Course Exercises Guide

IBM Case Foundation 5.2.1: Control Workflow Progress

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Exercises description

Overview

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

Student system

Exercises in this course require that you have access to a student system on which is installed the software that you are learning.

- If you are taking this course as part of a self-paced online course (SPVC), you must start the student system that is provided by the SPVC provider.
- If you are taking this course as part of an instructor-led training (ILT) program, your instructor can show you how to access your student system.

Conventions used in this course

These guidelines can help you complete the exercises faster.

- Most exercises include required sections which should always be completed. It might be necessary to complete these sections before you can start later exercises. Some exercises might also include optional sections that you might want to complete if you have sufficient time and want an extra challenge.
- `Code font` indicates information that you must type.
- *Italics font* indicates a variable. Substitute a literal value where indicated.
- As you progress through the materials, the lesson instructions become less verbose. You can refer back to earlier examples of procedures if you forget the steps.
- Data tables are used throughout this course. After you learn to perform the steps of a procedure, you can complete the exercise by using the data they provide.
- If a value is not specified in a data table, then the value is already correctly configured by default. Do not change it.
- First-level numbered instructions, followed by second-level instructions are high-level instructions and details.

Exercise 1. Milestones and logging

Estimated time

00:30

Overview

In this exercise, you add milestones and logging to a workflow in order to display status messages to workflow participants.

Objectives

After completing this exercise, you should be able to:

- Add milestones and logging to a workflow.

Introduction

You are designing an IBM Case Foundation solution and you need to control logging and display of status messages for a running workflow. Workflow participants need information on workflow status at specified points in a workflow. Management wants a log kept with key information on process status for each workflow. You must add milestones and logging to your workflow definition. You must test the workflow to verify the changes.

In this exercise, you add milestones and logging to a workflow to display status messages to workflow participants.

Activities

Define and use milestones, on page 1-3

User Accounts

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

Note

Passwords are case-sensitive.

System Startup

Refer to Appendix A, "Start and Stop System Components," on page A-1 to start your student system. Your system must be fully started before you attempt the lesson exercises.

Troubleshooting

Refer to Appendix B, "Troubleshooting," on page B-1 to resolve any errors, issues, or unexpected challenges,

1.1. Define and use milestones

Introduction

This exercise gives you practice in adding milestones and event logging to a workflow definition. Before you start this exercise, be sure to perform the system startup.

Procedures

Procedure 1: Define and use milestones

You can access Process Designer from the Workflow Author desktop. From Process Designer, you can open workflow definitions either from the local file system or from an object store. After you load the workflow definition, you are going to add a milestone.

1. Open Process Designer:

   a. Start Firefox.

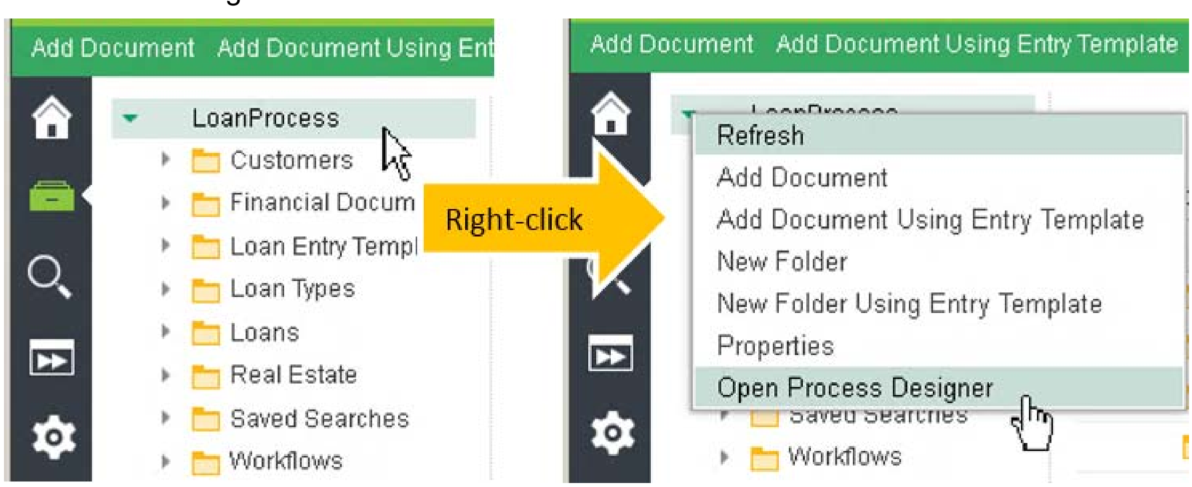
   b. Open the Workflow Author Desktop bookmark:

   `(http://ecmedu01:9080/navigator/?desktop=WorkflowAuthorDesktop)`

   c. Log on to Workflow Author Desktop:

   - User name: `P8Admin`
   - Password: `IBMFileNetP8`

   d. In the left navigation pane, right-click the LoanProcess object store and then select Open Process Designer.

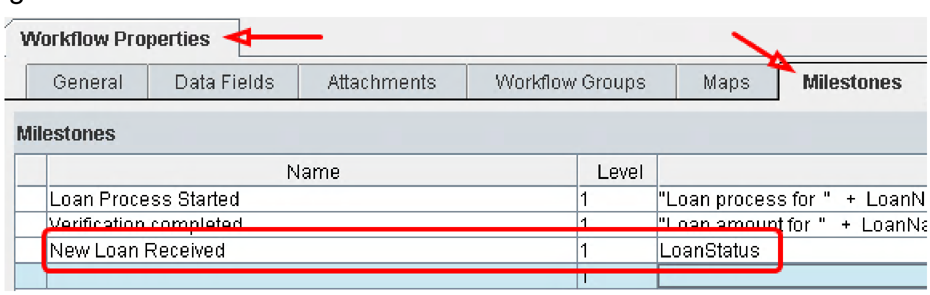


Troubleshooting

If you see an Activate Java message instead of Process Designer, activate. Select the Allow and Remember option. Do NOT update your version of Java select the Later option instead.

If you see a Java plug-in error, refer to Appendix B, "Troubleshooting," on page B-1

2. Open the Basic Loan Processing Workflow.pep:
   a. Click File > Open.
   b. Browse to C:\Labs\Case Foundation 5.2.1 Workflow Design\Basic Loan Processing Workflow.pep
3. Update the workflow properties.
   a. On the Workflow Properties tab, change the name to `Basic Loan Processing-Milestones`.
   b. Select the Advanced tab.
   c. Set the Roster to LoanRoster.
   d. Set the Log to LoanLog.
4. Define new milestones:
   a. In Workflow Properties, open the Milestones tab. Observe that two milestones are already defined.
   b. Define a new milestone:
   - Name: `New Loan Received`
   - Level: 1
   - Message: `LoanStatus`



5. Press Enter after you type the information on this row.

Note

Although the data is displayed on this line, it is not saved in the workflow definition until the Enter key is pressed. Always press Enter at the end of each field entry in Process Designer.

6. Assign the milestone to the launch step:
    a. Select the Launch step in the workflow map area.
    b. Open the Assignments tab.
    c. In the Milestones field, select New Loan Received.
    d. In the Field Assignments area, enter the following data:

Name	Expression
LoanStatus	“New loan received for customer: “ + LoanName

7. Press Enter after your entry.
8. Verify the milestones on the Verify Info step:
    a. Select the Verify Info step.
    b. Select the Assignments tab.
    c. In the Milestones field, verify that Before Execution is selected.
    d. Verify that the milestone is Loan Process Started.
    e. Select After Completion.
    f. Verify that the Verification completed milestone is assigned.

Procedure 2: Add a log system step

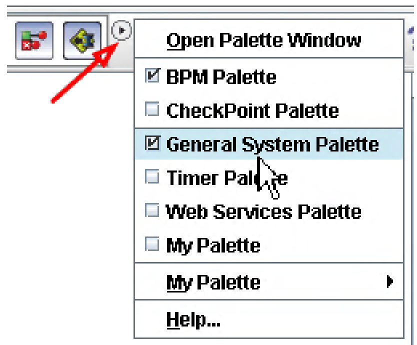
1. Add a data field.
    a. On the Workflow Properties tab, open the Data Fields tab.
    b. Enter the following information:

Field	Data
Name	LoanEventType
Type	Integer
Expression	2222

    c. Press the Enter key after your entry.

2. Add a Log system step:

   a. If the General System Palette is not displayed, then click the palette selection arrow and then select the General System Palette.



   b. Drag a Log system step from the General System Palette to the workflow map. Position the step between the Verify Info and Process Loan steps.

   c. Set the log step properties:

Field	Data
Step Name	Log Message
Event Type Expression	LoanEventType
Event Message Expression	LoanStatus

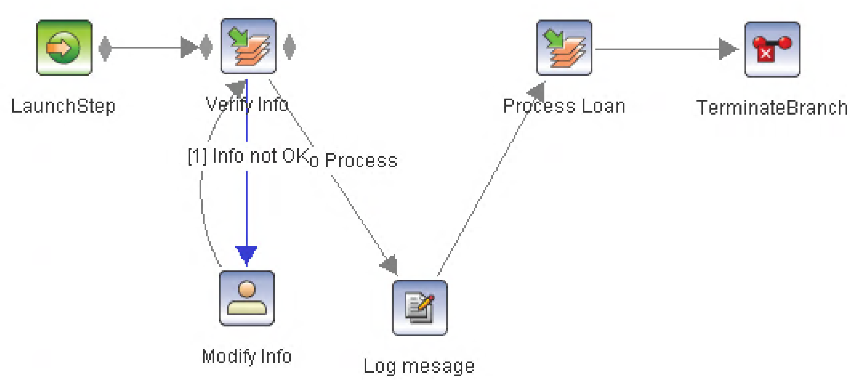
3. Reroute the workflow:

   a. Delete the route: OK to Process

   b. Draw a route from the Verify Info step to the Log Message step.

   c. Name the new route: `OK to Process.`

   d. Draw a route from Log Message to Process Loan.



4. Set conditions for the routes:

   a. Select the *Info not OK* route.

   b. Click Conditional Route.

c. In the Responses tab, set the following condition:

Field	Value
Condition	All
Response	More Info Needed

d. Click Add.

e. Select the *OK to Process* route.

f. Click Conditional Route

g. In the Responses tab, set the following condition:

Field	Value
Condition	All
Response	Info OK

Procedure 3: Validate and transfer the workflow

1. Validate the workflow collection. If the workflow fails to validate, check the error message.

Troubleshooting

Refer to Appendix B, "Troubleshooting," on page B-1 for more help with workflow errors.

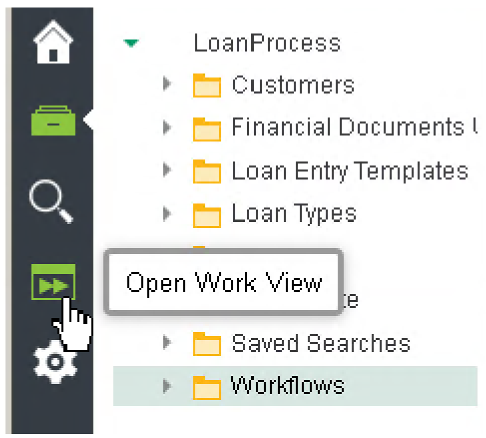
2. Save the workflow collection to the object store:
   a. Click File > FileNet > FileNet Add New.
   b. Browse to and select the Workflows folder in the LoanProcess object store.
   c. Enter the document title: `Basic Loan Processing-Milestones.`
   d. Click Finish.
3. Exit Process Designer.
   a. Click File > Exit.
   b. Cancel the checkout.
   c. Click OK.
4. Transfer the workflow:
   a. In Workflow Author Desktop, browse to LoanProcess > Workflows.
   b. Right-click Basic Loan Processing-Milestones.
   c. Click Workflow > Transfer Workflow.
   d. Click Transfer.
   e. Click Refresh.

Procedure 4: Test the workflow

1. Launch the Basic Loan Processing-Milestones workflow.
   a. Right-click the workflow definition.
   b. Click Workflow > Launch Workflow.
   c. Enter the following data:

Field	Value
Customer Name	Robert Rogers
Loan Amount	300000

   d. Click Launch Workflow.
2. View milestones:
   a. Open Work View > Loan Supervisor > Supervised Loan Status.

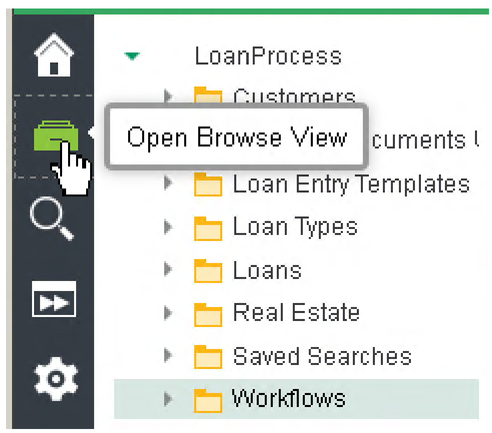


   b. Double-click to open the Track Work Item window for the work item that is not completed.
   c. Select the Milestones tab.
   d. Verify that the Loan Process Started and New Loan Received milestones are completed (Completed milestones are indicated by a diamond.)
   e. Close the window.
3. Complete the Verify Info step:
   a. Open Loan Officer > Loan Officer Inbasket.
   b. Double-click to open the Basic Loan work item.
   c. Click Info OK.
4. View milestones again.
   a. Verify that the Verification Completed milestone is now complete.
   b. Verify that the message is displayed: *Loan amount for Robert Rogers is 300000*.
   c. Close the window.

5. Complete the Process Loan step.
   a. Open the Loan Processor > Loan Processor Inbasket.
   b. Open the work item.
   c. Click Complete.
6. Complete the Process Loan step:
   a. Open the Loan Processor inbasket.
   b. Complete the work item.

Procedure 5: View event logging information

1. Open Process Administrator:
   a. Open browse view.



   b. Open Process Designer.
   c. Click Tools > Process Administrator.
2. View event logging information:
   a. Create the following search.

Field	Value
Look for	Events
In	Event Log
Select one	LoanLog
Criteria	F_EventType = 2222

   b. Click Find Now.
   c. Verify that you can find the log event.
3. Close all applications and browsers.

End of exercise

Exercise review and wrap-up

In this exercise, you did the following tasks:

- Added milestones and logging to a workflow.

Exercise 2. Workflow deadlines

Estimated time

00:30

Overview

In this exercise, you establish workflow and step deadlines. If a deadline is passed, the workflow must open an escalation map that involves management.

Objectives

After completing this exercise, you should be able to:

- Establish a workflow deadline.
- Establish a step deadline.

Introduction

You are designing an IBM Case Foundation solution. You need to establish deadlines for the overall workflow process completion and for completion of individual steps. You want to notify a workflow participant when a deadline approaches for completion of a step. If a step deadline expires, you want the work to be escalated and sent to a manager for attention. You must test the workflow to verify the changes.

Activities

User Accounts

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

Note

Passwords are case-sensitive.

2.1. Workflow deadlines

Introduction

In this exercise, you use workflow deadlines to escalate work when deadlines are reached. You want to notify a workflow participant when a deadline approaches for completion of a step.

Procedures

Procedure 1, "Open and update the workflow definition," on page 2-3

Procedure 2, "Add a workflow deadline," on page 2-4

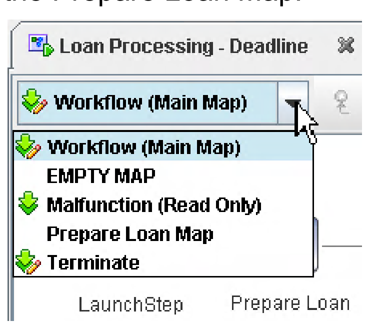
Procedure 3, "Validate and transfer the workflow," on page 2-4

Procedure 4, "Test the workflow," on page 2-5

Procedure 1: Open and update the workflow definition

1. Open Process Designer:
   a. Start Firefox.
   b. Open the Workflow Author Desktop bookmark:

      `(http://ecmedu01:9080/navigator/?desktop=WorkflowAuthorDesktop)`
   c. Log on to Workflow Author Desktop:
      - User name: `P8Admin`
      - Password: `IBMFileNetP8`
   d. In the left navigation pane, right-click the LoanProcess object store and then select Open Process Designer.
2. Open the Deadline Start Workflow.pep:
   a. Click File > Open.
   b. Browse to C:\Labs\Case Foundation 5.2.1 Workflow Design\Loan Processing - Deadline Start.pep
   c. Click Open.
3. Explore the workflow definition:
   a. Use the map menu to open the Prepare Loan Map.



b. Explore the steps to learn the flow.

4. Simplify the workflow:

a. Select the Get Rate and Payment step.

b. Delete the loan_officer_group by selecting the group and then clicking the red X.

c. Select the Work Queue option.

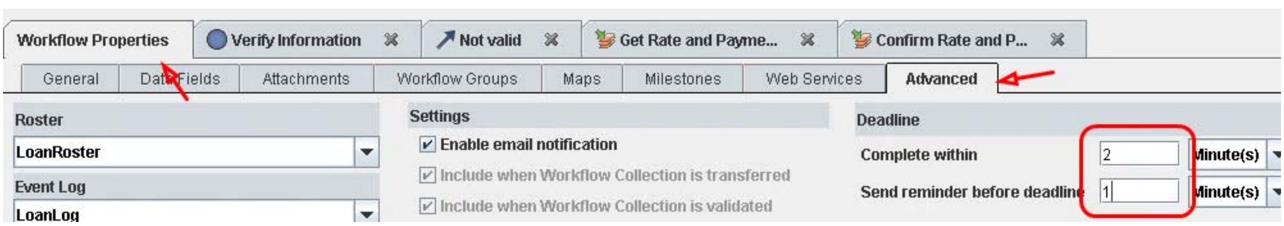
d. Select the LoanOfficer queue from the menu.

Procedure 2: Add a workflow deadline

1. Open the Workflow Properties > Advanced tab.

2. Set the following values:

Field	Value
Complete within	2 Minutes(s)
Set reminder before deadline	1 Minute(s)



Procedure 3: Validate and transfer the workflow

1. Validate the workflow collection. If the workflow fails to validate, check the error message.

Troubleshooting

Refer to Appendix B, "Troubleshooting," on page B-1 for more help with workflow errors.

2. Save the workflow collection to the object store:

a. Click File > FileNet > FileNet Add New.

b. Browse to and select the Workflows folder in the LoanProcess object store.

c. Enter the document title: `Loan Processing-Deadlines`

d. Click Finish.

3. Exit Process Designer.

a. Click File > Exit.

b. Cancel the checkout.

   c. Click OK.

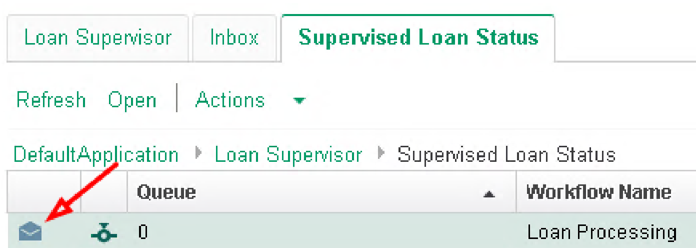
4. Transfer the workflow:
   a. In Workflow Author Desktop, browse to LoanProcess > Workflows.
   b. Right-click Basic Loan Processing-Deadline.
   c. Click Workflow > Transfer Workflow.
   d. Click Transfer.
   e. Click Refresh.

Procedure 4: Test the workflow

1. Launch the workflow with the following values.

Field	Value
customer_name	Trent Chase
down_payment	25000
loan_term	15
purchase_price	200000

2. Wait for the deadline notification:
   a. Wait about a minute
   b. Switch to Work View Loan Supervisor > Supervised Loan Status.
   c. Confirm that you can see a reminder sent item The reminder sent icon looks like an envelope..



   d. If you do not see it, click Refresh.
   e. After a few more minutes, click Refresh.
   f. Confirm that you can see an Overdue item. The Overdue icon looks like an exclamation point.

3. Complete the work item:
   a. Open Process Designer.
   b. Open Tools > Process Administrator.

c. Search for the work item.

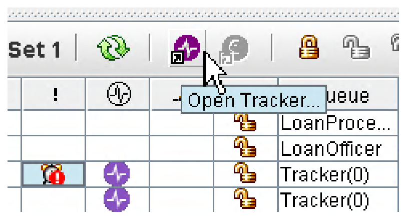
Field	Value
Search mode	Edit (all fields)
Look for	Work items
In	Workflow Roster
Select one	LoanRoster

d. Select the work item with the clock icon that indicates that it is overdue.

Note

If you do not see a clock icon, make sure that you select Edit (all fields) before searching.

e. Click Open Tracker to open the work item in Process Tracker.



f. Double-click the Prepare Loan submap step to open the submap.

g. Select the Get Rate and Payment step.

h. Click Tasks > Complete Work.

i. Select LoanOfficer from the Participants pane.

j. Click OK.

k. Click Yes to complete the work.

l. Close Process Tracker.

m. Close Process Administrator and Process Designer.

4. Complete the Confirm Rate and Payment step.

   a. In the Work View, open the Loan Officer Inbasket.

   b. Complete the work item.

5. Complete the Process Loan step:

   a. Open the Loan Processor Inbasket.

   b. Complete the work item.

6. Complete the Set Loan Document Status step:

   a. Open the Loan Underwriter Inbasket.

   b. Complete the work item.

2.2. Step deadlines

Introduction

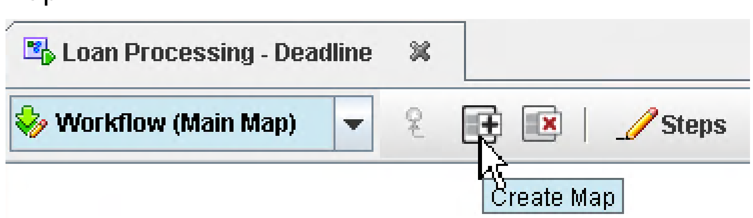
In this exercise, you use a step deadline to escalate a workflow to a line manager. If a step deadline expires, you want the work to be escalated and sent to a manager for attention.

Procedures

Procedure 1: Add a step deadline and a deadline submap

You can place deadlines on individual steps as well. When a step deadline is reached, a submap can be called to handle the contingency. Before you add the step deadline, you are going to remove the old deadlines to make testing easier.

1. Open Process Designer.
2. Open/Checkout the Loan Processing-Deadline workflow definition:
   a. Click File > FileNet > FileNet Open/Checkout.
   b. Browse to Loan Process > Workflows.
   c. Select Loan Processing-Deadline.
   d. Confirm that the *Checkout* option is selected.
   e. Click Open.
3. Clear existing deadline properties.
   a. Open the Workflow Properties > Advanced tab.
   b. Clear both deadline properties.
4. Add a submap for handling deadlines:
   a. Click Create Map.



   b. In the Name field, type `Handle Escalation Map`.
5. Add a workflow data field:
   a. Open Workflow Properties > Data Fields.
   b. Scroll to the bottom of the properties list.

c. On the last row, enter the information in the following table.

Field	Data
Name	retry_option
Type	Boolean
Expression	False

d. Press the Enter key at the end of the row to save the data field.

6. Add an activity step:

a. Drag an Activity step and place it to the right of StartStep.

b. Enter the information in the following table.

Hint

To change permissions on parameters, right-click the selected parameter.

Tab	Field	Value
General	Name	Handle Timeout
	Work Queue	LoanManager
	Instructions	Deadline was missed. Complete information and expedite.
Parameters	Parameters	customer_name [R] interest_rate [R/W] loan_amount [R] monthly_payment [R/W] status [R/W]
Routing	Routing responses	Retry Skip
	Take Routes of	First true conditions
Assignments	Assignment after completion	
	Name	retry_option
	Expression	F_Responses[1] > 0

Note

The expression evaluates to true when Retry is selected as the response and false when Skip is selected.

Hint

Be sure to press the Enter key after you enter your expression.

7. Add a Return step.
   a. Drag a Return step from the General System palette onto the map and place it to the right of the Handle Timeout step.
   b. Type the Return Expression: `retry_option`.
8. Draw the routes:
   a. Draw a route from StartStep to the Handle Timeout step.
   b. Draw a route from Handle Timeout to the Return step.

9. Add a deadline to the Get Rate and Payment step:
   a. On the Map toolbar, select the Prepare Loan submap.
   b. Select the Get Rate and Payment step.
   c. Click the Deadline tab.
   d. Add a deadline by using the following information.

Field	Value
Complete within	2 minute(s)
Send reminder before deadline	1 minute(s)
Deadline Map	Handle Escalation Map

Note

Deadline reminders cannot be sent to work queues because no participant is assigned. In this exercise, email notification is disabled and no reminders are sent.

Procedure 2: Validate and transfer the workflow

1. Validate the workflow collection. If the workflow fails to validate, check the error message. Also, check the troubleshooting appendix if the errors do not make sense.
2. Save the workflow collection to the object store:
   a. Click File > FileNet > FileNet Add New.
   b. Cancel the checkout of the Loan Processing-Deadlines workflow.
   c. Browse to and select the Workflows folder in the LoanProcess object store.
   d. Enter the document title: `Loan Processing-Step Deadline`
   e. Click Finish.
3. Exit Process Designer.
   a. Click File > Exit.
   b. Cancel the checkout.
   c. Click OK.
4. Transfer the workflow:
   a. In Workflow Author Desktop, browse to LoanProcess > Workflows.
   b. Click Refresh.
   c. Right-click Loan Processing-Step Deadline.
   d. Click Workflow > Transfer Workflow.
   e. Click Transfer.

Procedure 3: Test the workflow

1. Launch the workflow with the following values.

Field	Value
Customer_name	Ann Hedonia
Down_Payment	15000
Loan_term	30
Purchase_price	220000

2. Wait for more than a minute for the step reminder notification.
3. Open Process Administrator by using the Process Designer > Tools menu.
4. Search for work items in LoanRoster.

Field	Value
Search mode	Edit (all fields)
Look for	Work items

Field	Value
In	Workflow roster
Select one	LoanRoster

5. Click Find Now until you see the work item in the LoanManager queue.
6. Complete the Handle Timeout step:
   a. Open the work item in Tracker.
   b. Click Tasks > Complete work.
   c. Select the LoanManager work queue.
   d. Select the Retry response.
   e. Click OK.
   f. Click Yes.
7. Complete the Get Rate and Payment step.
   a. Open the Prepare Loan Map.
   b. Verify that the *Get Rate and Payment* step is the current step.
   c. Complete the step.
   d. On the Prepare Loan map, complete the Confirm Rate and Payment step.
   e. On the Main Map, complete the Process Loan step.
   f. On the Terminate Map, complete the Set Loan Document Status step.
   g. Close Process Tracker.
8. Launch the same workflow again with any field values that you want (loan_term must be either 15 or 30). Allow the step deadline to expire as before, but this time, choose the Skip option on the Handle Timeout step.
9. Verify that the work item returns to the Confirm Rate and Payment step (skipping the deadline step).
10. Complete the remaining steps in the workflow.
11. Close applications:
    a. Close Process Tracker.
    b. Close Process Administrator.
    c. Close Process Designer.
    d. Close Firefox.

End of exercise

Exercise review and wrap-up

In this exercise you did the following tasks:

- Establish a workflow deadline.
- Establish a step deadline.

Exercise 3. Timers and delays

Estimated time

00:30

Overview

In this exercise, you add a timer function to a workflow definition.

Objectives

After completing this exercise, you should be able to:

- Add a timer system function to a workflow definition.
- Add a delay system function to a workflow definition.

Introduction

You need to control the time during which a specified series of steps is processed. If the time expires, you want an alternative processing path to be followed. In another use-case, you want to delay workflow processing for a specified period. You must test the workflow to verify the changes.

Activities

Use timers and delays, on page 3-2

User Accounts

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

Note

Passwords are case-sensitive.

3.1. Use timers and delays

Introduction

In this exercise, you create a timer for the completion of two steps in the workflow. If the timer expires, then the Handle Escalation submap is called.

Procedures

Procedure 1: Open the workflow definition

1. Open Process Designer:
   a. Start Firefox.
   b. Open the Workflow Author Desktop bookmark:
      `(http://ecmedu01:9080/navigator/?desktop=WorkflowAuthorDesktop)`
   c. Log on to Workflow Author Desktop:
      - User name: `P8Admin`
      - Password: `IBMFileNetP8`
   d. In the left navigation pane, right-click the LoanProcess object store and then select Open Process Designer.
2. Open the Loan Processing-Timer Start.pep:
   a. Click File > Open.
   b. Browse to C:\Labs\Case Foundation 5.2.1 Workflow Design\Loan Processing - Timer Start.pep
   c. Click Open.
3. Explore the workflow map. Note the step recipients and responses for each step. Confirm that the workflow includes a Handle Timeout map.

Procedure 2: Simplify the workflow

In this procedure, you simplify the workflow to aid in testing.

1. Open the Prepare Loan Map.

2. Select the Get Rate and Payment step.
3. On the General tab, change the recipient by selecting the LoanOfficer work queue.

Procedure 3: Add a timer function

1. Add a BeginTimer step:
   a. Select the Timer Palette.
   b. On the main map, drag a BeginTimer system step from the Timer Palette onto the map and place it below the Prepare Loan and Process Loan steps.
   c. Set the properties on the step.

Field	Value
Timer Name Expression	“Loan Processing Timer”
Expiration Time	addminutes(systemtime(), 3)
Map	Handle Timeout

   d. Delete the route between Prepare Loan and Process Loan.
   e. Draw a route from Prepare Loan to BeginTimer.
   f. Draw a route from BeginTimer to Process Loan.
2. Add an EndTimer system step.
   a. Drag an EndTimer system step from the Timer Palette onto the map and place it below the Complete Loan step.
   b. Set the EndTimer step properties.

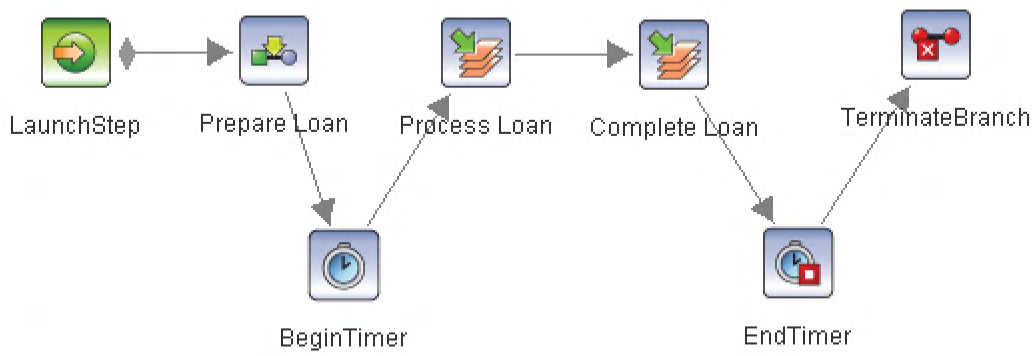
Field	Value
Timer Name Expression	“Loan Processing Timer”

Important

Be sure that the Timer Name Expressions in the BeginTimer and EndTimer steps match exactly. The string expressions are case-sensitive.

   c. Delete the route between the Complete Loan step and TerminateBranch step.
   d. Draw a route from the Complete Loan step to the EndTimer step.
   e. Draw a route from the Begin Timer to the Process Loan step.

f. Draw a route from the EndTimer step to the TerminateBranch step.



3. Validate the workflow to ensure that you introduced no errors.

Procedure 4: Add a delay system function

In this procedure, you add a delay to the Handle Timeout Map. The loan manager who processes the Handle Timeout map is able to delay the workflow.

1. On the map toolbar, select the Handle Timeout map.
2. Add a response for the Handle Timeout step.
   a. Select the Handle Timeout step.
   b. Open the Routing tab.
   c. Add the following response to the list of responses: `Delay`.
   d. Press Enter.
   e. Confirm that the step has the following responses:
      - Retry
      - Skip
      - Delay
3. Add a Delay system step:
   a. Drag a Delay system step from the General System palette onto the map and position the step below the Handle Timeout step.
   b. Set the Delay step properties by using the following information.

Field	Value
Step Name	Delay Processing
Delay Expression	addminutes(systemtime(), 1)

4. Add routes:
   a. Draw a route from the Handle Timeout step to the Delay Processing step.

b. Assign route properties by using the following information.

Field	Value
Name	Wait
Conditional Route	ANY(Delay)

c. Draw a route from the Delay Processing step to the Return step.

d. Select the route from the Handle Timeout step to the Return step.

e. Name the route: `No Wait`.

5. Reorder outgoing routes from the Handle Timeout step.

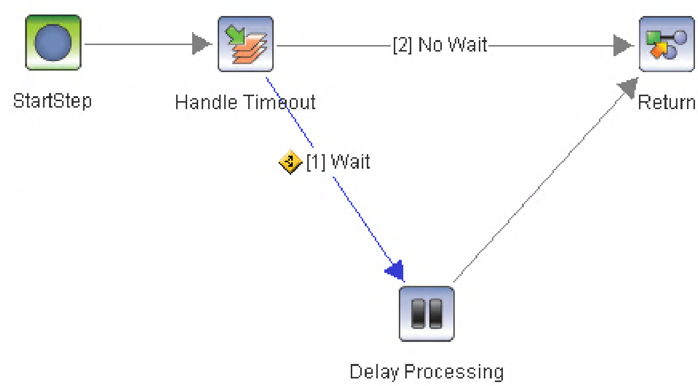
   a. Select the Handle Timeout step.

   b. Open the Routing tab.

   c. In the Outgoing Routing Information section, use the arrows to arrange the order of the routes as follows:

      i. Wait

      ii. No Wait



Procedure 5: Validate and transfer the workflow

1. Validate the workflow collection. If the workflow fails to validate, check the error message. Also, check the troubleshooting appendix if the errors do not make sense.

2. Save the workflow collection to the object store:

   a. Click File > FileNet > FileNet Add New.

   b. Browse to and select the Workflows folder in the LoanProcess object store.

   c. Enter the document title: `Loan Processing-Timer`

   d. Click Finish.

3. Exit Process Designer.

   a. Click File > Exit.

   b. Cancel the checkout.
   c. Click OK.

4. Transfer the workflow:
   a. In Workflow Author Desktop, browse to LoanProcess > Workflows.
   b. Right-click Loan Processing-Timer.
   c. Click Workflow > Transfer Workflow.
   d. Click Transfer.
   e. Click Refresh.

Procedure 6: Test the workflow timeout handler

1. In the Workflow Author desktop, browse to LoanProcess > Workflows.
2. Right-click Loan Processing-Timer, and then select Workflow > Launch Workflow.
3. Enter the following values.

Field	Value
Customer_name	Jack Nigh
Down_payment	55000
Loan_term	30
Purchase_price	675000

4. Click Launch Workflow.
5. Track the workflow.
   a. Open Process Administrator.
   b. Search for the work item by using the following information.

Field	Value
Search mode	Edit (all fields)
Look for	Work Items
In	Workflow Roster
Select one	LoanRoaster

   c. Open Tracker for the work item for Jack Nigh.
6. Complete the Get Rate and Payment step:
   a. Click Tasks > Complete Work.
   b. Select the LoanOfficer queue.
   c. Complete the work item.
7. Complete the Confirm Rate and Payment step.

8. Test the timer function:
   a. Wait for at least 3 minutes.
   b. In Tracker, open the Main Map.
   c. Verify that the BeginTimer step was activated.
   d. Open the Handle Timeout Map.
   e. Confirm that the step name is Handle Timeout.
9. Test the Delay function:
   a. Click Tasks > Complete work.
   b. Select the LoanManager queue.
   c. Select the Delay response.
   d. Click OK.
   e. Click Yes.
   f. In Tracker, click Refresh.
   g. Confirm that the current step is Delay Processing.
   h. Wait another 2 minutes.
   i. Click Refresh.
   j. Confirm that the Return step was completed.
   k. Open the Workflow (main map).
   l. Confirm that the Complete Loan step is active.
   m. Use Tracker to complete the Complete Loan step.
   n. Use Tracker to complete the Set Loan Document Status step.
   o. Close Process Tracker.

Procedure 7: Test the workflow in a timely manner

Now test the workflow again without letting the timer to expire. Use Process Tracker to track the active work item.

1. Launch the Loan Processing-Timer workflow with the following values.

Field	Value
Customer_name	Deb Utant
Down_payment	6000
Loan_term	30
Purchase_price	550000

2. Use Process Administrator to locate the work item.
3. Open the work item in Process Tracker.

4. Complete these steps in order without pausing.

Order	Role	Step
1	Loan Officer	Get Rate and Payment
2	Loan Officer	Confirm Rate and Payment
3	Loan Processor	Process Loan
4	Loan Processor	Complete Loan
5	Loan Underwriter	Set Loan Document Status

5. Use Tracker to verify that the Handle Timeout map was not called.
   a. In Tracker, open the Handle Timeout map.
   b. Confirm that the steps have no check marks above them.
6. Close Tracker.
7. Close Process Administrator
8. Close Process Designer.
9. Close Firefox.

End of exercise

Exercise review and wrap-up

In this exercise, you did the following tasks:

- Add a timer system function to a workflow definition.
- Add a delay system function to a workflow definition.

Exercise 4. Checkpoints

Estimated time

00:30

Overview

In this exercise, you add checkpoint processing to a workflow to have a point in the workflow that can restore earlier property values.

Objectives

After completing this exercise, you should be able to:

- Add checkpoint processing to a workflow.

Introduction

You need to set a workflow checkpoint and save current workflow information at a point in the process flow. At a later point in the workflow, you need the option to roll back specified workflow information to that earlier point in processing and if necessary, to resume work processing at that previous point. You must test the workflow to verify the changes.

Activities

Activity 4.1, "Add checkpoint processing," on page 4-2

User Accounts

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

Note

Passwords are case-sensitive.

4.1. Add checkpoint processing

Introduction

This exercise gives you practice in using the checkpoint system functions in a workflow definition. You launch a workflow with starting values for loan_amount and down_payment. You set up checkpoint steps so that you can modify the down_payment. The loan supervisor has a chance to review the loan and either accepts the change to down_payment or rejects it. If the loan supervisor rejects the change, the RollBackCheckpoint step rolls back the down_payment value. The loan_amount is recalculated and resubmitted. Otherwise, the workflow continues to the Process Loan step.

Procedures

Procedure 1: Open Process Designer

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

   `(http://ecmedu01:9080/navigator/?desktop=WorkflowAuthorDesktop)`
3. Log on to Workflow Author Desktop:
   - User name: `P8Admin`
   - Password: `IBMFileNetP8`
4. In the left navigation pane, right-click the LoanProcess object store and then select Open Process Designer.

Procedure 2: Create a workflow definition

With Process Designer open, you can create a workflow. In this procedure, you create the data fields and overall workflow design.

1. On the Workflow Properties tab, enter the following field values.

Field	Value
Workflow Name	Loan Processing - Checkpoints
Subject	Process Loan

2. Open the Data Fields tab and add the following data fields.

Name	Type	Expression
customer_name	String	“”
loan_amount	integer	0
purchase_price	integer	0
down_payment	integer	0
reject_update	Boolean	false

3. Open the Workflow Properties > Advanced tab to change property values.

Field	Value
Roster	LoanRoster
Log	LoanLog

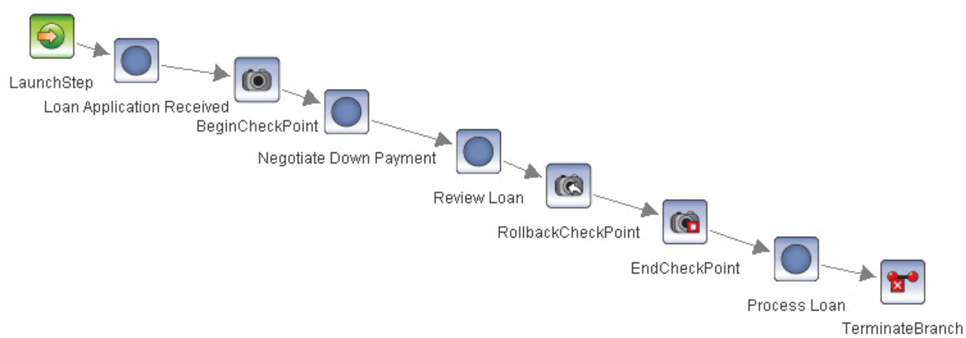
4. On the palette menu, select the following palettes (clear other):
   - BPM Palette
   - CheckPoint Palette
   - General System Palette
5. Drag the following steps onto the main map in order from left to right and rename them as shown.

Step	Step type	Step name
1	Activity	Loan Application Received
2	BeginCheckPoint	BeginCheckPoint
3	Activity	Negotiate Down Payment
4	Activity	Review Loan
5	RollbackCheckPoint	RollbackCheckPoint
6	EndCheckPoint	EndCheckPoint
7	Activity	Process Loan
8	TerminateBranch	TerminateBranch

6. Draw routes between the steps.

Source	Destination
Loan Application Received	BeginCheckPoint
BeginCheckPoint	Negotiate Down Payment
Negotiate Down Payment	Review Loan
Review Loan	RollbackCheckPoint
RollbackCheckPoint	EndCheckPoint
EndCheckPoint	Process Loan
Process Loan	TerminateBranch

7. Check your workflow map design.



Procedure 3: Configure workflow steps

1. Configure the Launch step by using the following data.

Tab	Field	Value
General	Step name	LaunchStep
Parameters	Selected Parameters	customer_name [RW] purchase_price [RW] down_payment [RW]

2. Configure the Loan Application Received step.

Tab	Field	Value
General	Name	Loan Application Received
	Work Queue	LoanOfficer
	Instructions	Review the loan application.
	Selected Parameters	customer_name [RW] purchase_price [RW] down_payment [RW]

3. Configure the Negotiate Down Payment step.

Tab	Field	Value
General	Name	Negotiate Down Payment
	Work Queue	LoanOfficer
	Instructions	Modify the Down Payment amount, if needed.
Parameters	Selected Parameters	customer_name [RW] purchase_price [R] down_payment [RW]

4. Configure the Review Loan step.

Tab	Field	Value
General	Name	Review Loan
	Work Queue	LoanManager
	Instructions	Review the loan and choose whether to reject the modification.
Parameters	Parameters	customer_name [R] purchase_price [R] loan_amount [R] down_payment [R] reject_updates [RW]
Assignments	Before Execution	
	Name	loan_amount
	Expression	purchase_price - down_payment

5. Configure the RollbackCheckPoint step.

Tab	Field	Value
General	Name	RollbackCheckPoint
	Resume Processing Expression	reject_update
	Roll Back Fields	down_payment reject_update
Parameters	Non-Roll Back Fields	customer_name loan_amount puchase_price

Note

When the Resume Processing Expression is true, the rollback fields are rolled back, and the workflow returns to the point after the BeginCheckPoint step. If the expression is false, the workflow continues past the RollBackCheckPoint step.

6. Configure the Process Loan step.

Tab	Field	Value
General	Name	Process Loan
	Work Queue	LoanProcessor
	Instructions	Process this loan
Parameters	Selected Parameters	customer_name [R] purchase_price [R] loan_amount [R] down_payment [R]

Procedure 4: Validate and transfer the workflow

1. Validate the workflow collection. If the workflow fails to validate, check the error message. Also, check the troubleshooting appendix if the errors do not make sense.
2. Save the workflow collection to the object store:
   a. Click File > FileNet > FileNet Add New.
   b. Browse to and select the Workflows folder in the LoanProcess object store.
   c. Enter the document title: `Basic Loan Processing-Checkpoints`
   d. Click Finish.
3. Exit Process Designer.
   a. Click File > Exit.
   b. Cancel the checkout.
   c. Click OK.
4. Transfer the workflow:
   a. In Workflow Author Desktop, browse to LoanProcess > Workflows.
   b. Click Refresh.
   c. Right-click Basic Loan Processing-Checkpoints.
   d. Click Workflow > Transfer Workflow.
   e. Click Transfer.

Procedure 5: Test the workflow

1. From Workflow Author Desktop, launch the workflow:
    a. Right-click Basic Loan Processing-Checkpoints.
    b. Click Workflow > Launch Workflow.
    c. On the launch step, enter the following information.

Field	Value
customer_name	Sarah Tonin
down_payment	25000
purchase_price	300000

    d. Click Launch Workflow.
2. Process the Loan Application Received step:
    a. Open the Loan Officer Inbasket.
    b. Select the Loan Application Received step.
    c. Review the values.
    d. Click Complete.
3. Process the Negotiate Down Payment step:
    a. Open the Negotiate Down Payment step.
    b. Change the value of down_payment to 500.
    c. Click Complete.
4. Process the Review Loan step:
    a. Open the Loan Supervisor queue.
    b. Open the Review Loan step.
    c. Verify that the down_payment is 500.
    d. Verify that the loan_amount is 299500.
    e. Change the value of reject_update to True.
    f. Click Complete.
5. Confirm rollback:
    a. Open the Loan Officer Inbasket.
    b. Confirm that the Negotiate Down Payment step is active.
    c. Open the step.
    d. Confirm that the down_payment value was rolled back to 25000.
    e. Click Complete.

6. Process the Review Loan step again:
   a. Open the Loan Supervisor Inbasket.
   b. Open the Review Loan step.
   c. Verify that the down_payment is 25000
   d. Verify that the loan amount is 275000
   e. Verify that reject_update is false.
   f. Click Complete.
7. Process the loan:
   a. Open the Loan Processor Inbasket.
   b. Open the Process Loan step.
   c. Verify that the values match the values in the previous step.
   d. Click Complete.

End of exercise

Exercise review and wrap-up

In this exercise, you did the following tasks:

- Add checkpoint processing to a workflow.

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. If you do not see this folder, make sure that you are signed in to the operating system as Administrator.
2. Double-click the Start Server1.bat to run the script.
3. Wait for the command window to disappear (Can take several minutes).

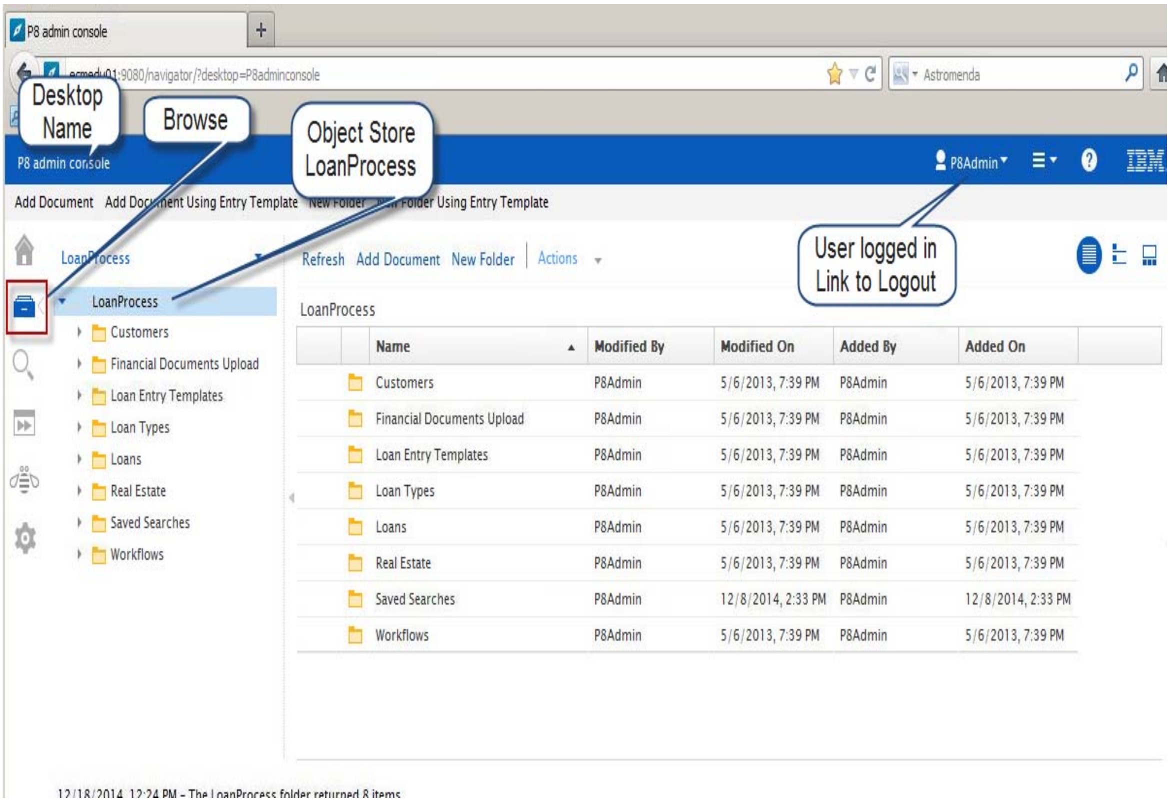
Procedure 2: Check system components

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.

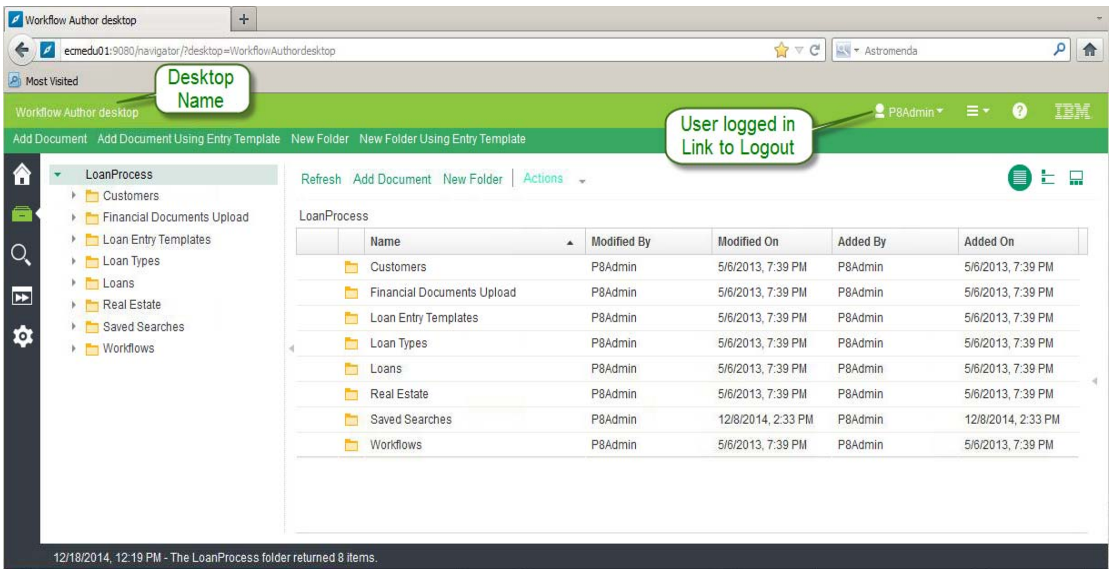
   a. Open a Mozilla Firefox browser window.
   b. Click the Bookmarks menu and select, Workflow Author desktop

      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

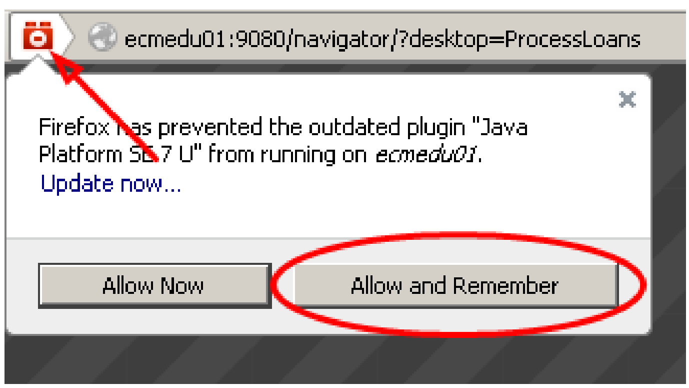
Appendix Overview

This appendix contains issues and resolutions.

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.



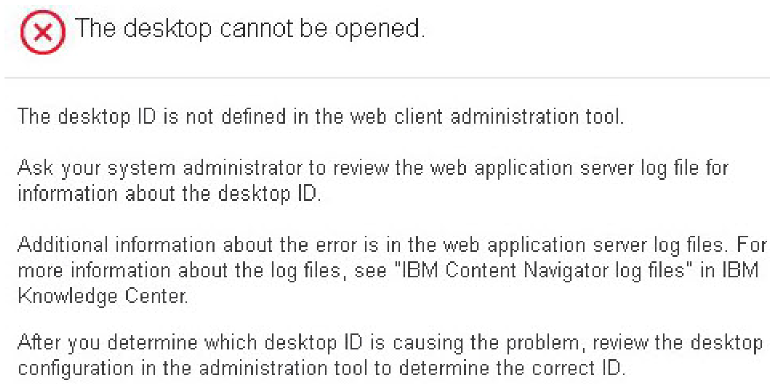
WebSphere Application Server error log

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 this guide, 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 issues

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.

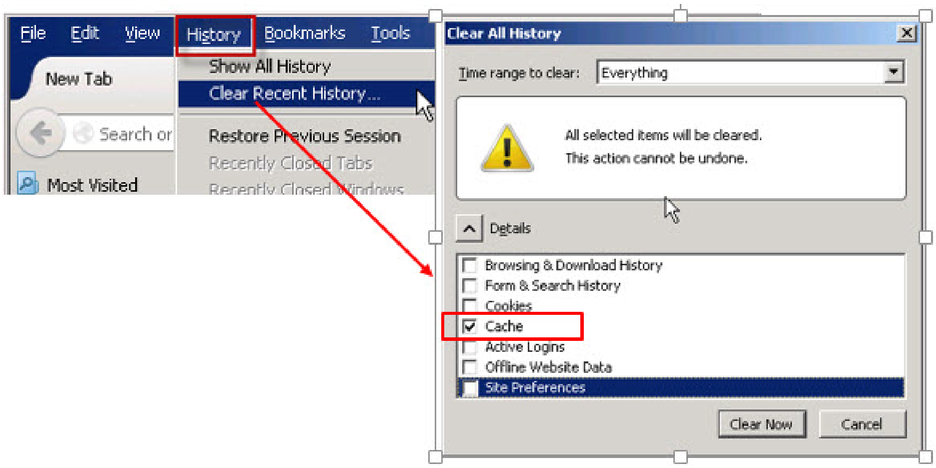
Issue: You have a browser tab open to the Administration Console for Content Platform Engine (ACCE). You refresh the tab, expecting to get a login prompt and nothing happens.

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 issues

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*.

Issue: You attempt to validate a workflow, but you get a very large number of validation errors that cannot be resolved.

Cause

The security session on the Content Platform Engine has timed out. The Process Designer application remains open, but is disconnected from the Content Platform Engine.

Resolution

Save your workflow definition to the file system. Close all browser windows. Reopen your saved workflow definition in Process Designer.

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.

IBM Training