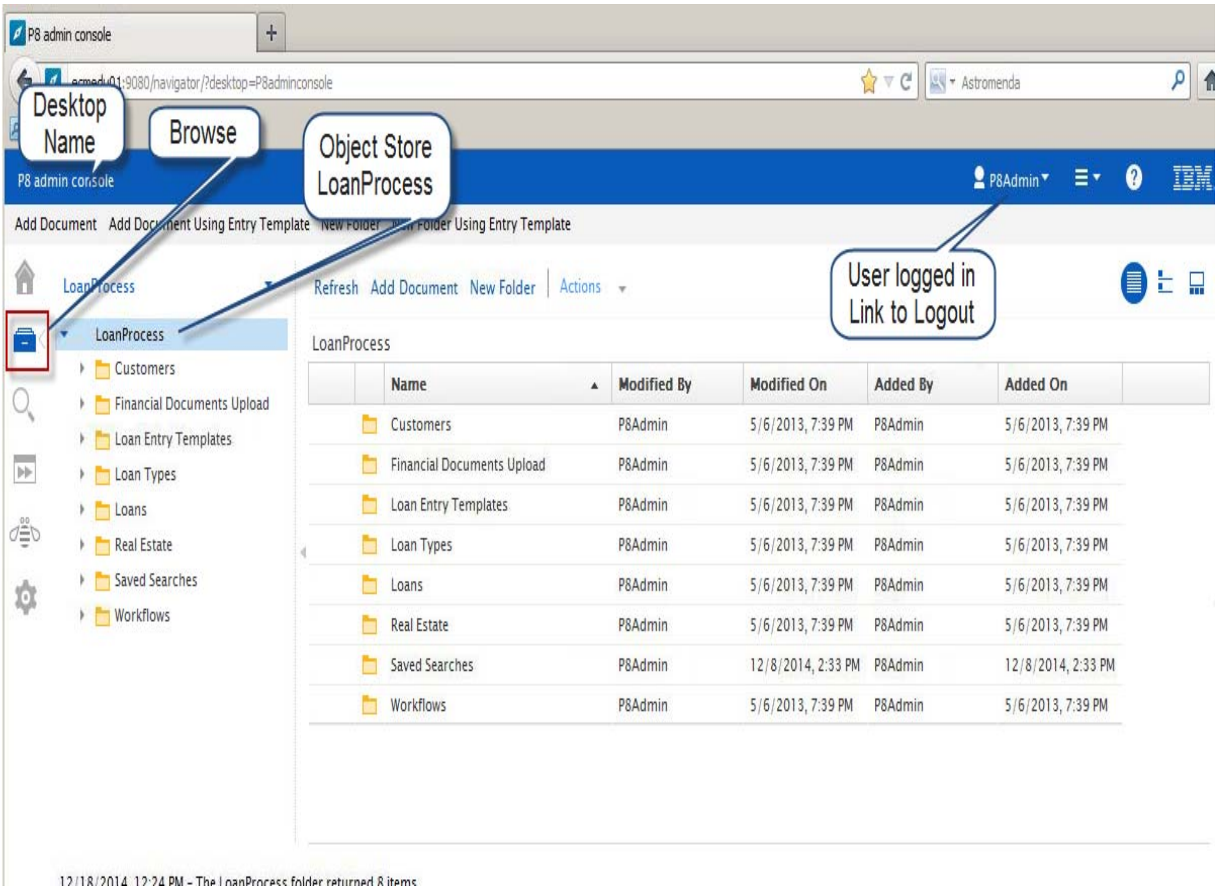
   c. Log in as the administrator.
      - Username: `p8admin`
      - Password: `IBMFileNetP8`

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, 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`.

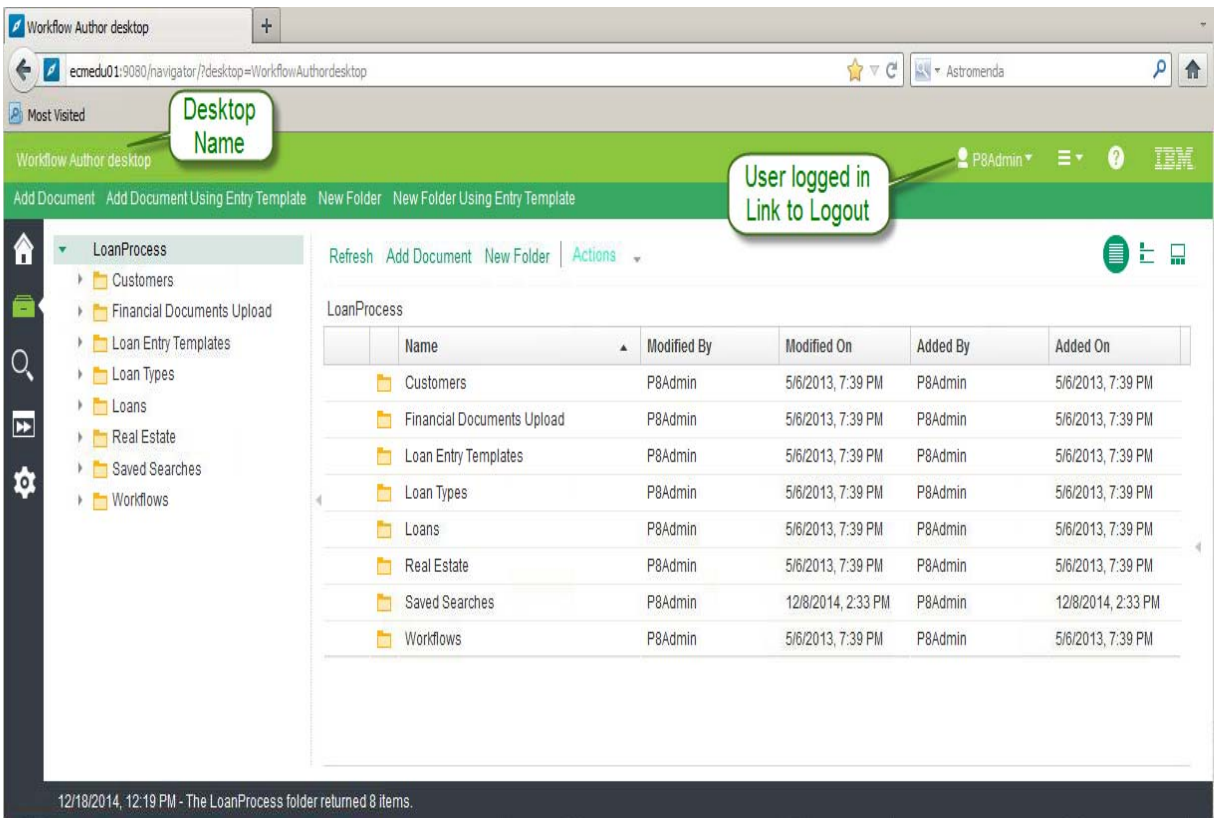
  - On the upper right corner of the desktop, click *P8Admin* and select Log Out.
  - Click Log Out to confirm.

4. Verify that the Workflow Author desktop is functioning properly.
   a. Open a new Mozilla Firefox browser window.
      - 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 all the browser windows and all the tabs.

Identify elements in a workflow definition: Walkthrough

In this activity, you use the Process Designer tool to open and review a Loan Processing workflow definition file. You identify some elements that are used by the workflow author to create the workflow definition.

Information

The Process Designer tool is primarily used by the workflow author, not the workflow administrator. However, it is the best tool to use to show the elements of a workflow definition. It is important for the workflow administrator as well as the workflow author to have a good understanding of how a workflow is structured.

The ability to launch the Process Designer tool from an IBM Content Navigator desktop, which is configured with the Content Platform Engine process applets plug-in, is new to IBM Case Foundation Version 5.2.1. In IBM Case Foundation 5.2.0 and earlier releases, you launch Process Designer from the tools menu of Workplace XT.

Help Path: IBM Knowledge Center for FileNet P8 Platform 5.2.1 > Integrating workflow into document management > Designing workflows > Running Process Designer

Procedures

Procedure 1: Open a copy of a workflow definition

1. Start Process Designer.
   a. Open a Firefox browser window and click the *Workflow Author Desktop* on the Bookmarks menu.
   b. Log in to the IBM Content Navigator desktop as a workflow author.
      - Username: `p8admin`
      - Password: `IBMFileNetP8`
   c. Right-click the *LoanProcess* object store, in the navigation pane, and select the last option, Open Process Designer.
      i. If you get a screen that shows the plug-in is vulnerable and should be updated, click the *Activate Java Platform SE 7 U* link, and select *Allow and Remember*.
      ii. Do NOT Check for Updates.

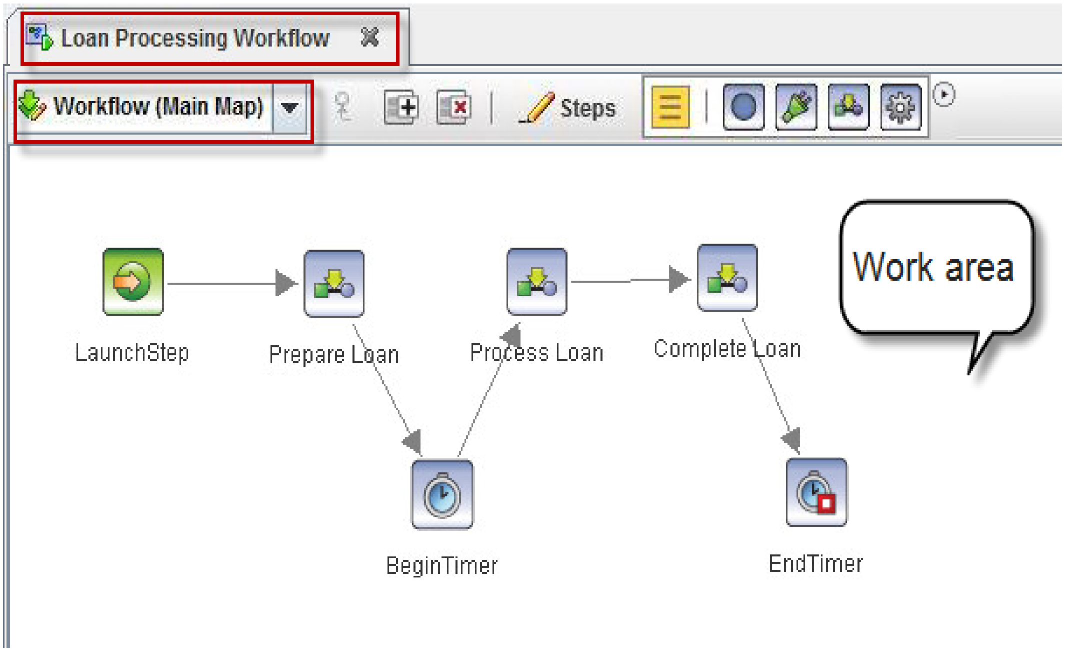
Important

The first time that you launch the Process Designer tool; it can take several minutes, be patient. You see a white screen display, and eventually the Process Designer tool finishes coming up and you see just the LaunchStep on the work area. Once the applet is loaded into the browser Java cache, the applet will display faster the next time it is launched.

2. Open the workflow definition file.
   a. In the Process Designer tool, click File > FileNet > FileNet Open/Checkout.
   b. Go to the *LoanProcess* object store > *Workflows* folder and select *Loan Processing Workflow Collection.*

   Tip: You can either double-click or select Open for each item.

The Loan Processing Workflow main map is displayed in the Process Designer work area. This main map is named *Workflow (Main Map)*.



Procedure 2: Identify workflow properties

Identify some of the workflow properties that defined for the Loan Processing Workflow.

1. View the Loan Processing Workflow workflow properties in the lower pane.

Hint

To expand the viewing area of the object properties pane, in the lower half of the interface:

- Drag the horizontal separator bar between the panes upwards, or click the up arrow, right above the Workflow Properties tab.

  To expand the work area again, click the down arrow.

2. Click the Workflow Properties > General tab.
   a. What is the value of the Workflow Name property?

      ____

3. Click the Workflow Properties > Advanced tab.
   a. What roster and event log are specified for the Loan Processing Workflow?

      Roster: ______________________________

      Event Log: ______________________________

4. Click the Workflow Properties > Data Fields tab and notice that String, Float, Integer, Boolean, and Time data type fields are defined for this workflow.

   Tip: Use the scroll bar at the right of the object properties pane to view more data fields.

5. Click the Workflow Properties > Attachments tab.

   What are the names of the attachments specified for this workflow?

   ____

6. Click the Workflow Properties > Workflow Groups tab.

   Which participants are assigned to the LoanOfficers workflow group?

   ____

Hint

To view the participants list for LoanOfficers, select LoanOfficers in the list of Workflow Groups on the left.

7. Click the Workflow Properties > Maps tab.

   Which submap performs the loan processing?

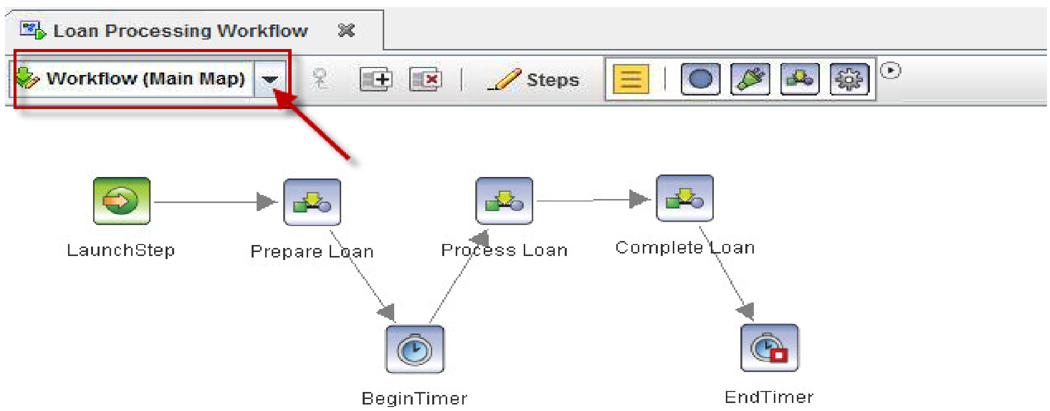
   ____

8. Notice the other submaps that are listed and the description of what they do.

Procedure 3: Identify queues and steps

For each of the Loan Processing Workflow Collection submaps, identify the steps for which work queues are assigned.

1. On the map toolbar, click the down arrow located next to Workflow (Main Map) and select *PrepareLoanMap* from the list of submaps.



   In the workflow map pane, the steps, and routes in the *PrepareLoan Map* submap are displayed.

   Tip: Use the scroll bar at the right side of the map pane to adjust the viewing area.

   You identify a work queue step by the following icon: 

2. Click the *Correct Information* work queue step to display its properties in the object properties pane at the bottom of Process Designer. A new tab that is named Correct Information, is added in the object properties pane to display the step properties.
3. Click the General tab for *Correct Information*. What is the name of the queue that is listed under participants?

Procedure 4: Record steps and queues

Note

As shown in the partially completed table, the Terminate submap has the LoanUnderwriter work queue that is assigned to the Set Loan Document Status step. You identify a work queue step by the following icon: 

1. Record the step name for each work queue step in the submaps in the following table.Record the assigned queue name for each work queue step in the following table.

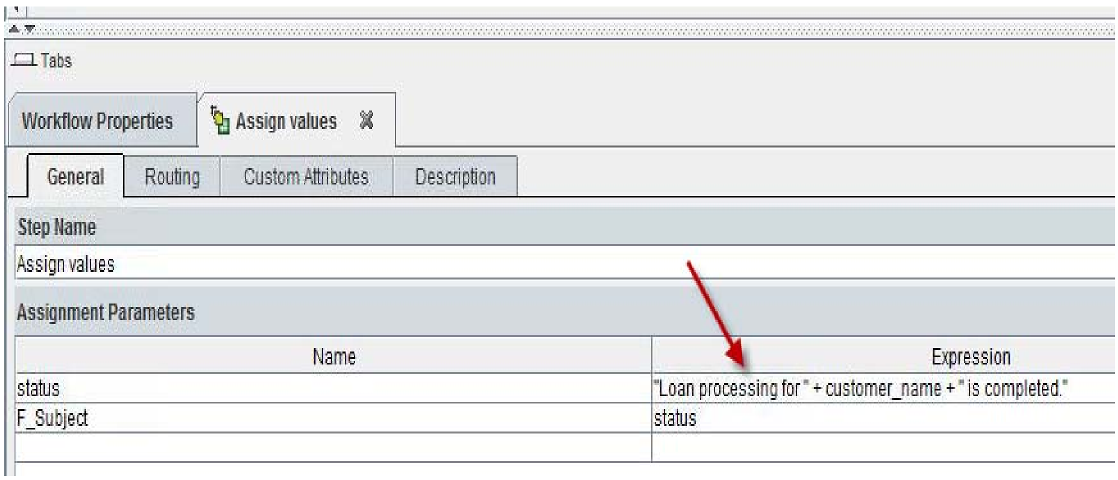
Submap	Step	Work Queue
Terminate	Set Loan Document Status	LoanUnderwriter
PrepareLoanMap		
PrepareLoanMap		
ProcessLoanMap		
ProcessLoanMap		
ProcessLoanMap		
ProcessLoanMap		
CompleteLoanMap		
CompleteLoanMap		
CompleteLoanMap		

Procedure 5: View a system step in the workflow

For the Loan Processing Workflow, view properties of one system step.

1. On the map toolbar, click the down arrow and select the *CompleteLoanMap* submap from the list.
2. Click the Assign Values system step.

   The following icon represents an Assign system step. 
3. Notice that, in the General tab for Assign Values, an expression for computing the status field is shown in the Expression column.



4. Click File > Exit to exit the Process Designer tool.
5. When prompted, select ***Cancel the checkout?***, and click OK.
6. If prompted to save your changes, select No.
7. Log out of the Workflow Author desktop.
8. Close the browser window.

Lesson 1.2. Workflow processing

Overview

Why is this lesson important to you?

Your IBM FileNet workflow application includes numerous workflow processing features. As a workflow administrator, you are responsible for administering work items during workflow processing. As a workflow author you build, and implement the application. You must know how to launch, process, and track a workflow and view history of workflow processing events.

Activities

- Launch, process, and track a workflow: Walkthrough, page 1-23

References

- If you encounter any issues refer to, Appendix B, Troubleshooting, on page B-1

User accounts

Type	User ID	Password
IBM Content Navigator desktops: Workflow Author desktop & P8 Admin console	p8admin	IBMFileNetP8
Administration Console for Content Platform Engine	p8admin	IBMFileNetP8

Note

Passwords are always case-sensitive. User names are not case-sensitive.

Launch, process, and track a workflow: Walkthrough

Introduction

In this exercise, you open and view a basic loan processing workflow definition file in the Process Designer tool. You launch and process the workflow. You track the progress of the workflow at each step with the use of administrative tools. After completion of the workflow, you view the event log containing information about historical workflow events.

Procedures

Procedure 1: Open and view a workflow definition file

In this exercise, you work with a workflow definition that contains three steps. This simplified version of the loan processing workflow gives you the opportunity to run a workflow from and track the location of work at each step with administrative tools.

1. Launch the IBM Content Navigator, Workflow Author desktop.
   b. Open a Firefox browser window and click the *Workflow Author Desktop* on the Bookmarks menu.
   c. Log in to the IBM Content Navigator desktop as a workflow author.
      - Username: `p8admin`
      - Password: `IBMFileNetP8`

2. Open and view a basic loan processing workflow definition file in Process Designer.
   a. On the left navigation pane, double-click the *Workflows* folder to open it.
   b. Double-click the icon for the Basic Loan Processing Workflow.

      Hint: You can also right-click the workflow and select Open.

Information

Because the workflow is saved with a class definition of Workflow Definition, IBM Navigator automatically opens it with the Process Designer tool.

   c. Notice that the main map of Basic Loan Processing Workflow is displayed.

      In this workflow definition, only the main map, named Workflow, contains steps to be executed.
   d. In the Workflow Properties General tab, notice the values of the Workflow Name and Subject fields.

      What is the Workflow Name? ______________

      What is the value of the Subject field? ________________________

      The Subject field is used to identify a task. This value appears as the task name in the Inbox or queue and in the F_Subject field in the Process Administrator tool.
   e. In the object properties pane, click Workflow Properties > Data Fields.
   f. Notice the four data fields that are defined for this workflow definition: LoanName, LoanAmount, LoanStatus, and LoanApproved.
   g. On the map, select the *Verify Info* step.
   h. In the *Verify Info* > *General* tab in the object properties pane, verify that this step is assigned to the LoanOfficer work queue.
   i. Click the *Routing* tab.

      What are the two possible responses available at the *Verify Info* step?

      ____
   j. Click the *Process Loan* step on the map.

      What work queue is assigned to this step?

      ____
   k. Click the *Modify Info* step on the map.

      What is the work queue or participant that is assigned to this step?

      ____

3. Click File > Exit to exit the Process Designer tool.
4. Select *Cancel the checkout?*, and click OK.
5. Leave the Workflow Author desktop open for the next procedure.

Procedure 2: Launch a workflow

In this exercise, you launch the workflow from the client application, IBM Content Navigator. In a development environment, the workflow author uses the Process Designer tool to develop and test a workflow definition. In a production workflow environment, workflows are typically launched by an automated process or an event or by a custom program that launches a workflow.

1. Launch the workflow definition to create a workflow instance and start the workflow processing.
   a. You are in the Workflow Author desktop, in the Workflows folder.
   b. Select the Basic Loan Process Workflow.
   c. Click the Actions link, and select Workflow > Launch Workflow.
   d. Enter the following values:
      - Customer Name: `Mary Miller`
      - LoanAmount: `0.0`
      - Comments: `New loan application`

   Tip: You can use the tab key to jump to the next field.
2. Click the *Launch Workflow* link, at the bottom.
3. Log out of the Workflow Author desktop.
4. Close the browser window.

Procedure 3: Perform a search for the work item

In this procedure, you search for work items with the Process Administrator tool.

Information

You can search for work items in two ways:

- Process Administration tool
- The new workflow search
  - New feature added to ACCE in IBM Case Foundation 5.2.1

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 workflow administrator.
      - Username: `p8admin`
      - Password: `IBMFileNetP8`

   c. Click the LoanProcess object store.
   d. Expand Administrative >Workflow System > Connection Points
   e. Right-click P8ConnP5 and select *Administer Work Items*.

      Hint: The Process Administrator tool displays.

2. Enter the following search criteria in the top search pane and click Find Now.

Field name	Value
Look for	Work items
In	Workflow Roster
Select one	DefaultRoster
Search mode:	Edit (all fields)

3. Click Find Now to execute the search.

   Search results are displayed.

   You should see two rows that are listed, one is the workflow that you launched and the other is the tracker work item. You learn about the tracker work item in another activity.

4. Examine the search results.
   a. Verify that the workflow that you launched in the previous activity for this lesson displays in the search results.

      Tip: The F_Subject column should contain the text `Basic Loan`.

      Tip: You can expand the width of a column by hovering over a column separator in the column heading area until the icon changes to a double-arrow, then clicking and sliding the column separators. Use the scroll bar at the bottom of the results pane to view all columns.
   b. Answer the following questions about this work item.

      In which queue, besides the Tracker(0) queue is the work item currently waiting?

      ____

      What is the value of the LoanName field?

      ____

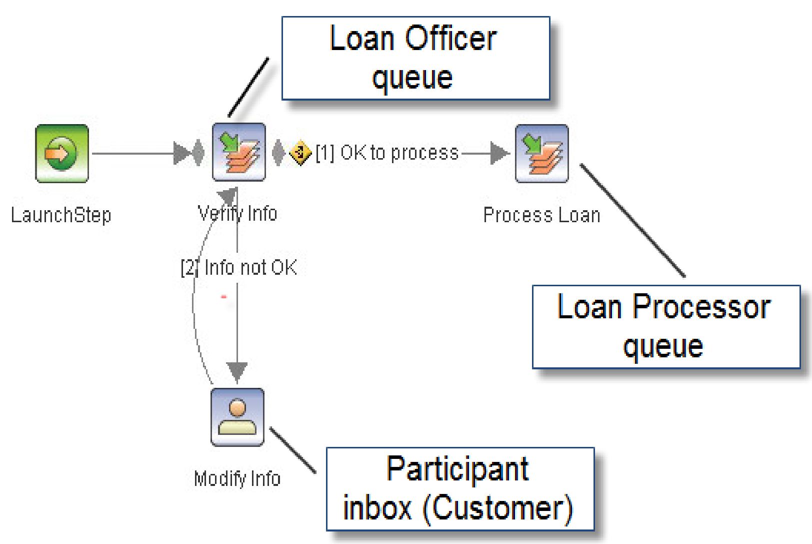
      What is the value of the LoanApproved field?

      ____
5. Leave the Process Administrator tool open for the next procedure, but minimize the window.

Procedure 4: Process and track the workflow

In this procedure, you process each step in the workflow and use two different tools to track the location and progress of the work item.

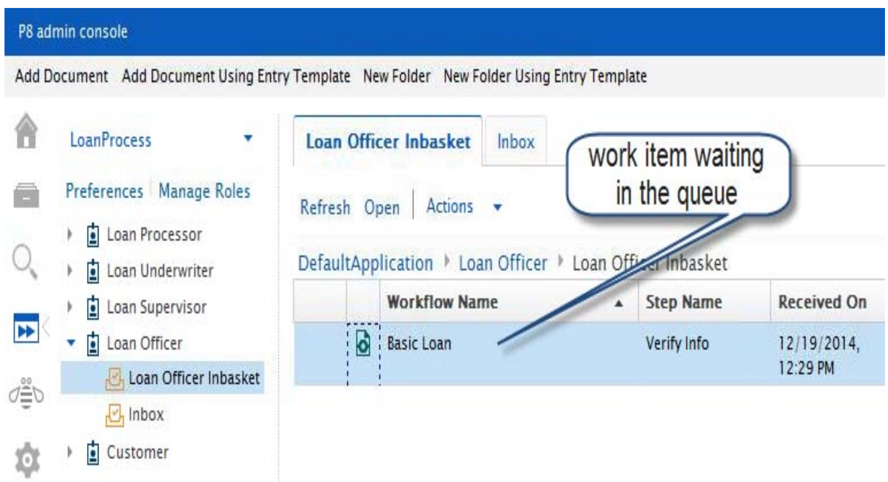
Review: Here is a diagram of the Basic Loan workflow map:



1. Complete the Verify Info step in the workflow with the P8 Admin console desktop.

   The Loan Officer receives a request for a new loan from the customer and verifies the information.

   a. Open a new tab in the Mozilla Firefox browser, launch the P8 Admin console desktop and log in as the p8admin user, if prompted.
   b. Click the Work feature icon: 
   c. Expand the Loan Officer queue.
   d. Select the Loan Officer in-basket.
   e. You see something similar to:



   Tip: In the previous procedure, while searching for the work items, you found that the work item was waiting in the LoanOfficer queue.

   f. Click the icon for the work item to open it.
   g. Type `NEW` in the LoanStatus field.
   h. On the bottom, click the `More Info Needed` link.

Information

The links that are displayed are the responses available for the workflow step. The list depends on the access rights of the user and the responses that are configured in the workflow definition.

2. View the status of the work item with the Process Administrator tool.

   a. Return to the Process Administrator tool window.

      Hint: Minimized Mozilla Firefox window with title: administration P8ConnP5.

   b. Click Find Now to re-execute the search.

   c. Verify that the Basic Loan work item is waiting in the Inbox(0) queue.

3. View the status of the work item with the Process Tracker tool.

   a. In the results pane, select the row that contains the Basic Loan work item that is in the Inbox(0) queue.

   Tip: To select an entire row, click the number in the first column of the row.

   b. Click Open Tracker icon that is on the Results pane toolbar.

      the Process Tracker tool opens showing the progress of the work item with Modify Info as the current step in progress.

   c. Explore the History pane in the Process Tracker tool to view current and historical information about the work item.

      Tip: Use the four tabs on the bottom of the window to view Milestones, Workflow History, Step History, and Work Items.

   d. Click the *Modify Info* step, in the Workflow Map area.

      In the Properties pane, select the Fields tab, notice that the value of LoanStatus is “New”, the value you entered in the *Verify Info* step.

      If you need help with using features of the Process Tracker tool, click Help on the menu bar.

      To return to the Process Tracker tool window, minimize the browser window and click the Process Tracker tool icon in the system tray.

   e. Click the Tasks menu and explore the actions that you can perform on the work item.

Information

The list of tasks are common workflow administrator tasks, such as assigning a work item to another participant. Performing actions on work items is covered in another course.

   f. Close the Process Tracker tool.

   g. Minimize the Process Administrator tool.

4. Complete the Modify Info step in the workflow.

   The Loan Officer requested more information, the customer now has a work item in the inbox and adds the requested information and complete the work.

   a. In the P8 admin console, expand the Customer queue to view the Inbox.
   b. Click the icon for the Basic Loan workflow name to open the work item in the step processor.
   c. Type `5000.` in the LoanAmount field.
   d. Click Complete.

5. View the status of the work item.

   a. Return to the Process Administrator tool window.
   b. Click Find Now to re-execute the search.
   c. Verify that the work item is waiting in the LoanOfficer queue.
   d. Select the row in the LoanOfficer queue and click the Process Tracker tool icon to open it.
   e. What is the step that currently processing? _____________
   f. Verify that the value of LoanAmount is `5,000.0`.
   g. Explore the History pane and Properties pane if you want.
   h. Close the Process Tracker tool.
   i. Close the Process Administrator tool.

6. Complete the Verify Info step in the workflow.

   The work item returns to the Loan Officer for verification again. The Loan Officer decides that the information is OK.

   a. In the P8 admin console, expand the LoanOfficer queue and select the Loan Officer in-basket.
   b. Click the Basic Loan workflow to open the work item in the step processor.
   c. You verify that a valid Loan Amount is specified; it is OK to proceed. Click the `Info OK` link, at the bottom, for the response.
   d. Leave the P8 admin console desktop open for the next step.

7. View the status of the work item with the new workflow search feature.

   This time you use the new workflow search feature added to the Administration Console for Content Platform Engine (ACCE), in the IBM Case Foundation 5.2.1 release, to search for the work item. You can use the Administration Console for Content Platform Engine web application or the ACCE feature, which is configured in the P8 Admin console IBM Navigator desktop.

   a. You are in the P8 Admin console desktop and you are logged in as p8admin.

   b. Click the ACCE feature icon.

      Hint: It can take a few minutes for ACCE to display.

   c. Expand Object Stores and Open the LoanProcess object store.

   d. Right-click Search and select New Workflow Search.

   e. Enter the following search criteria in the top search pane.

Field name	**Value**
Search result type	Work items
Workflow structure	Workflow Roster
Workflow structure name	DefaultRoster

   f. Click Run, at the top.

   g. A new tab with the search results appears.

      The search results display all the properties in alphabetical order. Scroll to the right to see all the properties and their values.

   Tip: The queue that the work item is waiting in is displayed under F_QueueWPClassID.

8. Modify how the results are displayed in the search results.

   In the new workflow search, you adjust what properties to display in the search results and in what order before you execute the search.

   a. Select the Search Parameters tab and scroll down to the bottom, to the section called Search Result Display.
   b. Move F_WobNum, F_WorkflowNumber from Selected to Available.
   c. Under *Selected*, select F_Subject, click the up arrow on the right to move it to the first position.
   d. Click Run to re-execute the search.
   e. Notice that F_Subject is now listed first, and the two properties you moved from *Selected* to *Available* no longer appear.

9. Explore the actions available for the work item.

   a. Select the work-item that is displayed in the Search Results tab.

   b. Click Actions > Tasks.
   c. Notice that the same actions that were available in the Process Administrator tool are available here as well.

10. View the status of the workflow in the tracker in-basket.

    The tracker in-basket is normally used by a manager, or supervisor who keeps track of their department's work progress. It provides a birds eye view. A workflow administrator can also use this information to get quick status. The tracker in-baskets must be configured to be available. The workflow author defines tracker in-baskets as part of the design of the workflow application.

    a. Switch to the Work feature in the P8 Admin Console desktop.
    b. Expand the LoanProcessor queue and select Track Loans.
    c. Select the icon to open the tracker history for the Basic loan. 
    d. Explore the History information displayed.

        - You see all the steps in the workflow listed.
        - Four steps that are completed, showing the time stamp of when each step completed.

        Which step waiting to completed?

        ____

        - Notice the Response column, the two responses you selected, while processing the workflow are recorded.
        - Notice the Comments column, all comments that are entered while processing the workflow are displayed here.

    e. Click the Milestones tab to explore the information that is displayed.

        - This view lists the major milestones that are completed, notice that two *Verification completed* items that are listed.

        What are the two Loan amounts listed in the Message column?

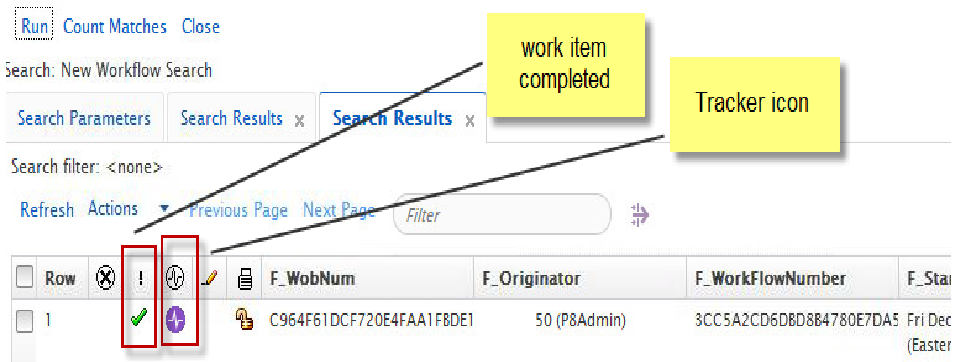
        ____

    f. Close the Track Work Item windows.

11. Complete the Process Loan step in the workflow.

    g. Select the Loan Processor in-basket.
    h. Open Basic Loan work item.
    i. In the LoanApproved field, select `True`.
    j. Type `Complete` in the LoanStatus field.
    k. Click *Complete*.

12. Verify that the work item is deleted.
    a. Switch to the ACCE feature in the P8 admin console.
    b. Click Run to re-execute the search.
    c. Verify that the only work item displayed in the results, has the tracker icon that is associated with it and the deadline status shows work item that is completed.



13. Leave the P8 Admin console open for the next procedure.

Procedure 5: View event log information

In this procedure, you view the event log where the system saves workflow event information, such as work item creation, termination, begin service, and end service. You find the events that are associated with the Basic Loan Processing Workflow that you processed.

1. Ensure that you are in the P8 admin console > ACCE feature, New Workflow Search.
2. Click the Search Parameters tab.
3. Enter the following search criteria and click Run.

Field name	Value
Search result type	Events
Workflow structure	Event Log
Workflow structure name	DefaultEventLog
Search Filter:	General Criteria
Column A	F_Originator
Condition	Equal To
Value:	50

4. Scroll through the events that are listed in the results pane. Observe the various event types that are listed in the F_EventType column.

Information

Each logged event has an event category and associated event number. The F_EventType field contains the event logging category. For more information, see the IBM Knowledge Center for FileNet P8 Platform 5.2.1 > Integrating workflow into document management > Process applications concepts > Events > Event logging categories.

The event log database tables can grow quickly with event logging enabled for an isolated region. The workflow administrator is responsible for periodically archiving and purging event log messages to prevent the tables from growing too large. Maintenance of event logs is covered in another course.

5. Click the F_Comment column header to sort the values, and locate the event that contains the text `New loan application` in the F_Comment field. Notice the event types.

   You entered this text string in the Comments field at the Launch step. There are 2 event types, 100, Work Object System Operation, and 140, Work Object Parent Creation.
6. Locate the events that contain text in the F_Responses fields.
7. **Tip:** Click the F_Response column header until you see the `More Info Needed` and `Info OK` responses.

   These events correspond to the steps in which you selected a response.
8. Log out of the P8 admin console and close the browser window and all the tabs.

Lesson 1.3. IBM Case Foundation architecture

Overview

Why is this lesson important to you?

Your IBM FileNet workflow application uses various components that are provided by IBM Case Foundation. As a workflow administrator it is important that you understand the architecture of IBM Case Foundation so you can maintain the workflow application effectively. As a workflow author, you need to understand the components available to you to facilitate the development and testing of your FileNet workflow application.

Activities

- Identify functions of IBM Case Foundation components: Written exercise, page 1-37
- Explore the IBM Case Foundation components of your student system: Walkthrough, page 1-39

User accounts

Type	User ID	Password
IBM Content Navigator desktops: Workflow Author desktop & P8 Admin console	p8admin	IBMFileNetP8
Administration Console for Content Platform Engine	p8admin	IBMFileNetP8
DB2 user	dsrdbm01	IBMFileNetP8

Note

Passwords are always case-sensitive. User names are not case-sensitive.

Identify functions of IBM Case Foundation components: Written exercise

Match the letter of the description to the correct IBM Case Foundation component.

IBM Case Foundation component	Description
___ Case Analyzer	**A.** A component that contains queues, rosters, and event logs.
___ Business rules integration	**B.** A Case Foundation tool that runs as a Java applet and is used to view and manage running workflows, work items, and event logs.
___ Workflow system	**C.** A tool that is used to configure a workflow system.
___ Component Integration	**D.** A Case Foundation tool that collects events to facilitate analysis, and reporting on production and simulated process data.
___ Administration Console for Content Platform Engine	**E.** An extensible integration framework to easily create a connector, to an external component, within a workflow step.
___Process Administrator tool	**F.** Provides a mechanism to handle decisions outside of your workflow application for more flexibility.

Explore the IBM Case Foundation components of your student system: Walkthrough

Introduction

In this exercise, you explore the IBM Case Foundation components and settings of your workflow system. You review information about the workflow system with the Administration Console for Content Platform Engine (ACCE), the command-line tool vwtool, and a database administration tool for DB2.

Procedures

Procedure 1: Explore your workflow system global properties in ACCE

1. Launch the Administration Console for Content Platform Engine (ACCE).
   a. Open a Mozilla Firefox browser window
      - Go to the bookmark, ACCE.
   b. Log in as a workflow administrator.
      - Username: `p8admin`
      - Password: `IBMFileNetP8`
   c. Open the LoanProcess object store.
2. Explore the General tab of the workflow system properties.
   a. Expand Administrative, select Workflow System.
   b. On the General tab, Record the following information about your workflow system.

      Table Spaces:

      Table space for workflow system data: ________________________

      Workflow System Security Groups:

      Administration group: _______________________

      Configuration group: ________________________

3. Explore the Web Applications tab of the workflow system properties.
   a. Notice all the web applications that are listed by default that can be configured as a step processor.
4. Explore the DBExecute Connections tab of the workflow system properties.
   a. The DBExecute tab is the location where you configure the database connections for external databases to be used in a DBExecute step in a workflow. Configuring a database connection is covered in another course.
5. Explore the Remote Servers tab of the workflow system properties.
   a. The Remote Servers tab is where you configure remote servers, such as the SMTP server for email notification and the Rules Listener.
6. Explore the Isolated Regions tab of the workflow system properties.
   a. Record the following information about the isolated regions.

      Name of the isolated region: _______________

      Region Number: ________________
7. Explore the Advanced tab of the workflow system properties.

   The Advanced tab is where you adjust the advanced properties that fine-tune your workflow system.

   a. Click the Learn more link to read about each property.
   b. Switch back to the ACCE tab and record the following information about the advanced properties:

      CacheSyncInterval: _______________

      WSRequestProcessingTimeout: ____________

Procedure 2: Explore the Isolated Region properties in ACCE

1. On the ACCE navigation pane, expand Isolated Regions.
2. Select P8Region5.
3. Explore the General tab properties.
   a. Record the following information about the isolated region.

      Database Connection: ____________
4. Click the Properties tab and explore the properties that are listed.
5. Click the Table Spaces tab.

   As workflow administrator, you might want to separate isolated region data (such as indexes and rosters) into different table spaces to enhance administration or performance. The Table Spaces tab is where you configure the additional table spaces. Only one table space is used on your student system.

6. Click the Event Logging Options tab.
   a. Notice the events selected that generate work item messages by default.

      Is a work item message generated upon creation, by default? _______________
7. Click the Step Processors tab.

   The Step Processors tab is where you define the step processors and launch processors that are used in a workflow definition.

   a. Record the following information about the step processors.

      Default Step: ________________________

      Default Launch: ______________
8. Click the Web Applications tab.
   a. Record the following information about the web applications.

      Name of Web application configured: ______________

      Server Base URL: ______________________
9. Explore the remaining tabs.

Procedure 3: Explore the workflow system in ACCE

1. On the ACCE navigation pane, if necessary, expand the P8Region5 node.
2. Select the Event Logs node.
   a. Record the following information about the Event Logs.

      Names of the Event Logs: ____
3. Expand the Rosters node.
   a. Record the following information about the Rosters.

      Names of the Rosters: ____
4. Select the User Queues node.
   a. Record the following information about the User Queues.

      Names of the User Queues: _____________________
5. Expand the Work Queues node.
   a. Record the following information about the Work Queues.

      Names of the Work Queues: ____
6. Log out of ACCE and close the browser window.

Procedure 4: Explore the workflow system with vwtool

IBM Case Foundation includes a command-line tool, vwtool, that allows to view and manage your workflow system. In this procedure, you explore the configuration of the isolated region that is configured in the P8ConnP5 connection point.

1. Open vwtool.
   a. Open a windows command prompt window.
   b. Change directories to the <CPE_install>\tools\PE

Hint

Here are steps that you can follow:

- Open a windows explorer window and browse to:

  `C:\Program Files\IBM\FileNet\ContentEngine\tools\PE`.
- Copy the path to the clipboard.
- Open a command prompt window and type `cd <space>`.
- Right-click the header of the command prompt window and select Edit > Paste <Enter>.

You might want to create a shortcut for the vwtool, to make it easier to open again.

   c. At the command prompt window, type `vwtool P8ConnP5 <Enter>`.
   d. Wait for the login prompt; it can take several seconds, and enter
      - User name: `p8admin <Enter>`
      - Password: `IBMFileNetP8 <Enter>`

2. View the isolated region configuration.
   a. At the <vwtool::config5> prompt, type `config <Enter>`

      What is the Physical table name for the LoanRoster?

      ____

   b. Scroll up until you find the Work Queue information.

      What is the table name for the LoanOfficer work queue?

      ____

   c. Scroll up until you can see where you typed `config`.
   d. Notice the System Wide Flags and the Logging options, look familiar?

      What is the schema name for this Isolated Region?

      ____

e. Scroll to where the mouse indicator is flashing, click the space bar, then `<Enter>`.

   What is the physical table name for the DefaultEventLog?

   ____

   How many queues are configured?

   ____

   What object store is this isolated region associated with?

   ____

f. Type `quit <Enter>` to exit vwtool.
g. Leave the command prompt window open for the next procedure.

Procedure 5: Explore the workflow system tables in DB2

1. Start the DB2 database administration tool, Control Center.
   a. Start > All Programs > IBM DB2 > TDSV63DB2(Default) > General Administration Tools > Control Center
   b. In the Control Center View window, click OK.

Important

Use caution when using DB2 Control Center

The DB2 Control Center is a powerful administrative tool that requires careful and informed use. In a production environment, the misuse of this tool can cause:

- Work item corruption
- Compromised data integrity
- Loss of data

2. In DB2 Control Center, review information about the workflow system tables.
   a. In the left pane:
      i. Expand the *All Databases* folder in the left pane.
      ii. Expand OS_DB.
      iii. Select Tables
   b. In the upper right pane, click the Schema heading to sort in alphabetical order.
      - Click the Schema heading until you see LoanProcess listed first.
   c. Scroll through the list of tables to locate the table names that begin with VW.

d. Locate the table name for the DefaultEventLog.

   Tip: Refer to the previous procedure or look for the information in the command prompt window where you ran vwtool.

e. Click the VW table name in the Tables pane (upper right) and view the details of the table in the lower right pane.

f. Notice that the VW tables use the CEDATA_TS table space, created by the OSDBUSER, the same table space that contains the object store tables.

g. Locate the table name for the LoanRoster.

3. Close the DB2 Control Center.
4. Close the command prompt window.
5. Close any browser windows that are open.

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
- IBM FileNet Workplace XT

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

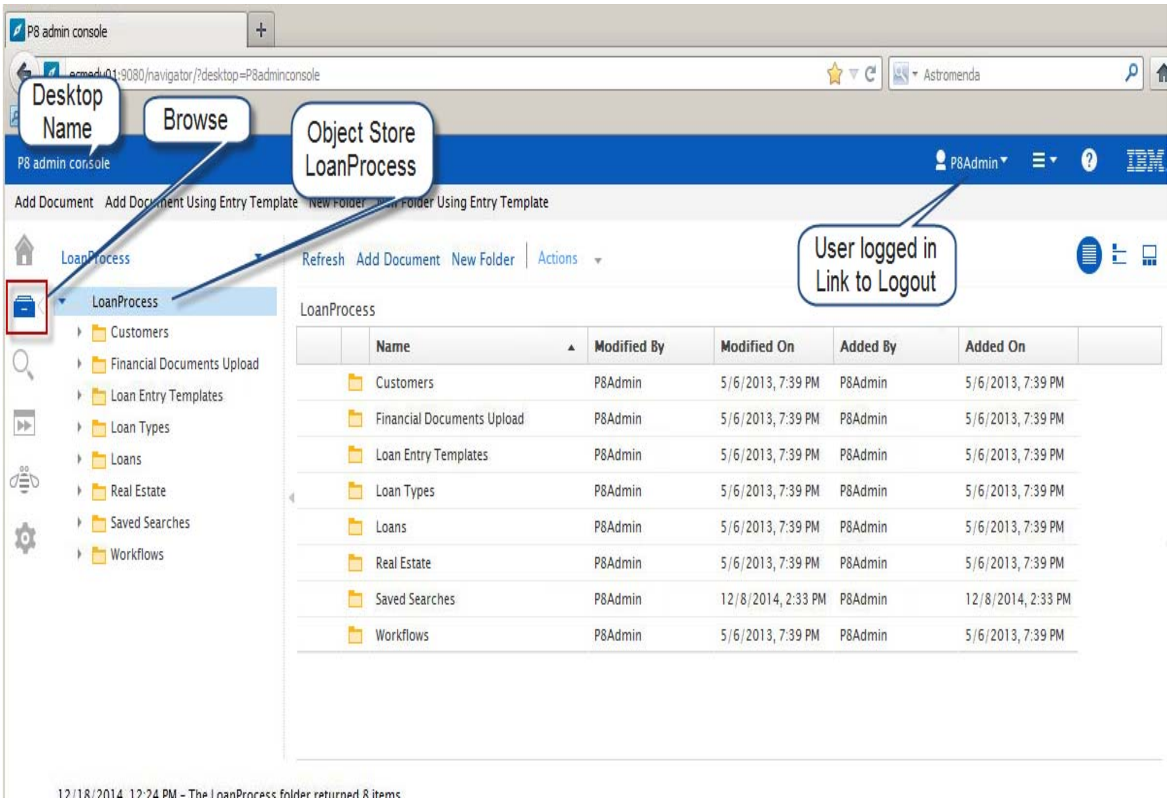
An IBM FileNet P8 Workflow system consists of one main engine, the Content Platform Engine, with two primary services, content and process services. In addition to the Content Platform Engine, a client application is required for the users and databases are required to store configuration information 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.

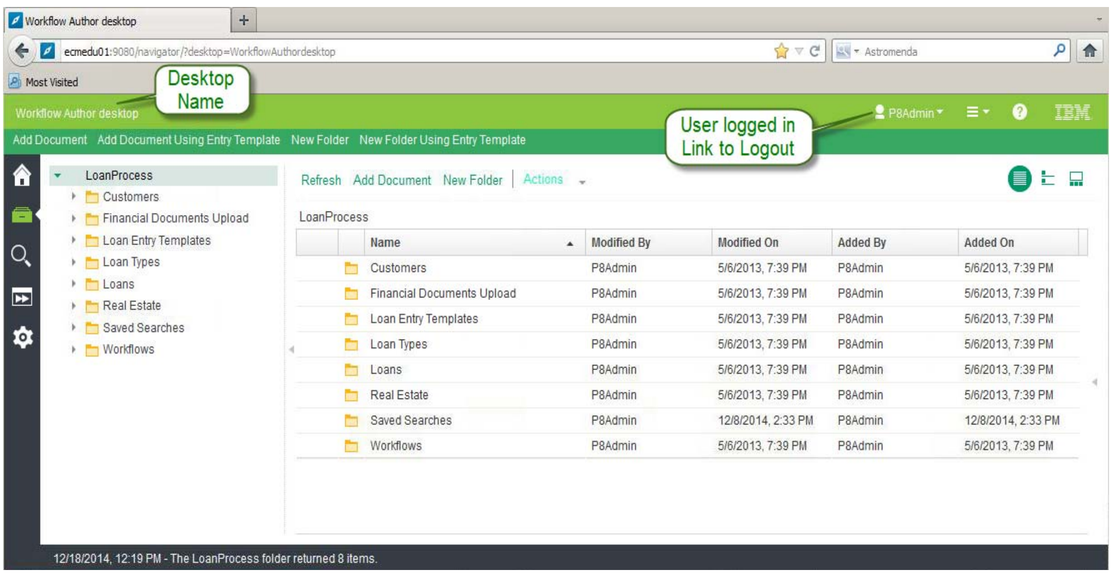
d. Logout of the P8 Admin console.

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. Troubleshooting

Appendix Overview

This appendix contains issues and resolutions for:

- "IBM Content Navigator Desktop issues" on page B-1
- "Administration Console for Content Platform Engine issue" on page B-2
- "Process Designer tool issue" on page B-2

IBM Content Navigator Desktop issues

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 time-out.

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*.