

# WebSphere Process Server V7.0

## Process evolution and instance migration

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## What this exercise is about

This lab shows you how to migrate a business process template using WebSphere Integration Developer V7.0, deploy the new business process template version to the process server, and then migrate live process instances from the older business process template version to the new business process template version at run time using the Business Process Choreographer Explorer.

In this lab you will build, deploy, and manage migration of in-flight business process instances. The beginning will cover background information in presentation form to level set this new enhancement. You will then build your new process version in WebSphere Integration Developer to see differences and make improvements to the process. Once satisfied with the changes, you will deploy the new version of the business process and use the BPC explorer and Business Space to manage the migration of an in-flight process to your new version. The take-away from this lab will be the hands-on realization of improved business process agility and dynamicity in WebSphere Process Server version 7.

## Lab requirements

List of system and software required for the student to complete the lab.

- WebSphere Integration Developer V7.0 with the WebSphere Process Server test server installed

## What you should be able to do

At the end of this lab you should be able to:

- Import project interchange files that has the initial process version into the WebSphere Integration Developer V7.0 development environment
- Deploy an initial process to the WebSphere Process Server test environment and then start a couple of process instances using the integration test client
- Verify the process instances using the Business Process Choreographer Explorer
- Create a new process version in WebSphere Integration Developer V7.0
- Make a critical and an uncritical change to the new version of the process
- Verify the new process version using the Differences Editor in WebSphere Integration Developer V7.0 which is a visual display of the migration specification.
- Use the Business Process Choreographer Explorer and migrate the existing process instances from the old process template version to the new process template version
- Explain why the process instances were successful and which ones correctly were not allowed to migrate

## Introduction

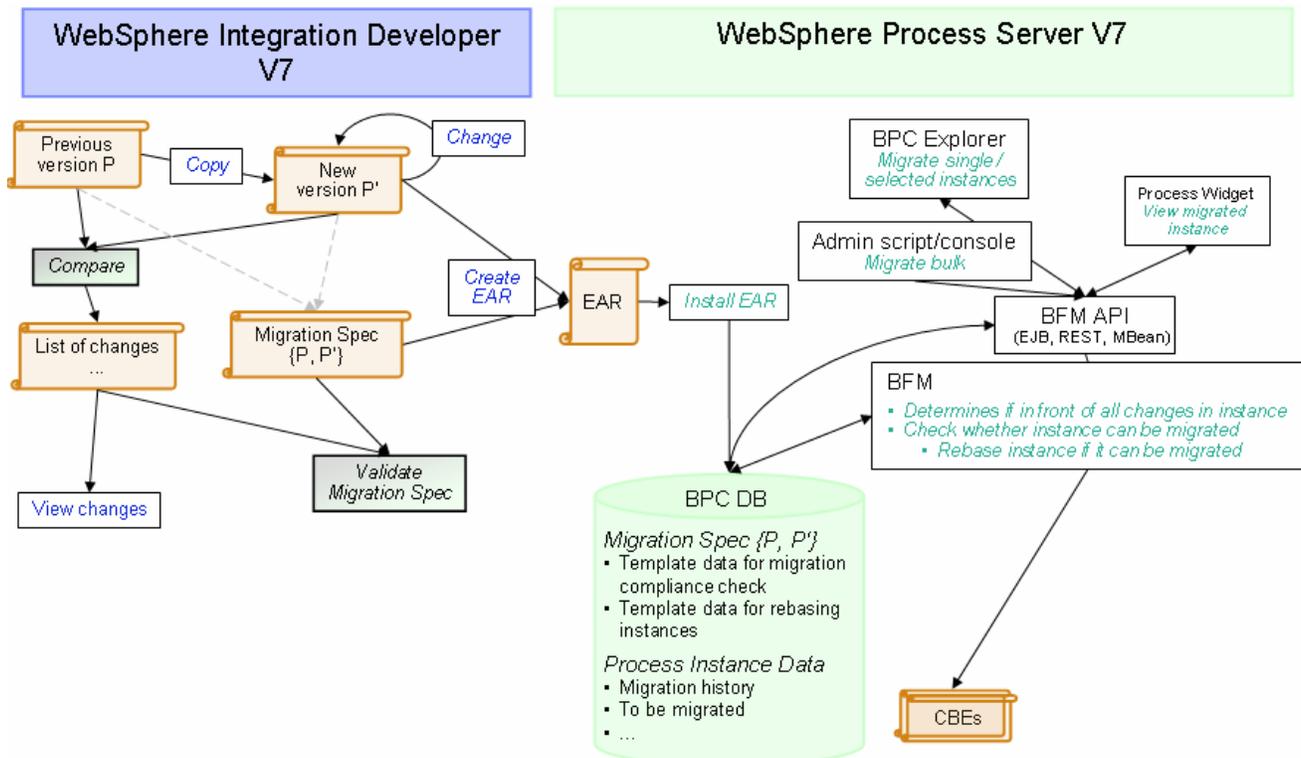
Process instance version handling provides the ability to migrate in-flight process instances to a new process template version at runtime.

To start you will need to create a new version of a V7 process model in WebSphere Integration Developer v7 with a new validFrom date. The “New Process Version...” Wizard copies the module for version handling including specification of new validFrom. Source and target process versions must be v7 processes.

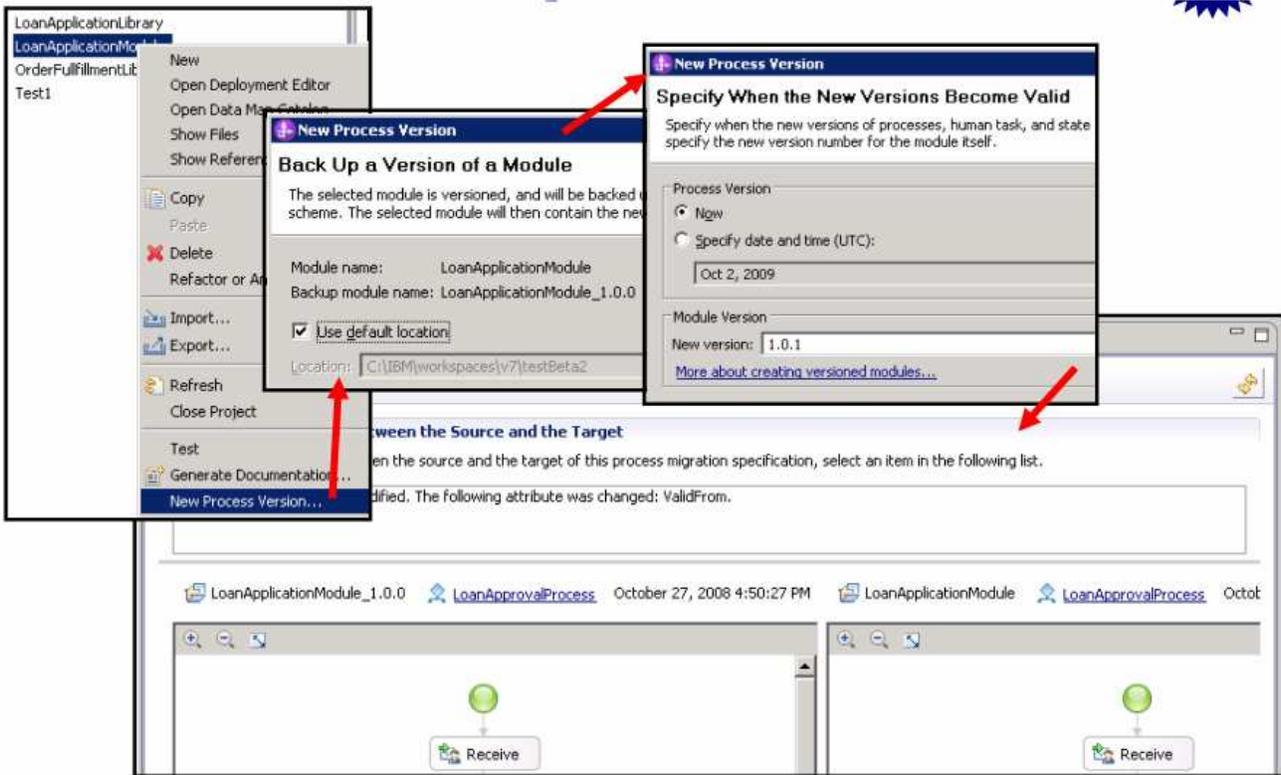
There are two types of changes that you will make to the business process that affect process instance version migration; a critical and an uncritical change to the new version of the process. The first are considered uncritical changes. These changes do not influence migration and are descriptive or QoS property changes. The second type of change covers everything else. These are called critical changes because the process template has been fundamentally changed. Critical changes are changes to the business logic of a process migration. You will be able to view those changes in the Differences Editor inside WebSphere Integration Developer V7. Once deployed, you will be able to see the different versions in the BPC Explorer application.

You can perform the in-flight process instance migration two ways. You will use the BPC Explorer application, which allows you to migrate single or select business processes. A script is also available and allows for bulk migration. The script can migrate all potential instances of a source process version to a target process version at one time. Each process instance migrated in one transaction. This reduces the risk of running into transaction timeout. For example, selecting 1000 instances to migrate will result in 1000 transactions.

Here is a general diagram of how process instance version handling works. WebSphere Integration Developer actions have darker blue text and WebSphere Process Server actions are in a lighter blue.



Here is a diagram of the actions you are going to take to create a new process version in WebSphere Integration Developer V7. Notice if the business process has an SCA version handling set, a backup module is created.



You can go back and manually add migration specification if you realize after the fact. In WebSphere Integration Developer V7, navigate to File > New > Process Migration Specification, select source and target. This action will re-create the migration specification. The migration specification is important because it outlines how the migration will happen at runtime and is deployed with the migrated business process application.

## Exercise instructions

Some instructions in this lab are Windows operating system specific. If you plan on running WebSphere Integration Developer on a Linux operating system you will need to run the appropriate commands and use appropriate files for Linux. The directory locations are specified in the lab instructions using symbolic references, as follows:

| Reference Variable | Windows Location                   | AIX®/UNIX® Location                  |
|--------------------|------------------------------------|--------------------------------------|
| <WID_HOME>         | C:\IBM\WID70                       | /opt/IBM/WID70                       |
| <WTE_HOME>         | C:\IBM\WID7_WTE\runtimes\bi_v7     | /opt/IBM/WID7_WTE/runtimes/bi_v7     |
| <WPS_PROFILE_HOME> | <WTE_HOME>\profiles\qwps           | <WTE_HOME>/profiles/qwps             |
| <LAB_FILES>        | C:\Labfiles70\WPS\ProcessMigration | /tmp/Labfiles70/WPS/ProcessMigration |
| <WORKSPACE>        | <LAB_FILES>\workspace              | <LAB_FILES>/workspace                |
| <SOLUTION>         | <LAB_FILES>\workspace\solution     | <LAB_FILES>\workspace/solution       |

**Windows user note:** When directory locations are passed as parameters to a Java™ program such as EJBdeploy or wsadmin, it is necessary to replace the backslashes with forward slashes to follow the Java convention. For example, C:\LabFiles70\ is replaced by C:/LabFiles70/

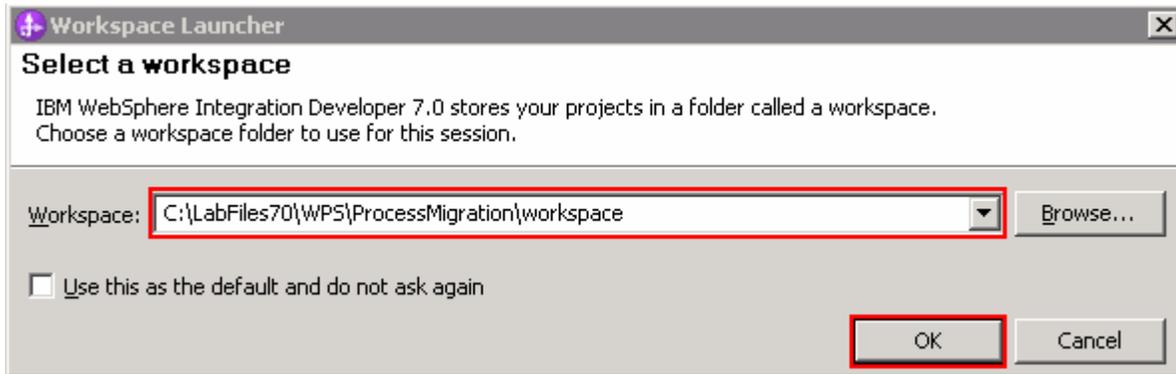
| Reference variable | Example: Remote Windows test server location | Example: Remote z/OS® test server location | Input your values for the remote location of the test server |
|--------------------|--|--|--|
| <SERVER_NAME>      | server1                                      | sssr011                                    |  |
| <WAS_HOME>         | C:\IBM\WID7_WTE\runtimes\bi_v7               | /etc/sscell/wps                            |  |
| <HOSTNAME>         | localhost                                    | mvsxxx.rtp.raleigh.ibm.com                 |  |
| <SOAP_PORT>        | 8880   | 8880                                       |  |
| <TELNET_PORT>      | N/A  | 1023                                       |  |
| <PROFILE_NAME>     | AppSrv01                                     | Default                                    |  |
| <USERID>           | N/A  | Ssadmin                                    |  |
| <PASSWORD>         | N/A  | fr1day                                     |  |

Instructions for using a remote testing environment, such as z/OS, AIX or Solaris, can be found at the end of this document, in the section ['Task: Adding Remote Server to WebSphere Integration Developer Test Environment'](#).

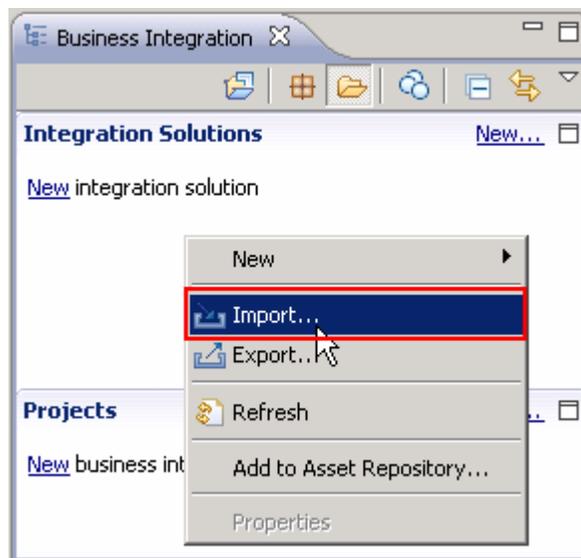
## Part 1: Prepare environment for lab

In this section of the lab, you will import all the projects in the **WPIv70\_WPS\_LoanApplication2009\_Pi.zip** project interchange file into a new workspace.

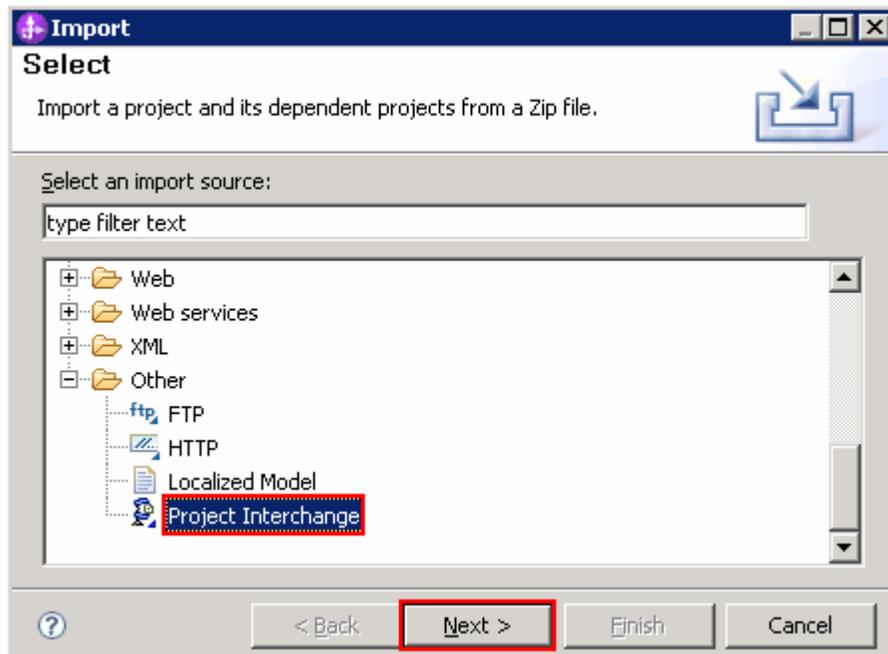
1. Start WebSphere Integration Developer V7.0 with a workspace location of **<WORKSPACE>**



2. Click **OK**
3. Import Project Interchange file, **WPIv70\_WPS\_LoanApplication2009\_Pi.zip**, into the development environment
  - a. Right-click inside **Business Integration View** (top left view in the Business Integration Perspective) and select **Import** from the pop-up menu

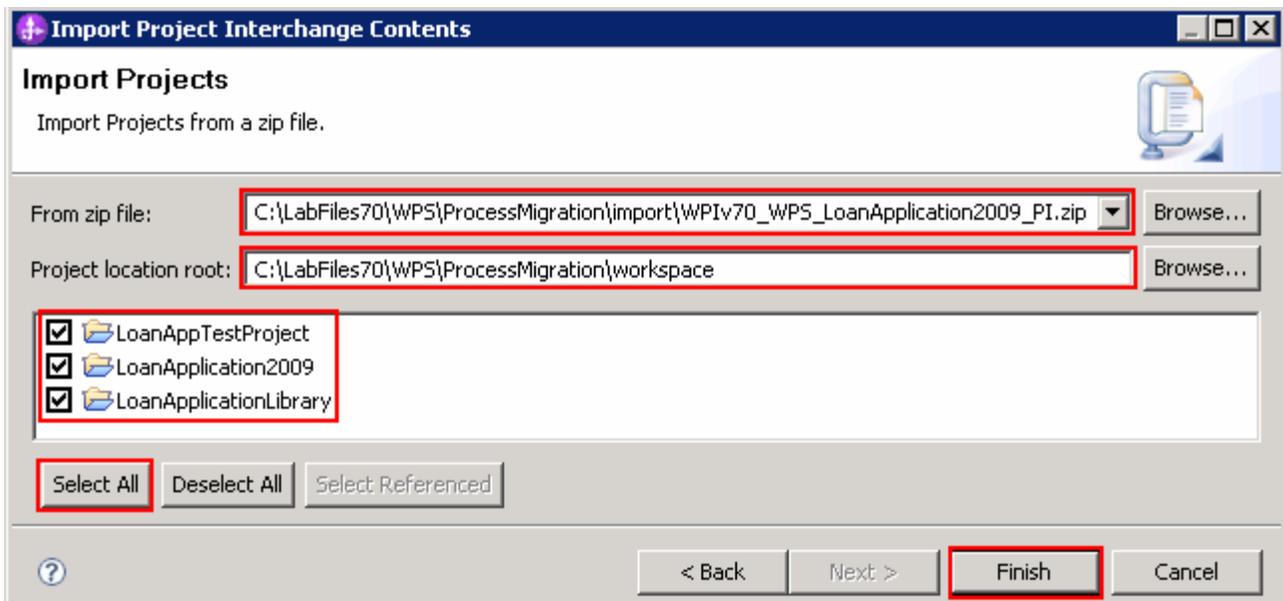


- b. From the **Import**, dialog, expand **Other** and select **Project Interchange** from the tree



\_\_ c. Click **Next**

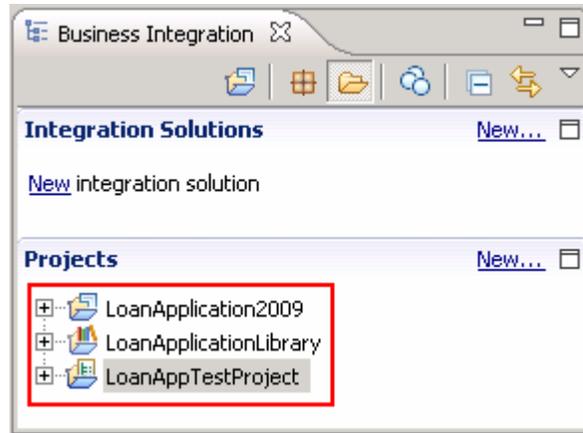
\_\_ d. In the next **Import Project Interchange Contents** panel, click the **Browse** button for **From zip file** and navigate to **<LAB\_FILES>/import/WPIv70\_WPS\_LoanApplication2009\_PI.zip** and click **Open**



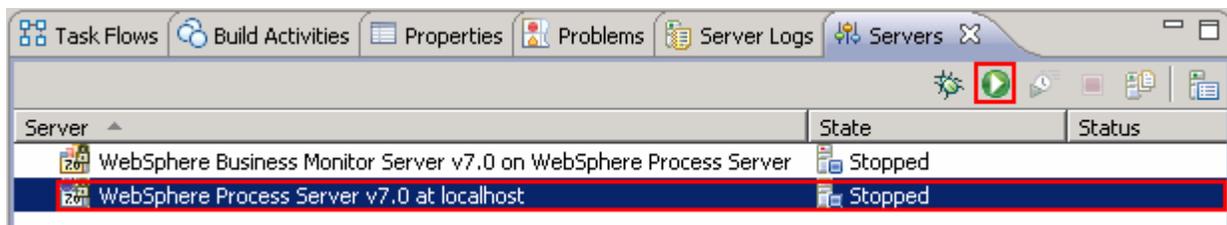
\_\_ e. Click the **Select All** button to select all the check boxes for the projects listed

\_\_ f. Click **Finish** button (projects are imported and auto-build will run).

\_\_ g. Verify you have **LoanApplication2009**, **LoanApplicationLibrary** and **LoanAppTestProject** modules listed in the Business Integration view under the **Projects** section.



\_\_\_ h. Verify the '**WebSphere Process Server V7.0**' listed in your **Servers** and start the server

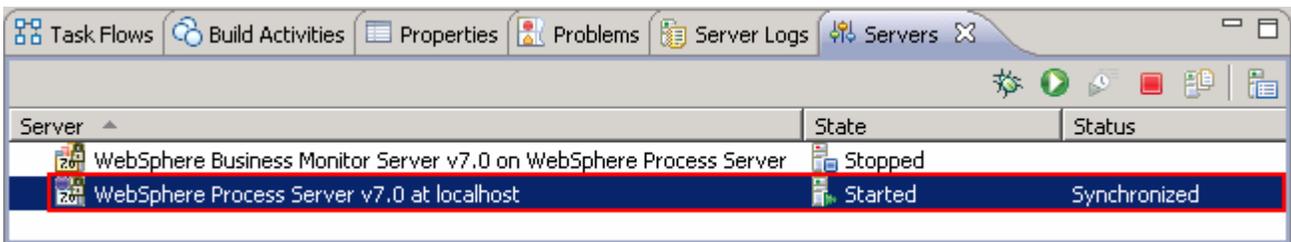


\_\_\_ i. Click the **Start Server** (  ) icon to start the server

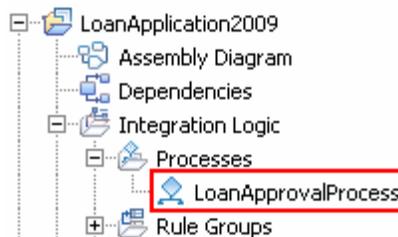
## Part 2: Create process instances for LoanApplication2009 application

In this part of the lab, you will be taken through the loan approval example to understand what will happen in the process later when testing. You will then publish the applications to WebSphere Process Server test environment, use the integrated test client to start a few process instances and then use the Business Process Choreographer explorer to verify the process instances.

- \_\_\_ 1. Ensure the WebSphere Process Server test server is started
  - \_\_\_ a. From the **Servers** view of WebSphere Integration Developer, select **WebSphere Process Server v7.0** and click the **Start the server** icon (🟢) if the server is not yet started



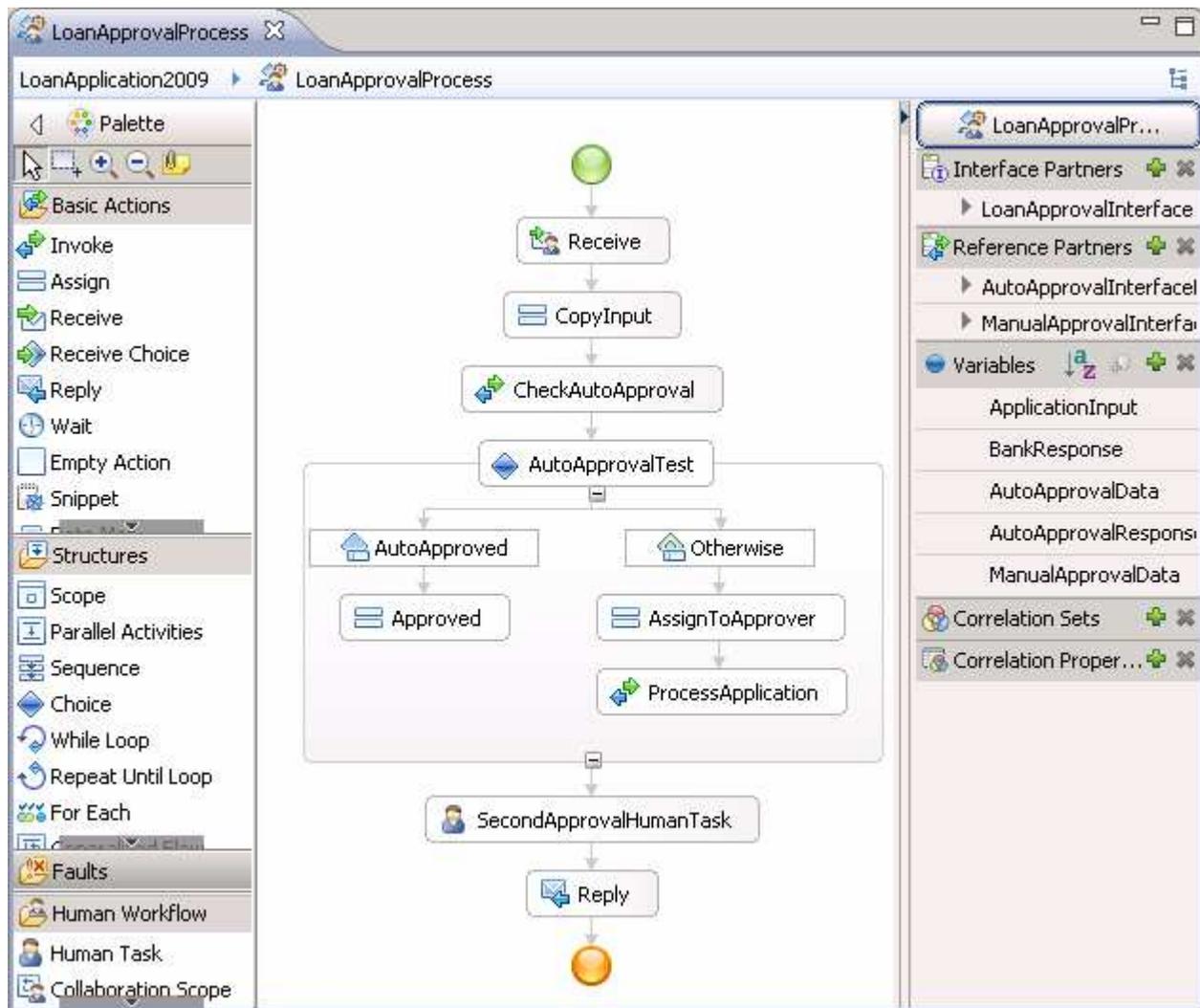
- \_\_\_ 2. Verify the loan application process
  - \_\_\_ a. Open the LoanApprovalProcess in the process editor
    - 1) Expand **LoanApplication2009** → **Integration Logic** → **Process** in the Business Integration view and double click **LoanApprovalProcess** (🔗 LoanApprovalProcess) to open it in an Assembly Diagram editor



\_\_\_ b. The loan approval process is opened in the process editor as shown below:

What does the loan approval process do?

The Loan Approval Process receives the application data, copies it to an assign activity and checks for auto approval availability using an invoke activity. If the applied loan amount is for less than (< \$50,000) 50,000 dollars, the loan is auto approved and the auto-approved case activity is invoked. If the applied loan amount is greater than (> \$50,000) 50,000 dollars, the otherwise activity is invoked which turn invokes an assign activity that assigns the work to human task labeled "process application". A second approval human task activity has been added to this simple sample to add a final human approval and to highlight what happens in two process paths that have a critical change and uncritical change in the new process versions

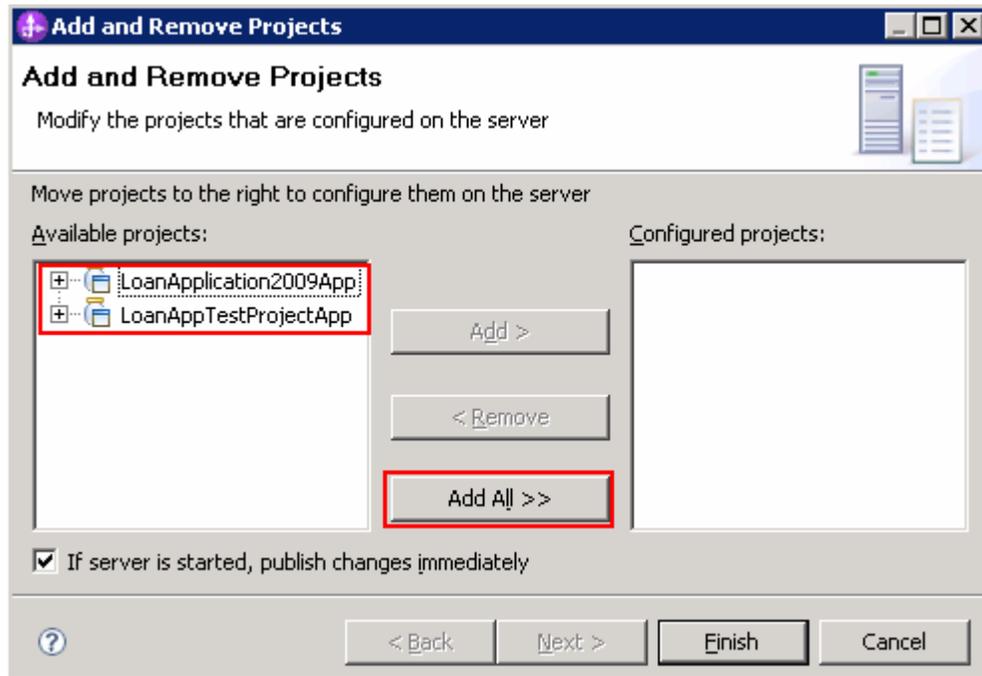


\_\_\_ c. Close the BPEL Editor.

\_\_\_ 3. Add the LoanApplication2009App and LoanAppTestProjectApp projects to the test server using the Add and Remove Projects dialog from the server pop-up menu

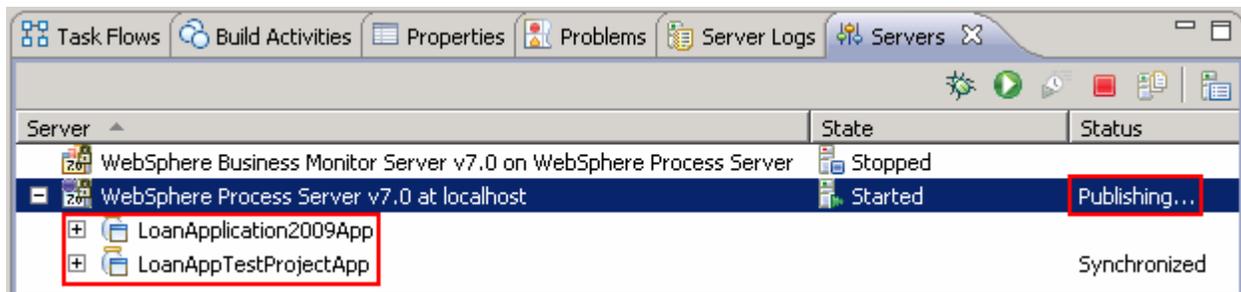
\_\_\_ a. Right-click **WebSphere Process Server v7.0** under the Servers view and select **Add and remove projects...** from the context menu

- \_\_\_ b. In the Add and Remove Projects window, click **Add All >>** to add LoanApplication2009App and LoanAppTestProjectApp projects to the Configured projects panel

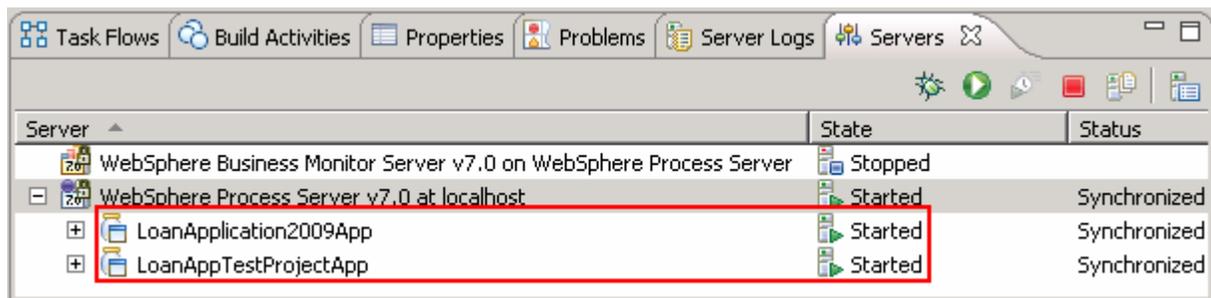


- \_\_\_ c. The projects will now be moved to Configured projects text area. Click **Finish**

- \_\_\_ d. Wait while the projects are being published to the server



- \_\_\_ e. Once the projects are published, from the Servers view, expand **WebSphere Process Server v7.0** to view see if the two applications are started as shown below:

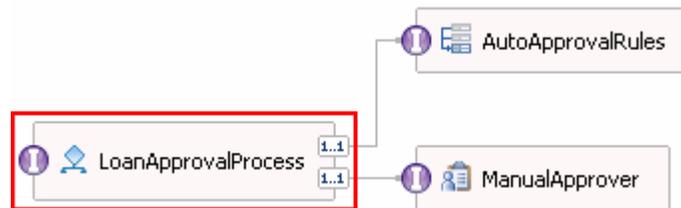


\_\_\_ 4. Create process instances. For demonstrational purposes, you will create two process instances, one with a loan amount of worth \$44,000 and the second with a loan amount worth \$77,000 using the integrated test client. Remember you will start the process instances but not finish them.

\_\_\_ a. In the Business Integration view, expand **LoanApplication2009** and double click **Assembly Diagram** ( **Assembly Diagram**) to open it in an Assembly Diagram editor



\_\_\_ b. From the **LoanApplication2009** assembly diagram, right click over **LoanApprovalProcess** and select **Test Component** from the pop-up menu



\_\_\_ c. The **LoanApplication2009\_Test** window is opened where you enter your test data

\_\_\_ d. Accept the default values populated under Default Properties and enter the values into the Initial request parameters table:

1) For **Name**, click under Value and enter **Customer 1**

| Name             | Type           | Value                                   |
|------------------|----------------|---|
| ApplicationInput | LoanRequestBO  | <input type="text" value=""/>           |
| ApplicantInfo    | PersonalDataBO | <input type="text" value=""/>           |
| Name             | string         | <input type="text" value="Customer 1"/> |
| EmailAddress     | string         | <input type="text" value=""/>           |

Press 'Alt+Enter' to

2) Similarly, for **EmailAddress**, enter **customer1@us.ibm.com**

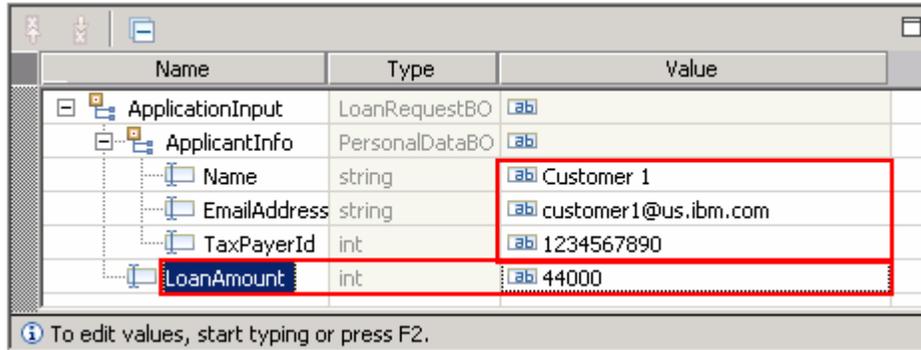
3) Similarly, for **TaxPayerId**, enter **1234567890**

4) For **LoanAmount**, enter **44000**

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**Note:** The loan amount of \$44000 will be auto approved by the Loan Approval Process application since it is less than \$50,000.

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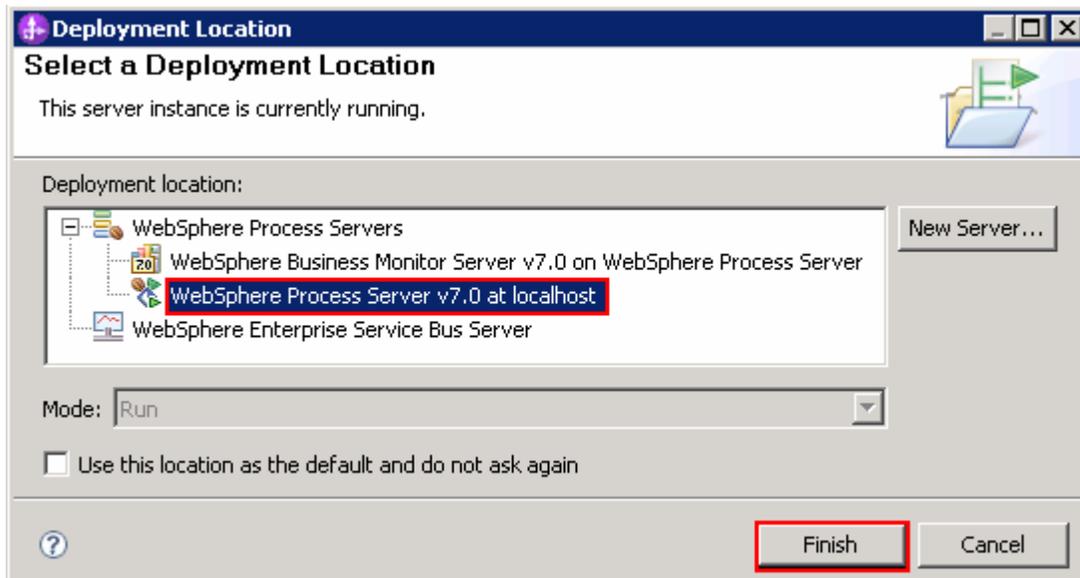
| Name             | Type           | Value                     |
|------------------|----------------|---------------------------|
| ApplicationInput | LoanRequestBO  | [ab]                      |
| ApplicantInfo    | PersonalDataBO | [ab]                      |
| Name             | string         | [ab] Customer 1           |
| EmailAddress     | string         | [ab] customer1@us.ibm.com |
| TaxPayerId       | int            | [ab] 1234567890           |
| LoanAmount       | int            | [ab] 44000                |

To edit values, start typing or press F2.

\_\_\_ e. Run the test by clicking the Continue icon (  )

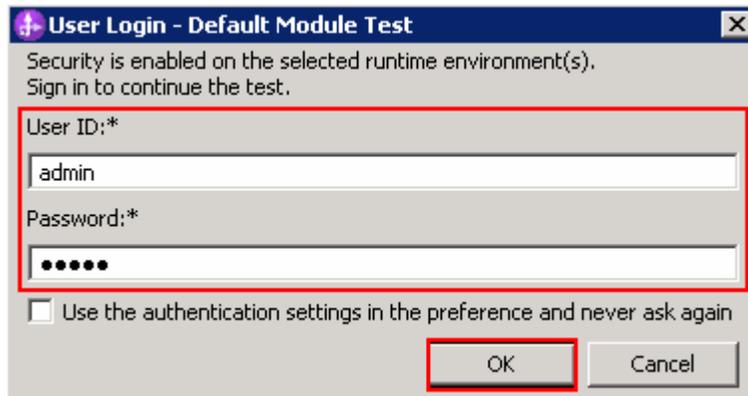


\_\_\_ f. If test client is run for the first time in this workspace, you should see a **Deployment Location** dialog prompting to select a run time sever where the applications are deployed. Select **WebSphere Process Server v7.0** from the list

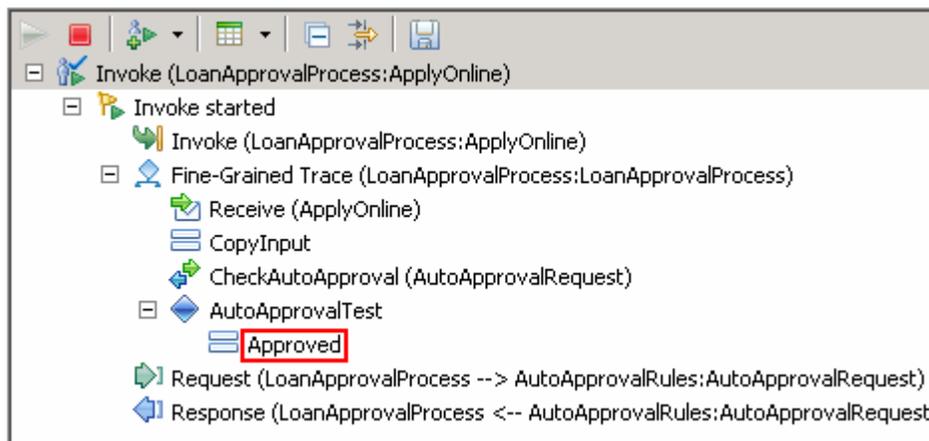


\_\_\_ g. Click **Finish**

- \_\_\_ h. If presented with the **User Login** dialog, enter the **User ID** and **Password**, which by default is normally set to **admin** and **admin**. Optionally, you can select the 'Use the authentication settings in the preference and never ask again' check box to prevent this dialog from being displayed in the future



- \_\_\_ i. Click **OK**. Wait until the integration test client starts.
- \_\_\_ j. You should see the results shown in the picture below indicating the process has been auto approved:



- \_\_\_ k. Now, create a process instance with a loan amount of \$77,000 (>\$50,000). Click the **Invoke** icon (🚀) under Events panel



- \_\_\_ l. Enter the values below for **Name**, **EmailAddress**, **TaxPayerId**, and **LoanAmount**:

- 1) Name : **Customer 2**
- 2) EmailAddress : **customer2@us.ibm.com**
- 3) TaxPayerId : **0987654321**
- 4) LoanAmount : **77000**

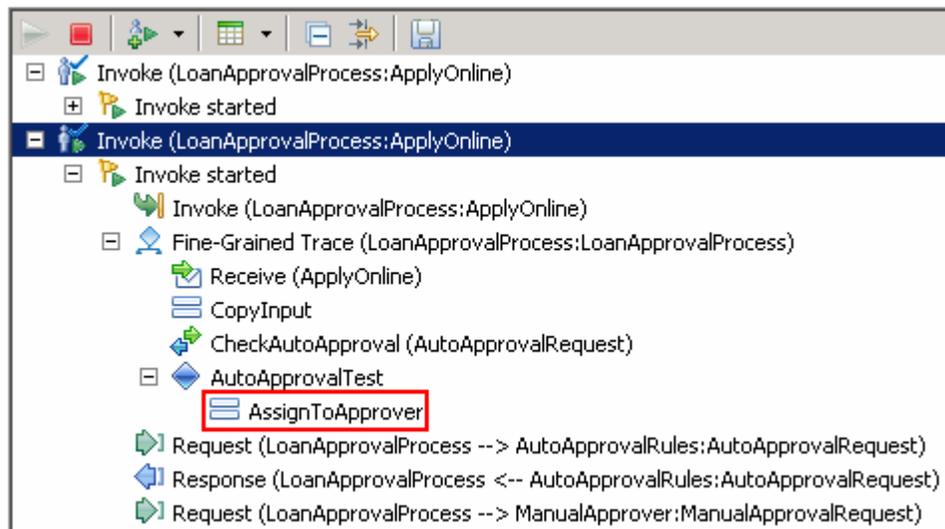
| Name             | Type           | Value                      |
|------------------|----------------|----------------------------|
| ApplicationInput | LoanReques...  | [tab]                      |
| ApplicantInfo    | PersonalDat... | [tab]                      |
| Name             | string         | [tab] Customer 2           |
| EmailAddress     | string         | [tab] customer2@us.ibm.com |
| TaxPayerId       | int            | [tab] 0987654321           |
| LoanAmount       | int            | [tab] 77000                |

To edit values, start typing or press F2.

\_\_ m. Click the **Continue** icon (  ) under Events panel



\_\_ n. You should see the results shown in the picture below indicating the process is assigned for approval with a human task:



\_\_\_ 5. Launch the **Business Process Choreographer (BPC) Explorer** site

\_\_ a. In the **Servers** view, right click over **WebSphere Process Server v7.0** and then select **Launch** → **Business Process Choreographer** from the context menu

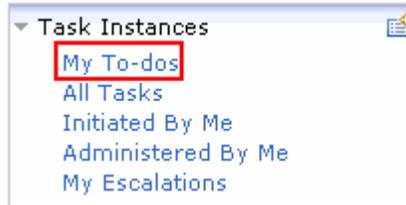
\_\_ b. Enter the username (admin) and password (admin) and click **Login**

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**Alternative:** Launch the BPC Explorer site for the Web browser using URL: Ex: <http://localhost:9080/bpc>

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\_\_ c. In the left navigation pane, click the **My To-dos** link under the **Task Instances** section



\_\_\_ d. In the **My To-dos** panel to the right, you should see two process task instances listed, one indicating manual approval and the other indicating human task approval as shown below:

**My To-dos**

Use this page to work on tasks that are assigned to you. i

| <input type="checkbox"/> | Priority | Task Name               | State | Kind       | Owner | Originator |
|--------------------------|----------|-------------------------|-------|------------|-------|------------|
| <input type="checkbox"/> | 5        | ManualApprover          | Ready | To-do Task | admin | admin      |
| <input type="checkbox"/> | 5        | SecondApprovalHumanTask | Ready | To-do Task | admin | admin      |

Items found: 2    Items selected: 0    <<<    Page 1 of 1    >>>    Items

\_\_\_ e. Logout of the BPC explorer

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**Note:** Do not remove the applications from the WebSphere Process Server test environment at this time.

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## Part 3: Create and update the new process version

In this part of the lab, you will create a new process template version from the existing process template and add a critical change and uncritical changes. You will be able to see the differences between the original process version and the new process version in the Differences Editor.

- \_\_\_ 1. In the Business Integration view, right click the LoanApplication2009 module, and then select **New Process Version** from the pop-up menu. The New Process Version creation wizard is launched
- \_\_\_ 2. Specify the name and location of the new process version module
  - \_\_\_ a. New module name : **LoanApplication2010**
  - \_\_\_ b. Select the check box for **Use default location** to accept the default module location

**New Process Version**

**Specify the Module Name and Location**

Specify a name and location for the copy of the module. The copied module will contain the new process version for further modifications.

Module name: LoanApplication2009

New module name: **LoanApplication2010**

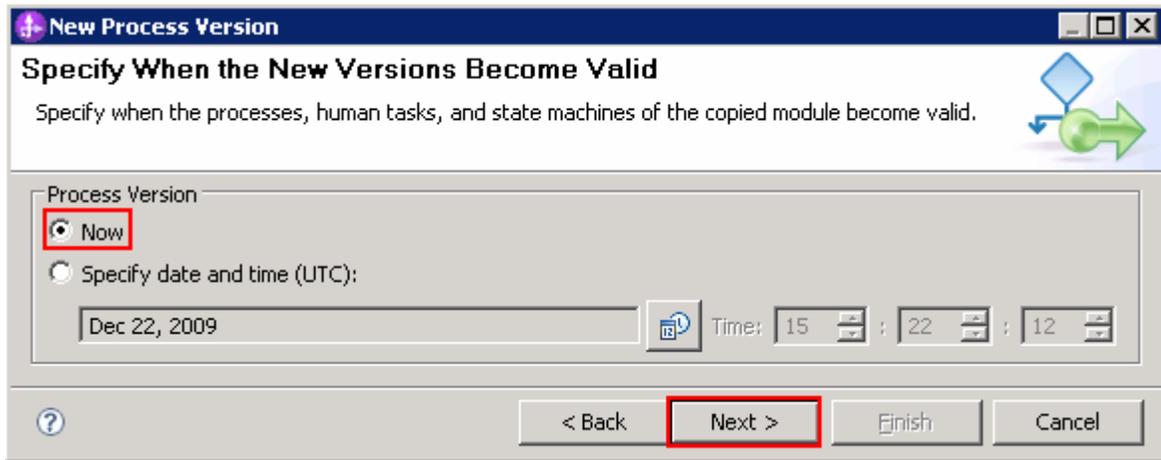
Use default location

Location: C:\LabFiles70\WPS\ProcessMigration\workspace\LoanApplication2010

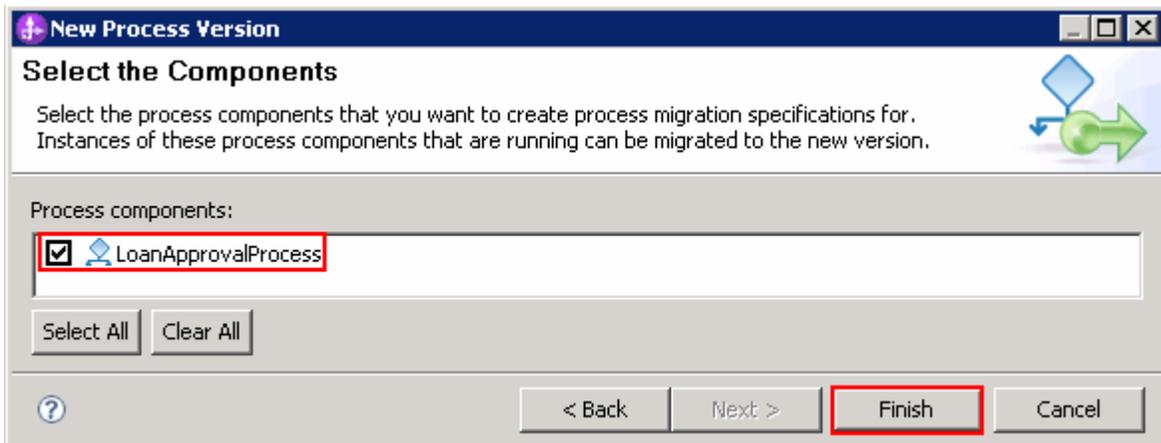
- \_\_\_ 3. Click **Next**.

- \_\_\_ 4. In the next panel, specify when the new process version becomes valid
  - \_\_\_ a. Select the radio button for **Now**

**Note:** For demonstrational purposes, you will select process validation time as Now in order to highlight how the migration specification is acted upon. In a production environment, it is recommended to specify a date and time when the new process version becomes valid.

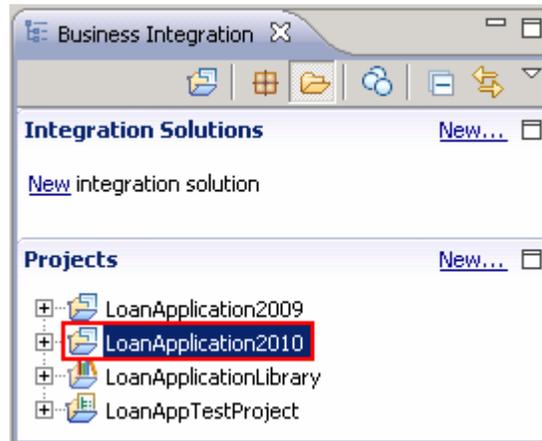


- \_\_\_ 5. Click **Next**
- \_\_\_ 6. In the next panel, select all or the process components you want to migrate
  - \_\_\_ a. Select the check box for **LoanApprovalProcess**



- \_\_\_ 7. Click **Finish**

- 8. You should see the new process version module named **LoanApplication2010** created under the Projects section in the Business Integration view. Note that the entire copy of the older version is created



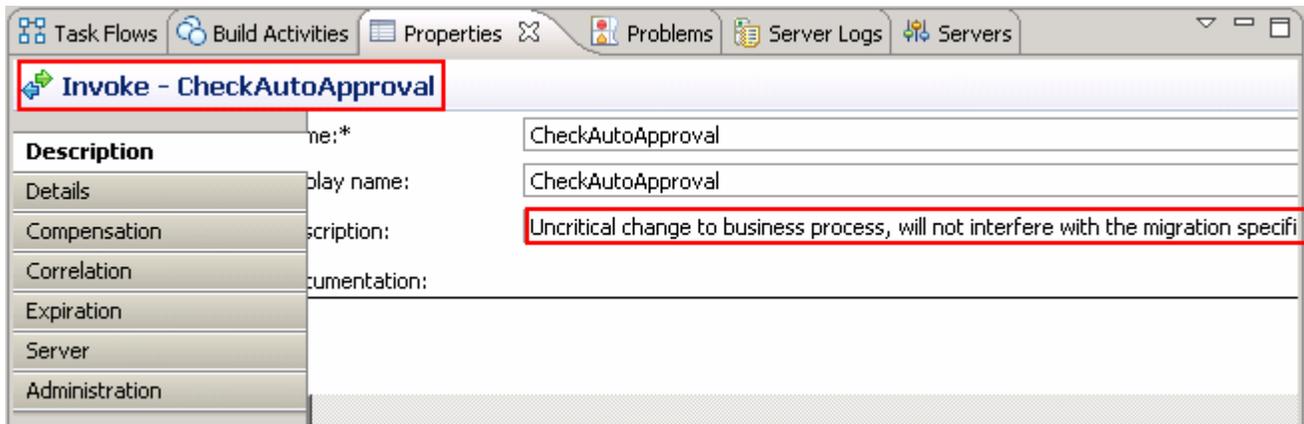
- 9. Now, make changes to the new process version you created. You will make an uncritical change which will not interfere with the process migration and a critical change which will actually interfere with the migration specification of the business process

- a. Uncritical change: Add a description to the LoanApprovalProcess. In the Business Integration view, expand **LoanApplication2010** → **Integration Logic** → **Process** and double click **LoanApprovalProcess** to open it in the process editor

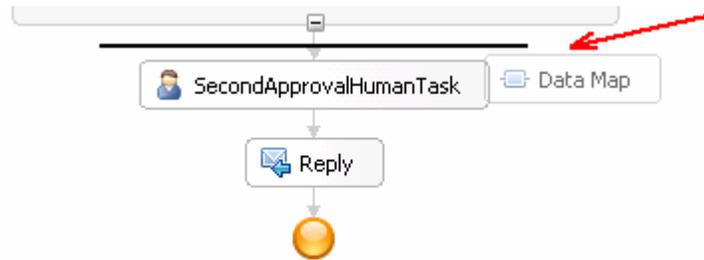


- b. In the **LoanApprovalProcess** editor, select the **CheckAutoApproval** invoke activity and then select the **Properties** tab in the lower quadrant of the integration work bench

1) Description : **Uncritical change to business process, will not interfere with the migration specification**

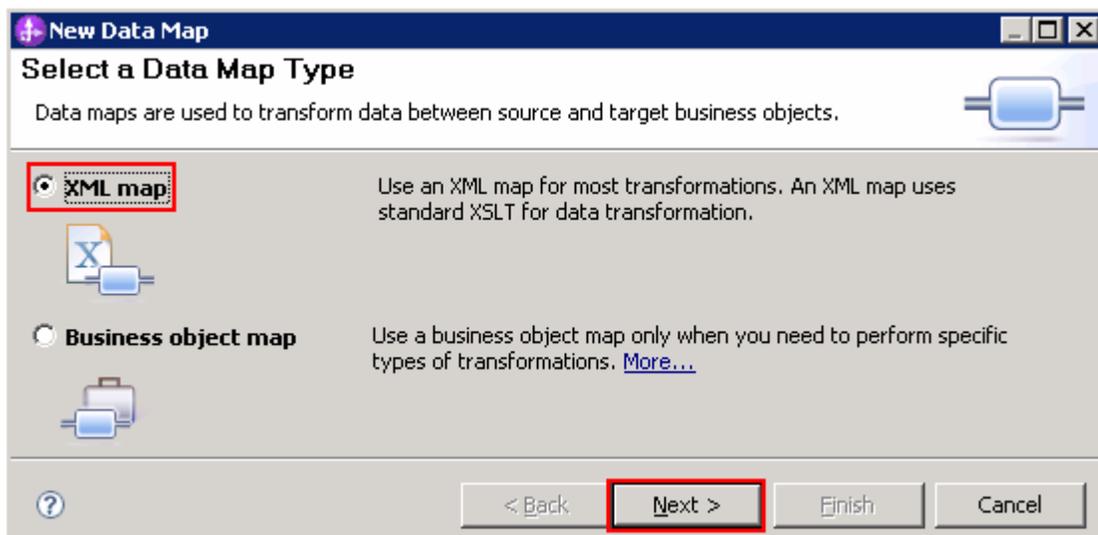


- \_\_\_ c. Critical change: Any new BPEL activity can be used for a critical change, but you are going to add a **Data Map** activity to the LoanApprovalProcess editor canvas to highlight this new enhancement to version 7. In the LoanApprovalProcess editor, select the **Data Map** activity from the palette tray to the left and drop it above the **SecondApprovalHumanTask** activity of the LoanApprovalProcess.



- \_\_\_ d. The New Data Map wizard is opened

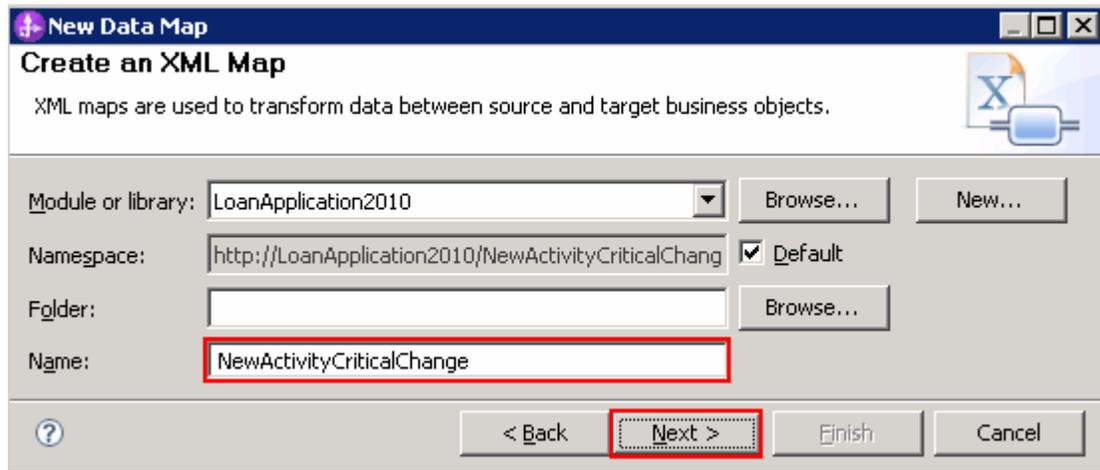
- 1) Select the radio button for **XML map**



- \_\_\_ e. Click **Next**

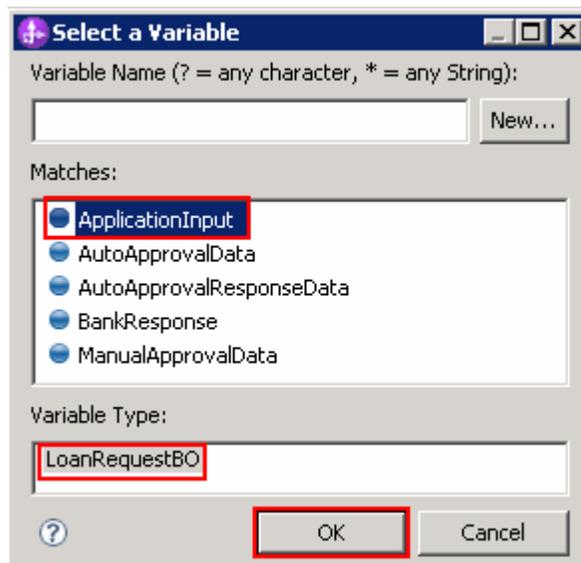
\_\_\_ f. In the next panel, type the name for the new **XML Map** activity

1) Name : **NewActivityCriticalChange**



\_\_\_ g. Click **Next**

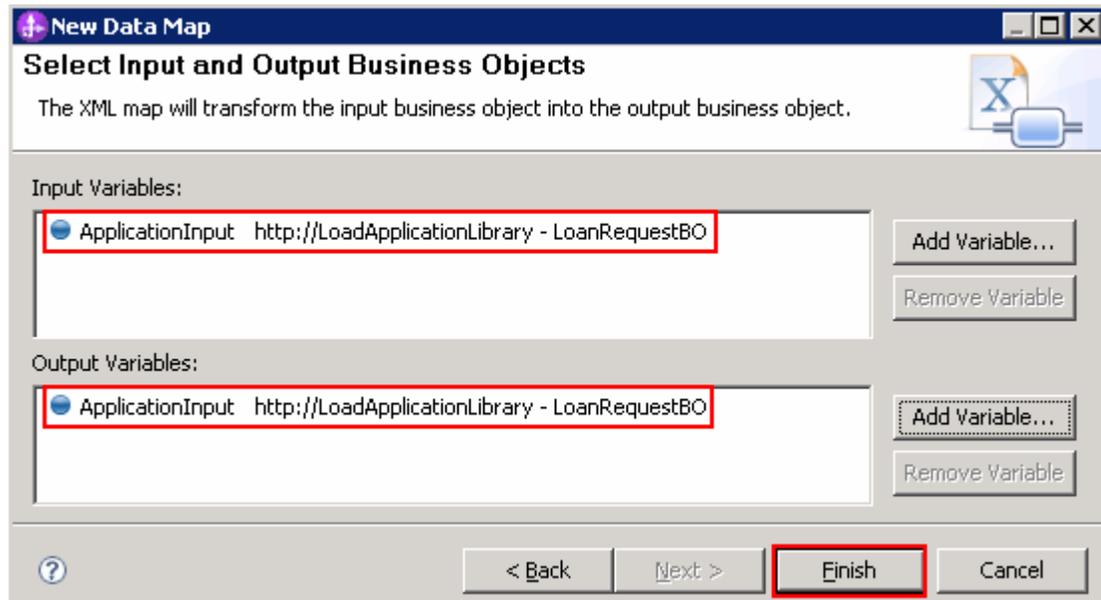
\_\_\_ h. In the next panel, select the input and output objects. Click the **Add Variables** button for the Input Variables text area and select **ApplicationInput** from the **Select a Variable** dialog



\_\_\_ i. Click **OK**

\_\_\_ j. Similarly, click the **Add Variables** button for the Output Variables text area and select **ApplicationInput** from the **Select a Variable** dialog.

\_\_\_ k. The final **Select Input and Output Business Objects** panel should look like in the picture below:

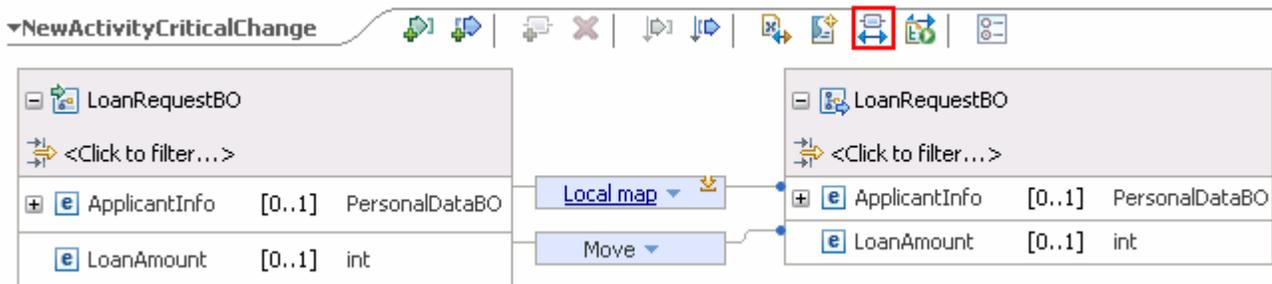


\_\_\_ l. Click **Finish**

\_\_\_ m. The new XML Map activity opens in the XML editor. Click **Map source to target based on name and types** icon (↔).



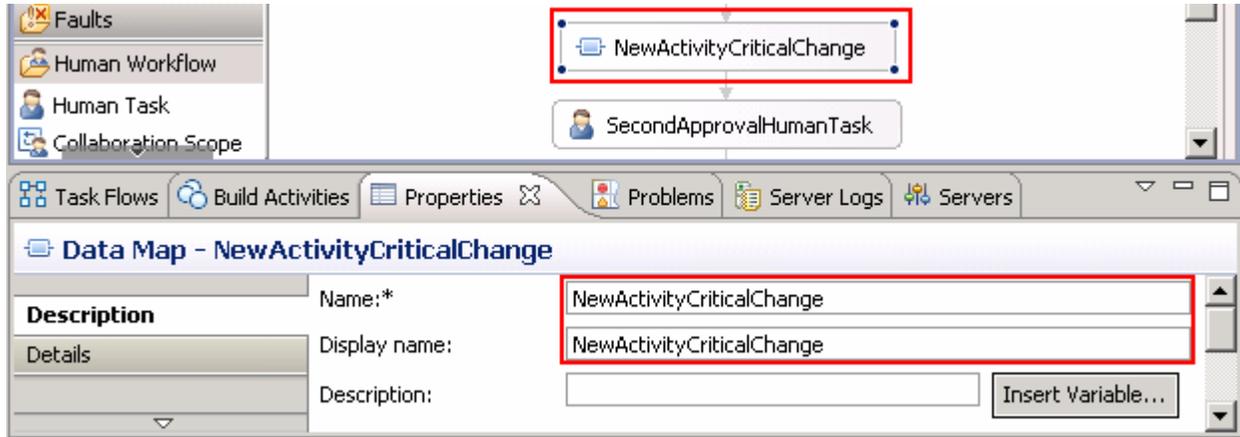
\_\_\_ n. This will map the Application Info and LoanAmount input/output elements using inline maps as shown below:



\_\_\_ o. Save the changes. From the menu select **File → Save** (or **Ctrl + S** from your keyboard) to save your changes and close the XML editor.

\_\_\_ p. Now, rename the XML Data Activity. In the LoanApprovalProcess editor, select the **DataMap** activity and then select the Properties tab. Update the Name and Display name fields

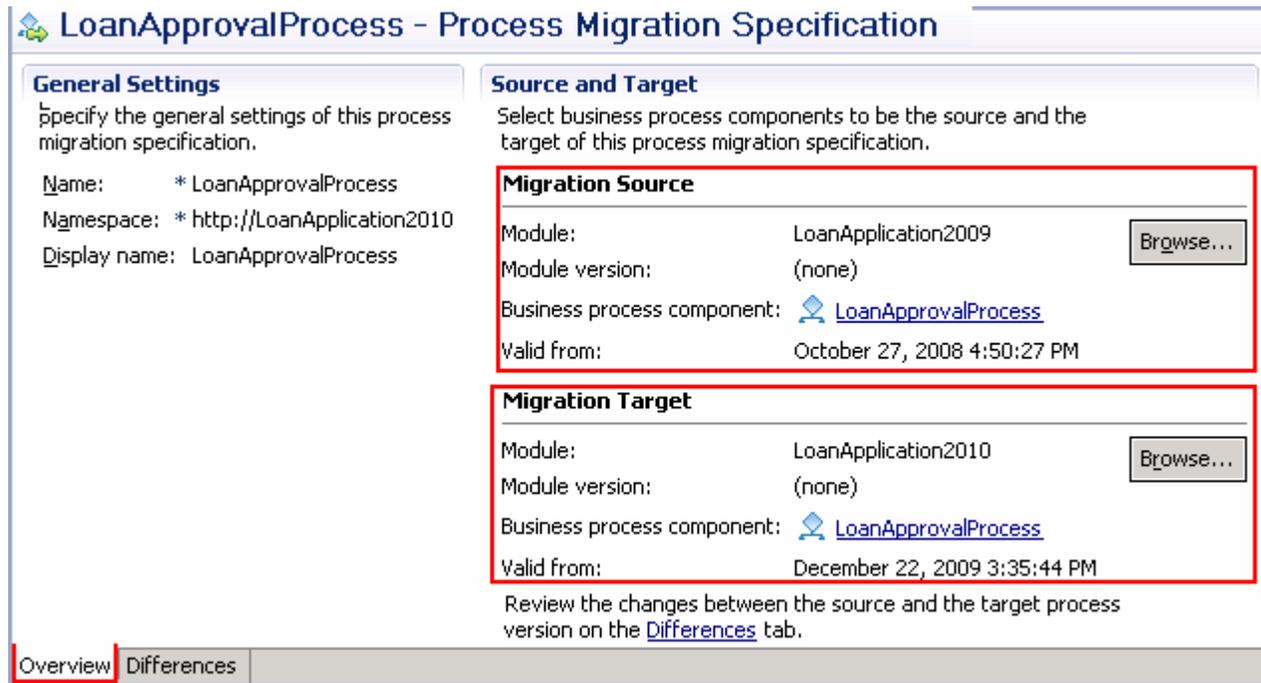
- 1) Name : **NewActicityCriticalChange**
- 2) Display name : **NewActicityCriticalChange**



\_\_\_ q. Save the changes. From the menu select **File → Save** (or **Ctrl + S** from your keyboard) to save your changes and close the LoanApprovalProcess

\_\_\_ 10. Verify the process migration specification. Now, you will verify where the process migration specification is generated in the new process module

\_\_\_ a. In the Business Integration view, expand **LoanApplication2010 → Integration Logic → Process Migration Specification** and then double click **LoanApprovalProcess**. The LoanApprovalProcess migration specification viewer is opened. You can view the information related to the migration source and target



\_\_\_ b. Now select the **Differences** tab, at the bottom of the LoanApprovalProcess migration specification viewer to review the changes between the source and target process version

- 1) Select the first change listed, which is the uncritical change, a description update to the CheckAutoApproval activity. Note that the uncritical changes are represented with yellow in color

**Differences**

**Review the Differences between the Source and the Target**

To review the changes between the source and the target of this process migration specification, select an item in the following list. [More...](#)

- The CheckAutoApproval activity has been modified. The following attribute was changed: Description.
- The NewActivityCriticalChange activity has been added.
- The process has been modified. The following attribute was changed: ValidFrom.

LoanApplication2009 LoanApprovalProcess      LoanApplication2010 LoanApprovalProcess

October 27, 2008 4:50:27 PM      December 22, 2009 3:35:44 PM

Process flow diagrams showing the source (left) and target (right) versions of the LoanApprovalProcess. The source process includes activities: Receive, CopyInput, and CheckAutoApproval. The target process includes activities: CheckAutoApproval, AutoApprovalTest, AutoApproved, and Otherwise. The CheckAutoApproval activity in both diagrams is highlighted with a red box.

Overview Differences

- \_\_\_ c. Now, select the second change listed, which is the critical change, the addition of a new Data Map to the new process version. Note that the critical changes are represented with green in color

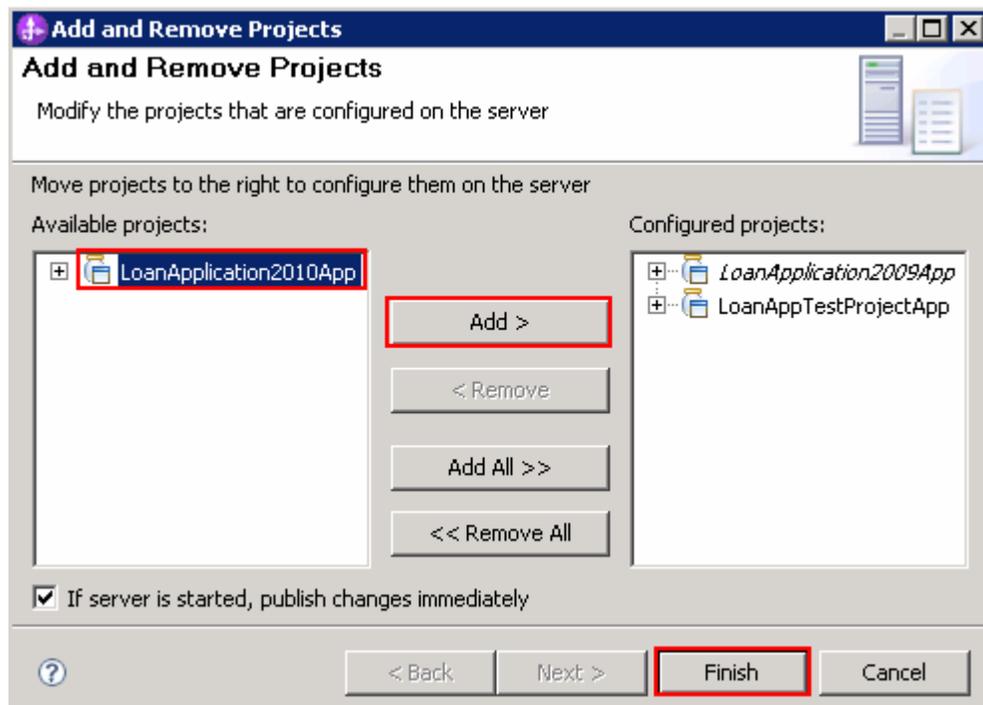
**Note:** TO update the new process version, you can click the LoanApprovalProcess link, update the process and then click the refresh (🔄) icon over top right corner and review the differences.

- \_\_\_ d. Close the LoanApprovalProcess migration specification viewer
  - \_\_\_ e. Ensure the all the changes have been saved at this point. (**File → Save All**)
- \_\_\_ 11. The LoanApprovalProcess migration is complete.

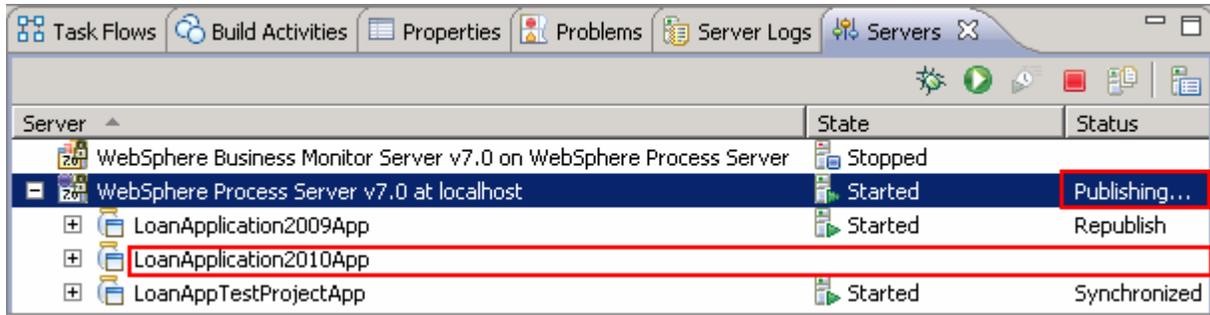
## Part 4: Deploy the new process application and migrate the process instances

In this part of the lab, you will deploy the new process version application to the WebSphere Process Server test environment and then migrate the live process instances from the old process version to the new version using the Business Process Choreographer Explorer (BPC Explorer). You will see how uncritical changes to an in-flight process, where the live process current state has already passed where the uncritical change was made, can be successful. Inversely, you will see how the migration specification correctly does not allow migration of live, in-flight process instances where the current state has passed any critical changes.

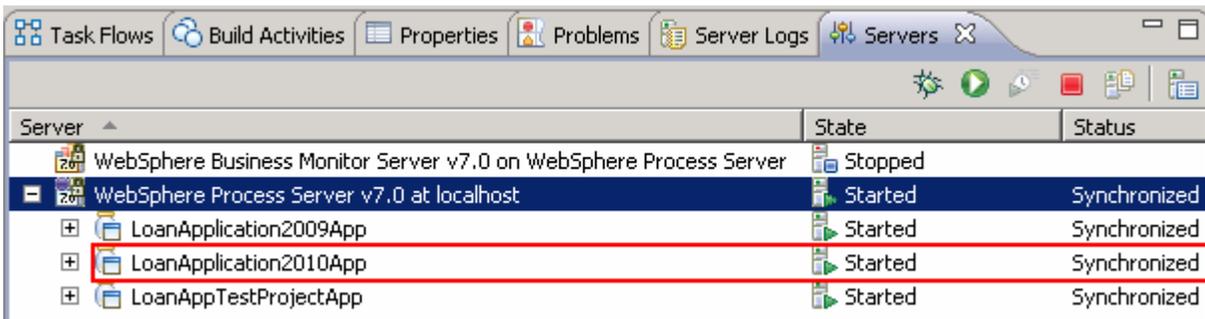
- \_\_\_ 1. Add the new process project to the WebSphere Process Server test environment. Add the LoanApplication2010App project to the test server using the Add and Remove Projects wizard from the server pop-up menu
  - \_\_\_ a. Right-click on **WebSphere Process Server v7.0** under the Servers view and select **Add and remove projects...** from the context menu
  - \_\_\_ b. In the Add and Remove Projects window, click **Add>** to add the LoanApplication2010App project to the Configured projects text area



- \_\_\_ c. Ensure the project is moved to Configured projects text area. Click **Finish**
- \_\_\_ d. Wait while the project is being published to the server



- e. Once the project is published, from the Servers view, expand **WebSphere Process Server v7.0** to view see if the application is started as shown below:



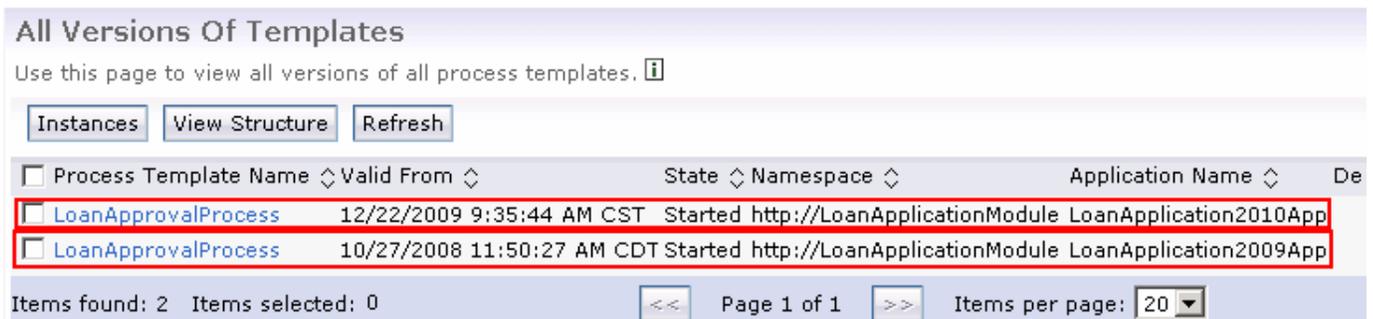
- 2. Launch the **Business Process Choreographer (BPC) Explorer** site
  - a. In the **Servers** view, right click over **WebSphere Process Server v7.0** and then select **Launch** → **Business Process Choreographer** from the context menu
  - b. Enter the username (admin) and password (admin) and click **Login**

**Alternative:** Launch the BPC Explorer site for the Web browser using URL: Ex: http://localhost:9080/bpc

- 3. In the left navigation pane, click the **All Versions** link under the **Process Templates** section



- 4. In the **All Versions Of Templates** panel to the right, you should see two process instances listed, one indicating the old version of LoanApprovalProcess dated 10/27/2008 and the other indicating the new version of LoanApprovalProcess with the current date, similar to the below picture:



**Note:** Remember that you can not start new process instances from the older process version once the newer process version becomes currently valid. The main goal of this enhancement is to allow in-flight migration of the existing process instances created from and old process version to the new process version.

5. Now, in the left navigation pane, click the **Currently Valid** link under the **Process Templates** section



6. In the **Currently Valid Process Templates** panel to the right, you should see all currently valid process instances listed. You should see one process instance listed in the view indicating that the new process version you deployed is currently active as shown below:

**Currently Valid Process Templates**  
Use this page to view process templates on which you can work. [i](#)

Start Instance Instances View Structure Refresh

| Process Template Name                        | Valid From                | Long Running | State   | Description |
|--|---------------------------|--------------|---------|-------------|
| <input type="checkbox"/> LoanApprovalProcess | 12/22/2009 9:35:44 AM CST | yes          | Started |             |

Items found: 1 Items selected: 0 << Page 1 of 1 >> Items per page: 20

**Note:** A new process version becomes valid from the date of validation you provided when creating the new process version.

7. In the left navigation pane, click the **All Versions** link under the **Process Templates** section

8. In the **All Versions Of Templates** panel to the right, select the check box for old version of LoanApprovalProcess dated 10/27/2008

**All Versions Of Templates**  
Use this page to view all versions of all process templates. [i](#)

Instances View Structure Refresh

| Process Template Name                                   | Valid From                 | State   | Namespace                    | Application Name       | Description |
|---|----------------------------|---------|------------------------------|------------------------|-------------|
| <input type="checkbox"/> LoanApprovalProcess            | 12/22/2009 9:35:44 AM CST  | Started | http://LoanApplicationModule | LoanApplication2010App |             |
| <input checked="" type="checkbox"/> LoanApprovalProcess | 10/27/2008 11:50:27 AM CDT | Started | http://LoanApplicationModule | LoanApplication2009App |             |

Items found: 2 Items selected: 0 << Page 1 of 1 >> Items per page: 20

9. Click the **Instances** button over the top.

10. In the next **Process Instances for Process Templates** panel, select the check boxes for all the process instances and then click the **Migrate** button over the top

**Process Instances for Process Templates**  
 Use this page to work with process instances that belong to specific process templates.

**Migrate** Terminate Delete View Process State Refresh

| <input checked="" type="checkbox"/> | Process Instance Name                   | Process Template Name | Valid From                 | State   |
|-------------------------------------|---|-----------------------|----------------------------|---------|
| <input checked="" type="checkbox"/> | _PI:90030125.b374a40a.deb4fcf6.6d9d00df | LoanApprovalProcess   | 10/27/2008 11:50:27 AM CDT | Running |
| <input checked="" type="checkbox"/> | _PI:90030125.b368b412.deb4fcf6.6d9d0093 | LoanApprovalProcess   | 10/27/2008 11:50:27 AM CDT | Running |

Items found: 2 Items selected: 2 << Page 1 of 1 >> Items per page: 20

11. You should see one process instance has successfully migrated but the other did not and encountered a problem as shown below:

**Number of problems encountered: 1**

Migrate Terminate Delete View Process State Refresh

| <input type="checkbox"/>            | Process Instance Name                   | Process Template Name | Valid From                 | State   |
|-------------------------------------|---|-----------------------|----------------------------|---------|
| <input checked="" type="checkbox"/> | _PI:90030125.b368b412.deb4fcf6.6d9d0093 | LoanApprovalProcess   | 10/27/2008 11:50:27 AM CDT | Running |

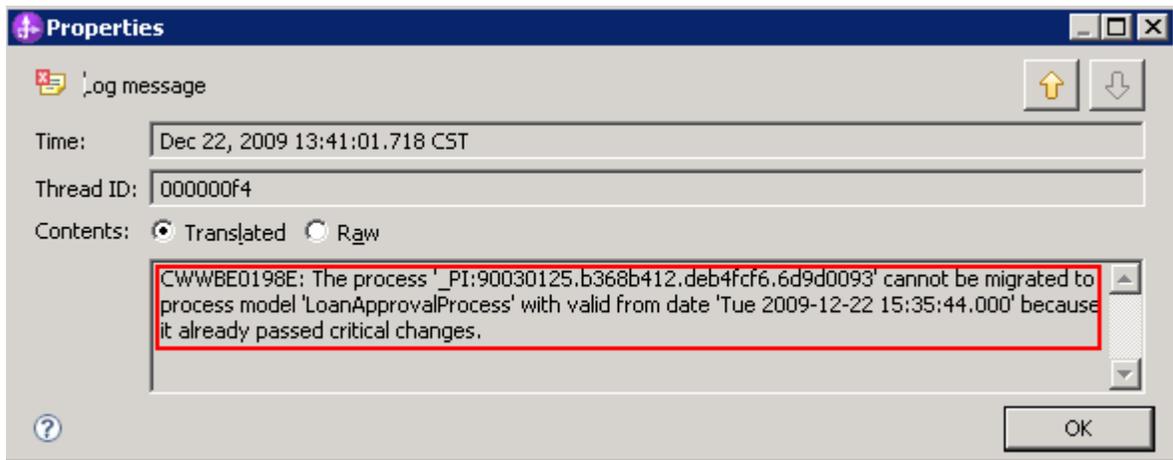
Items found: 1 Items selected: 0 << Page 1 of 1 >> Items per page: 20

The reason why this process instance failed to migrate is because it has already passed the critical change that occurred in the new process instance version. Meaning, the process instance has already passed the new Data Map activity in the LoanApprovalProcess. Remember this instance is started with loan application amount of \$44,000 (< \$50,000) and the application was auto approved, which it already reached the SecondApprovalHumanTask activity but not complete. Hence this instance can not be migrated to the new version.

12. Select the **Sever logs** view in the lower quadrant of WebSphere Integration Developer to troubleshoot the problem. Scroll down to locate the Log message indication an error as shown below:

|  |             |                           |          |   |
|--|-------------|---------------------------|----------|---|
|  | Log message | Dec 22, 2009 13:41:01.... | 000000f4 | CWWBE0198E: The process '_PI:90030125.b368b4... |
|--|-------------|---------------------------|----------|---|

\_\_\_ a. Double click the log message to open in a dialog to have clear view of the message:

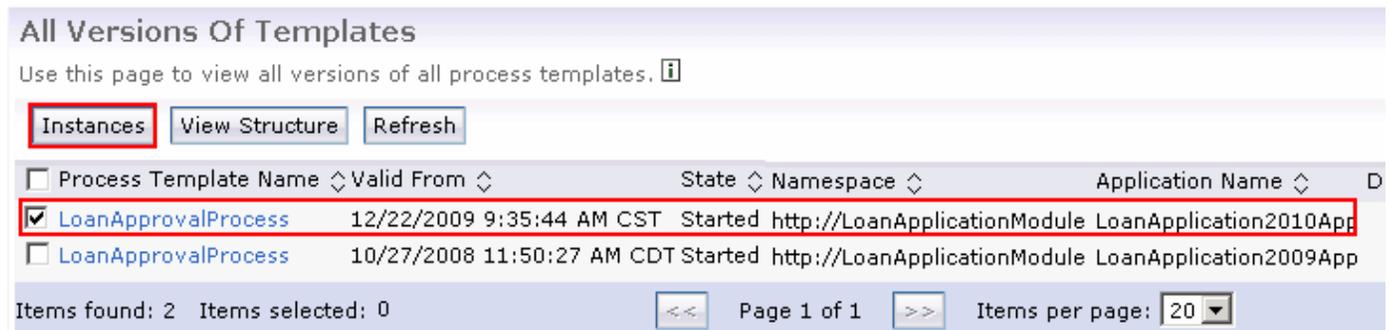


\_\_\_ b. Click **OK**

\_\_\_ 13. Now, verify the migrated process instance

\_\_\_ a. In the left navigation pane, click the **All Versions** link under the **Process Templates** section

\_\_\_ b. In the **All Versions Of Templates** panel to the right, select the check box for new version of LoanApprovalProcess dated 12/22/2009



\_\_\_ c. Click the **Instances** button over the top

\_\_\_ d. In the next **Process Instances for Process Templates** panel, click over the name of the process instance as shown below:



\_\_\_ e. In the next panel, review the process description. You should see the process instance is marked as migrated and the **Valid From** date is current

## Process Instance

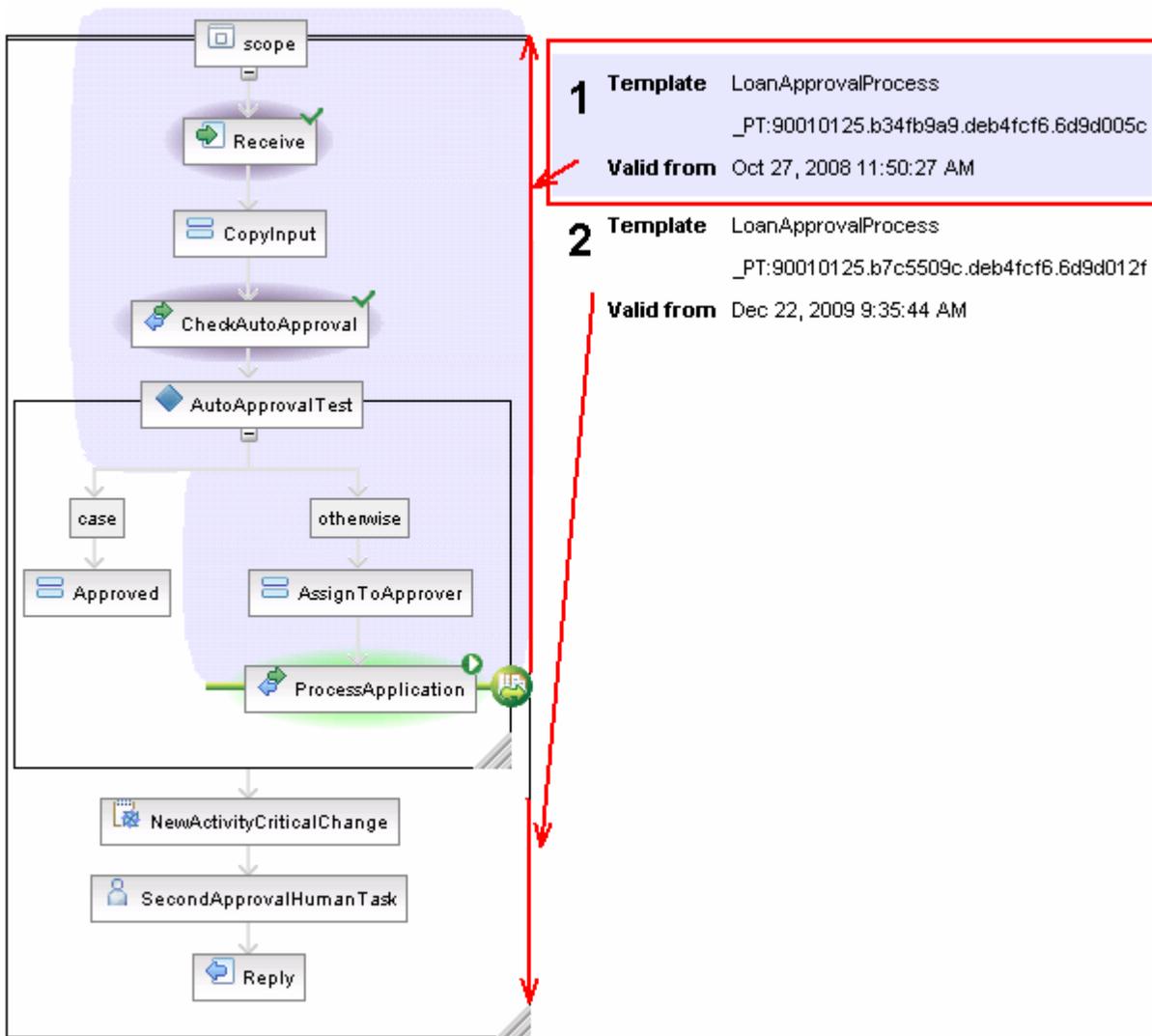
Use this page to view information about a process instance and, optionally, to work on the process instance. [i](#)

### Process Description

|                       |   |
|-----------------------|---|
| Process Instance Name | _PI:90030125.b374a40a.deb4fcf6.6d9d00df |
| Description           |   |
| State                 | Running                                 |
| <b>Migrated</b>       | <b>yes</b>                              |

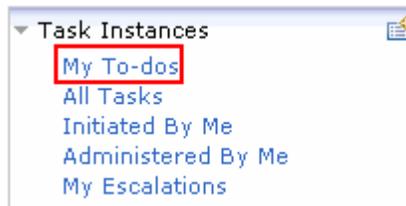
| Details               | Process Input Message                   | Activities | Waiting Operations | Related P |
|-----------------------|---|------------|--------------------|-----------|
| Process Instance ID   | _PI:90030125.b374a40a.deb4fcf6.6d9d00df |            |                    |           |
| Process Template Name | LoanApprovalProcess                     |            |                    |           |
| Process Template ID   | _PT:90010125.b7c5509c.deb4fcf6.6d9d012f |            |                    |           |
| Valid From            | 12/22/2009 9:35:44 AM CST               |            |                    |           |
| Starter               | admin                                   |            |                    |           |
| Administrators        | admin                                   |            |                    |           |
| Readers               |   |            |                    |           |
| Created               | 12/21/2009 4:56:23 PM CST               |            |                    |           |
| Started               | 12/21/2009 4:56:23 PM CST               |            |                    |           |
| Resumes               |   |            |                    |           |
| Parent Name           |   |            |                    |           |
| Top-Level Name        | _PI:90030125.b374a40a.deb4fcf6.6d9d00df |            |                    |           |

- \_\_\_ f. Now, click the **View Process State** button over the top. You should see two process templates mentioned. Template 1 indicates the old version in a light bluish gray color and Template 2 indicates the new version from where the critical change has occurred in white color



- \_\_\_ 14. Complete all the process instances

- \_\_\_ a. In the left navigation pane, click the **My To-dos** link under the **Task Instances** section



- \_\_\_ b. In the **My To-dos** panel to the right, you should see two process task instances listed, one indicating manual approval and the other indicating human task approval as shown below:

**My To-dos**  
 Use this page to work on tasks that are assigned to you.

| <input type="checkbox"/> | Priority | Task Name               | State | Kind       | Owner | Originator |
|--------------------------|----------|-------------------------|-------|------------|-------|------------|
| <input type="checkbox"/> | 5        | ManualApprover          | Ready | To-do Task | admin | admin      |
| <input type="checkbox"/> | 5        | SecondApprovalHumanTask | Ready | To-do Task | admin | admin      |

Items found: 2 Items selected: 0  Page 1 of 1  Items

\_\_\_ c. Select the check box for **ManualApprover** task

**My To-dos**  
 Use this page to work on tasks that are assigned to you.

| <input type="checkbox"/>            | Priority | Task Name               | State   | Kind       | Owner | Originator |
|-------------------------------------|----------|-------------------------|---------|------------|-------|------------|
| <input checked="" type="checkbox"/> | 5        | ManualApprover          | Claimed | To-do Task | admin | admin      |
| <input type="checkbox"/>            | 5        | SecondApprovalHumanTask | Claimed | To-do Task | admin | admin      |

Items found: 2 Items selected: 1  Page 1 of 1  Items

\_\_\_ d. Click the **Work on** button

\_\_\_ e. In the next **Task Message** panel, click the **Complete** button

\_\_\_ f. Similarly complete the **SecondApprovalHumanTask** task to complete all tasks and keep the BPC DB clear for the next lab.

\_\_\_ 15. Logout of the BPC explorer

---

## Part 5: Save work and clean up server

Export project as Project Interchange file. Switch to the 'Business Integration' perspective (**Window → Open Perspective → Other** and then select 'Business Integration')

- \_\_\_ 1. In WebSphere Integration Developer, Navigate to **File → Export**
- \_\_\_ 2. Expand **Other** and select **Project Interchange** from the tree. Click **Next**
- \_\_\_ 3. Out of all the projects listed, you only need to add a check next to four **projects**
  - LoanAppTestProject
  - LoanApplication2009
  - LoanApplication2010
  - LoanApplicationLibrary

All other projects are generated upon import of the project interchange
- \_\_\_ 4. Save in **C:/LabFiles70/WPS/ProcessMigration/solution**
- \_\_\_ 5. Name the project interchange **WPIv70\_WPS\_Finished\_ProcessMigration\_Pi.zip**

## What you did in this exercise

This lab provided you with an understanding of how to migrate a business process template using WebSphere Integration Developer V7.0, deployed the new business process template version to the process server and then migrated live, in-flight process instances from the older business process template version to the new business process template version at run time using the Business Process Choreographer Explorer.

## Solution instructions

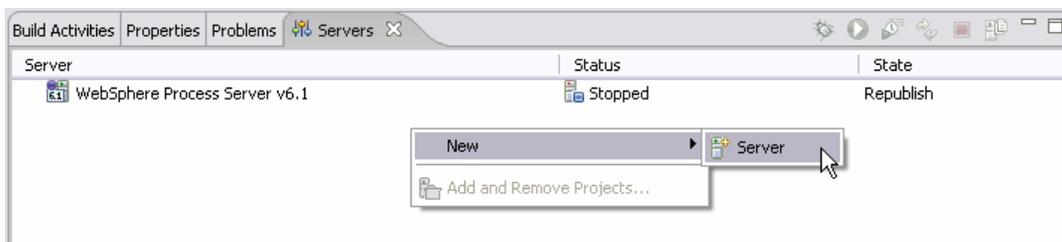
- \_\_\_ 1. Import **Solution** Project Interchange file
  - \_\_\_ a. With a blank workspace in WebSphere Integration Developer, Go to **File → Import → Project Interchange**
  - \_\_\_ b. Click top Browse button and navigate to  
**<LAB\_FILES>/solution/WPIv70\_WPS\_ProcessMigration\_PI\_Solution.zip**
  - \_\_\_ c. Select all the 6 project listed
  - \_\_\_ d. Click **Finish** button
- \_\_\_ 2. Continue from here

## Task: Adding remote server to WebSphere Integration Developer test environment

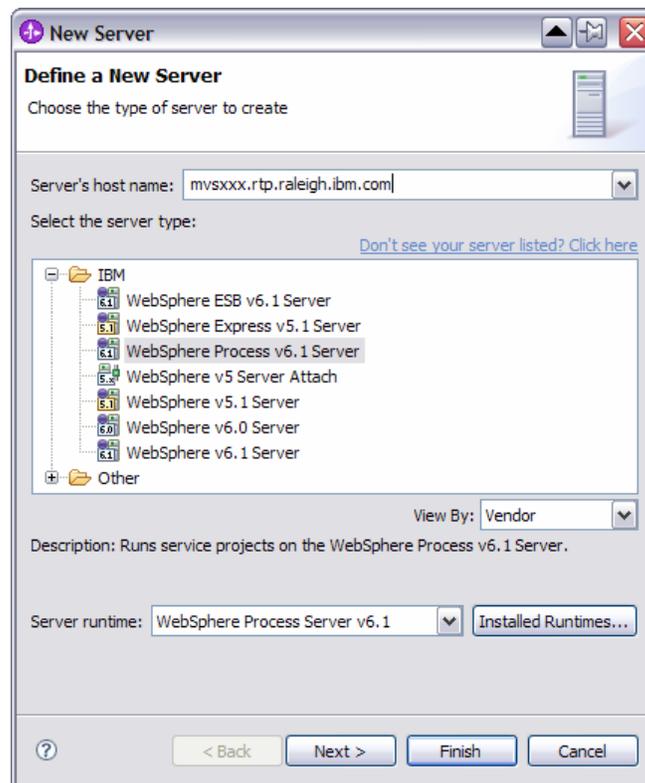
This task describes how to add a remote server to the WebSphere Integration Developer Test environment. This example uses a z/OS machine.

Create a new remote server.

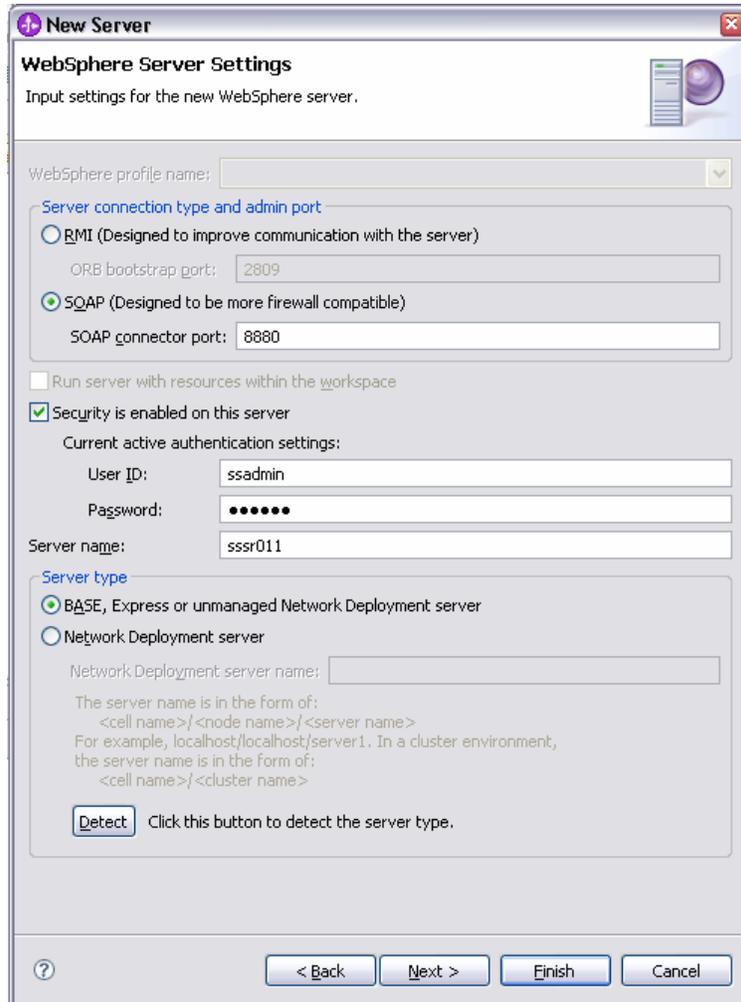
- \_\_\_ 1. Define a new remote server to WebSphere Integration Developer.
- \_\_\_ 2. Right click the background of the **Servers** view to access the pop-up menu.
- \_\_\_ 3. Select **New → Server**.



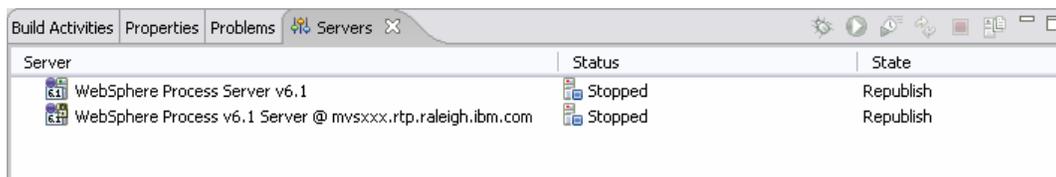
- \_\_\_ 4. In the New Server dialog, specify the remote server's host name, <HOSTNAME>.
- \_\_\_ 5. Ensure that the appropriate server type, 'WebSphere Process v7.0 Server' or 'WebSphere ESB v7.0 Server', is highlighted in the server type list



- \_\_\_ 6. Click **Next**
- \_\_\_ 7. On the WebSphere Server Settings page, leave the radio button for **SOAP** selected, changing the **SOAP connector port** to the correct setting (<SOAP\_PORT>). If security is on in your server, check the box for '**Security is enabled on this server**' and input <USERID> for the user ID and <PASSWORD> for the password.



- \_\_\_ 8. Click **Finish**.
- \_\_\_ 9. The new server should be seen in the Server view.



- \_\_\_ 10. Start the remote server if it is not already started. WebSphere Integration Developer does not support starting remote servers from the Server View.
  - \_\_\_ a. From a command prompt, telnet to the remote system if needed:

**'telnet <HOSTNAME> <TELNET\_PORT>'**

userid : **<USERID>**

password : **<PASSWORD>**

\_\_ b. Navigate to the bin directory for the profile being used:

**cd <WAS\_HOME>/profiles/<PROFILE\_NAME>/bin**

\_\_ c. Run the command file to start the server: **./startServer.sh <SERVER\_NAME>**

\_\_ d. Wait for status message indicating server has started:

```
ADMU3200I: Server launched. Waiting for initialization status.
```

```
ADMU3000I: Server c11sr01 open for e-business; process id is 0000012000000002
```