IBM WebSphere[®] Process Server V7.0 – Lab exercise

WebSphere Process Server V7.0 Parallel routing

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What this exercise is about

This lab shows how inline human tasks and inline parallel routing task work using WebSphere Integration Developer V7.0. The lab also discusses result aggregation and completion conditions.

Lab requirements

List of system and software required 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
- Verify the business process and create a WebSphere group and add users as members to the group
- Update the human task activity from single to parallel ownership
- Test for parallel routing

Introduction

The purpose for parallel routing is for tasks that require multiple owners. A subtask is created for every potential owner. Each of the multiple owners can work simultaneously on their assignment and when they are finished, criteria that you specify are used to aggregate the results and determine when the task is complete. The completion settings allow you to define an early completion condition. You may need only a subset of the potential owners to complete the task before the business process can proceed. The aggregation settings must be set for parallel approval and allow you to control the way in which individual responses are aggregated together into a single task result. Even if the human task has escalations defined, those escalations can adapt to parallel approval.

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></wid_home> | C:\IBM\WID70 | /opt/IBM/WID70 |
| <wte_home> C:\IBM\WID7_WTE\runtimes\bi_v7</wte_home> | | /opt/IBM/WID7_WTE/runtimes/bi_v7 |
| <wps_profile_home> <wte_home>\profiles\qwps</wte_home></wps_profile_home> | | <wte_home>/profiles/qwps</wte_home> |
| <lab_files></lab_files> | C:\Labfiles70\WPS\ParallelRouting | /tmp/Labfiles70/WPS/ParallelRouting |
| <workspace></workspace> | <lab_files>\workspace</lab_files> | <lab_files>/workspace</lab_files> |
| <solution></solution> | <lab_files>\workspace\solution</lab_files> | <lab_files>\workspace/solution</lab_files> |

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></server_name> | server1 | sssr011 | |
| <was_home></was_home> | C:\Program Files\IBM\WebSphere\AppServer | /etc/sscell/AppServer | |
| <hostname></hostname> | localhost | mvsxxx.rtp.raleigh.ibm.com | |
| <soap_port></soap_port> | 8880 | 8880 | |
| <telnet_port></telnet_port> | N/A | 1023 | |
| <profile_name></profile_name> | AppSrv01 | Default | |
| <userid></userid> | N/A | Ssadmin | |
| <password></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 '<u>Task: Adding Remote Server to WebSphere Integration Developer Test</u> <u>Environment</u>'.

Part 1: Prepare environment for lab

In this section of the lab, you will import all the projects in the **WPIv70_WPS_ParallelRouting_PI.zip** project interchange file into a new workspace.

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

| 🚯 Workspace Launcher | | × |
|--|---|--------|
| Select a workspace | | |
| IBM WebSphere Integration Developer 7.0 stores your projects in a folder called a workspace. Choose a workspace folder to use for this session. | | |
| Workspace: C:)LabEiles70)WPS\ParallelRouting\workspace | Ţ | Browse |
| Wondpace. Chicabi nesi of in stratalion coding from opaco | | |
| Copy Settings | | |
| OK | | Cancel |
| | | |

- _____ 2. Click **OK**
- _____3. Import Project Interchange file, WPIv70_WPS_ParallelRouting_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

| 🔠 Business Inter | gration 🛛 | | |
|-------------------|--------------------------|-----|--------------------|
| | 🔁 🖶 🔁 🔂 🗉 | 1 | \bigtriangledown |
| Integration So | lutions | New | |
| New integration : | solution | | |
| | New | • | |
| | 🔁 Import | | |
| | 🛃 Export 🕅 | | |
| Projects | 🔊 Refresh | - | |
| New business int | Add to Asset Repository. | | |
| | Properties | | |

____b. From the Import, dialog, expand Other and select Project Interchange from the tree

| 🚯 Import | | | | |
|---|------------------------------|-------------------|--------|------------|
| Select Import a project and i | ts dependent pr | ojects from a Zip | file. | ראק ק⊻ק |
| Select an import sour | ce: | | | |
| type filter text | | | | |
| Web Web service Web service XML Other FTP Kocalize Project | :s d Model Interchange | | | ▲ ▼ |
| 0 | < <u>B</u> ack | <u>N</u> ext > | Einish | Cancel |

___ 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_ParallelRouting_PI.zip and click Open

| 🚯 Import Project Interchange Contents | | | | | |
|--|----------------------|--------|--|--|--|
| Import Projects Import Projects from a zip file. | | ļ, | | | |
| From zip file: C:\LabFiles70\WPS\ParallelRouting\import\WPIv70_WPS_ParallelRouting_PI.zip Br Project location root: C:\LabFiles70\WPS\ParallelRouting\workspace Br | | | | | |
| ParallelRoutingCompTestProject ParllelRoutingDemo | | | | | |
| Select All Select Referenced | | | | | |
| 0 | < Back Next > Finish | Cancel | | | |

- ____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 **ParallelRoutingCompTestProject** and **ParellelRoutingDemo** modules listed in the Business Integration view under the **Projects** section.

| 🕼 Business Integration 🛛 | | |
|--------------------------|------------|---|
| 🗗 🔁 🖶 🔁 | □ 🕏 | ~ |
| Integration Solutions | <u>New</u> | |
| New integration solution | | |
| | | |
| Projects | <u>New</u> | |
| | | |
| | | |

___h. Verify the 'WebSphere Process Server V7.0' listed in your Servers and start the server

| 🔀 Task Flows 🗟 Build Activities 🔲 Properties 🔝 Problems 🔞 Server Log: | ; 👭 Servers 🛛 | - 0 |
|---|---------------|--------|
| | 参 💽 🖉 | = 🕑 🔚 |
| Server 🔺 | State | Status |
| 😹 WebSphere Business Monitor Server v7.0 on WebSphere Process Server | 🖥 Stopped | |
| 🔀 WebSphere Process Server v7.0 at localhost | ᡀ Stopped | |
| | | |

____ i. Click the Start Server ($m{\Omega}$) icon to start the server

Part 2: Verify the business process and create WebSphere group and users

In this part of the lab, you will verify the ParellelRouting process. The ParellelRouting process is a simple business process with a series of activities and tasks like Receive; Reply and a Human Task. An interface partner named Vote helps the business process receive and reply with the voting result data.

- 1. Verify the Business Object. A business object named, **VotingResult** is created, acts as the container of application data which is a boolean for VotingResult and a string for the comment
 - ____a. In the Business Integration view, expand ParellelRoutingDemo → Data Types and then double click VotingResult to open it in a Business Object Editor

| ▼Business object 📃 🗄 | | | | | |
|----------------------|-------------------------------|---|-------|---------|-----------|
| Configuration | | | | | |
| Name | VotingResult | | Refac | tor nan | <u>ne</u> |
| Namespace | http://Iteration3 | | Refac | tor nan | nespace |
| ▼Definition | Result to filter> | 1 | , Ŷ | × | |
| e votef e comm | Result boolean nent string | | | | |

- ____2. Verify the Interface. An interface named Vote is created to exchange the VotingResult data with other components within the ParellelRouting process with the help of an operation described with an input and output of VotingResult business object type
 - ____a. In the Business Integration view, expand **ParellelRoutingDemo** → Interfaces and then double click **Vote** to open it in a Interface Editor

| ■Interface | | | | |
|--|-----------------|------------|---------------------------------------|----------------------|
| Configuration | | | | |
| Name | Vote | | Refactor name | |
| Namespace | http://Iteratio | n3/Vote | Refactor namespace | |
| Binding Style | document liter | al wrapped | Change binding style to document lite | ral non-wrapped More |
| ▼Operations 🥻 🦆 📄 🖓 🖗 📈 📰 Operations and their parameters | | | | |
| | | Name | | Туре |
| 🔻 👹 operatio | on1 | | | |
| 🗊 Inputs | | input1 | | VotingResult |
| 🕼 Outputs | | output1 | | VotingResult |

- 3. Verify the ParellelRouting business process.
 - ____a. Open the ParellelRouting process in the process editor
 - Expand ParellelRoutingDemo → Integration Logic → Processes in the Business Integration view and double click on ParellelRouting (^{ParallelRouting}) to open it in the process editor



____b. The parallel routing process is opened in the process editor as shown below:



____ c. Double click the HumanTask activity to open it in the human task editor. The human task activity intervenes with the business process and allows the users who claim the task to vote and make a comment. The activity is defined with attributes like potential owners who can be escalated and then claim the task. The Human task also provides an escalation process named Escalation1 in ready state in the case of the human specified is unavailable or when it is not claimed in time and a sub task named Escalation2 which is escalated when the work has not been completed within the required time limit.

| •To-do Task | | | | | |
|--|--------------------------|--------------|--------|---------------------------|------|
| Name ParallelRoutingTask1 | | Display Name | | <not applicable=""></not> | |
| ▼Service Interface | | | | | |
| (I) Interface | Vote | | | | |
| Operation | operation1 | | | | |
| 🗊 Input | input1 | | Voting | Result | |
| 📫 Output | output1 | | Voting | Result | |
| People Assignment (Re Potential Owners | ceiver) 🕂 🗙 Everybody | | | Ownership: <u>Sir</u> | ngle |
| ▼User Interface | + × | | | | |
| Ser Interface | | | | | |
| ▼Escalation | | | | | |
| Ready Claimed Subtask | started ■ Escalation2 | | | | |

- _ 4. Create a WebSphere group and assign members (In this lab, you will assign existing users as members). You will use the WebSphere Process Server administrative console, create a group named **Parallel Users** and make four existing users named **bdaniel**, **dcampbell**, **dedwards** and **jjames** as members of the **Parallel Users** group
 - ____a. Login to the administrative console using the user name and password
 - ____b. In the left navigation pane, expand Users and Groups and click the Manage Groups link

| ΞUs | 🗆 Users and Groups | | | | | |
|-----|----------------------------|--|--|--|--|--|
| | Administrative user roles | | | | | |
| | Administrative group roles | | | | | |
| | Manage Users | | | | | |
| | Manage Groups | | | | | |

____ c. In the next Manage Groups panel, click the Create button

| Manage Groups | | | | ? - [|
|---------------------------|-------------|-------------------|--------|-------|
| Search for Grou | ps . | | | |
| Search by Group name 💌 | *Search for | *Maximum r 100 | esults | |
| Search | | | | |
| Create | Delete | | | |
| | | | | |
| | | | | |
| Page 1 of 1 | | То | tal: O | |

____ d. In the next panel, type Parallel Users in the Group name field

| Manage Groups | ? - 🗆 |
|----------------|-------|
| Create a Group | |
| * Group name | |
| Parallel Users | |
| Description | |
| Description | |
| | |
| | - |
| | |
| Create Cancel | |
| | |

____e. Click the Create button



____f. In the next panel, ensure the group is created successfully and click the **Close** button. You will be redirected to **Search for Groups** panel

Note: Make a note of the Unique Name of the Parallel Users group, which is cn=Parallel Users,o=defaultWIMFileBasedRealm. You will be using this unique name as a Group Name to assign potential owners for the human task.

1) Click the Parallel Users link

| anage Gr | oups | | | ? | |
|---|----------------|-------------|--|---|--|
| Search | for Groups | | | | |
| Search by *Search for *Maximum results Group name 🔽 * 100 | | | | | |
| Searc | h | | | | |
| Create Delete Select an action | | | | | |
| Select | Group name | Description | Unique Name | | |
| | Parallel Users | | cn=Parallel Users,o=defaultWIMFileBasedRealm | 1 | |
| | | | | | |
| Page 1 of 1 Total: 1 | | | | | |

____g. In the next Group Properties panel, select the Members tab

| Manage Groups | ? - 🗆 |
|-------------------------------|-------|
| Group Properties | |
| General Members Groups | |
| *Group name Parallel Users | |
| Description | |
| | |
| • | |
| OK Apply Cancel | |

___h. In the next panel, click the Add Users button

| Manage Groups | | ? - 🗆 |
|-----------------------|-------------------|-------|
| Group Properties | | |
| | | |
| General Members | Groups | |
| Group name | | |
| Parallel Users | | |
| The even here 0 erest | | |
| The group has 0 memb | ers. | |
| Add Users | Add Groups Remove | |
| | | |
| | | |
| | | |
| | | |
| Page 1 of 1 | Total: 0 | |

- ____i. In the next Add Users to a Group panel, to search for the existing WebSphere users enter the information below:
 - Search by : Select User ID from the drop down list
 - Search for : Type * (asterisk character as a wild character to list all the existing users)

• Maximum results : Accept the default value; **100** or type a value that results in 10 users

| Manage Groups | ? - 🗆 |
|--|-------|
| Add Users to a Group | |
| Group name | |
| Parallel Users | |
| Search for users that will be members of this group. | |
| Search by *Search for *Maximum results | |
| User ID 💌 * 100 | |
| Search | |
| Close | |

- ____j. Click the **Search** button
- ____k. In the next panel, select the four users, which are **bdaniel**, **dcampbell**, **dedwards** and **jjames** from the search result text area. Hold the **Shift** key to select multiple entries

| Manage Groups | ? - 🗆 |
|---|---------------------------|
| Add Users to a Group | |
| Group name | |
| Parallel Users | |
| Search for users that will be n | nembers of this group. |
| Search by *Search for | * <u>Maximu</u> m results |
| User ID 💌 \star | 100 |
| Search | |
| 9 users matched the search of admin bdaniel dcampbell dedwards ijiames Icarlesberg mburnnet mcharles redwards Add Close | riteria. |

- ____I. Click the **Add** button and click the **Close** button in the next panel.
- ____m. In the next Group Properties panel, you should see all the four users you added to the Parallel Users group as members

| lanage Gro | ups | | | ? | - | |
|-----------------------------|--------------|-------|--|---|---|--|
| Group Pr | operties | | | | | |
| General | Members | Group | s | | | |
| Group na | me | | | | | |
| Parallel I | Jsers | | | | | |
| The grou | p has 5 meml | oers. | | | | |
| Add Users Add Groups Remove | | | | | | |
| Select | ID | Туре | Unique Name | | | |
| | bdaniel | Q | uid=bdaniel,o=defaultWIMFileBasedRealm | | | |
| | dcampbell | 8 | uid=dcampbell,o=defaultWIMFileBasedRealm | | | |
| | dedwards | 8 | uid=dedwards,o=defaultWIMFileBasedRealm | | | |
| | jjames | Q | uid=jjames,o=defaultWIMFileBasedRealm | | | |
| Page | ≥1 of 1 | | Total: 5 | | | |

_____ 5. Close the administrative console

Part 3: Update the human task activity

In this part of the lab, you will update the human task activity

- _____1. Open the ParellelRouting process in the process editor
 - ____a. Expand ParellelRoutingDemo → Integration Logic → Processes in the Business Integration view and double click on ParellelRouting (ParallelRouting) to open it in the process editor



____b. The parallel routing process is opened in the process editor as shown below:

| ParllelRoutingDemo 🕨 🦂 | 😤 ParallelRouting | H |
|---|-------------------|----------------------------|
| 👌 😳 Palette | | ParallelRouting |
| $\fbox{$\square_{\bullet}$} \bigcirc \bigcirc \textcircled{\square_{\bullet}} \bigcirc$ | | 🛅 Interface Partners 🛛 🖶 🗶 |
| 送 Basic Actions | | ▶ Vote |
| 🗬 Invoke | Receive | 💱 Reference Partners 🖶 🕷 |
| 🚍 Assign | | 😑 Variables 🛛 🎝 🔒 🏶 |
| Receive | 👗 HumanTask | VotinaInput |
| neceive Choice | | |
| 🖳 Reply | Reply | VotingOutput |
| 🛺 Wait 💌 | | 🛞 Correlation Sets 👘 🌵 🕷 |
| 🕒 Structures | | 🐻 Correlation Proper 🖶 🕱 |
| 💿 Scope | | |

____2. Double click the **HumanTask** activity to open it in the human task editor

| ▼To-do Ta | ask 🔲 🖥 | 8- | | | |
|---------------------|---------------------------|-------------------------------|--------------|--------|---------------------------|
| Name | Name ParallelRoutingTask1 | | Display Name | | <not applicable=""></not> |
| •Service] | Interface | | | | |
| Interf. | ace | <u>Vote</u> | | | |
| 🍪 Opera | ation | operation1 | | | |
| 🗊 Input | | input1 | | Voting | Result |
| 🚺 Outpu | ıt | output1 | | Voting | Result |
| People A | tial Owners | eiver) 🕂 🗶 | | | Ownership: <u>Single</u> |
| ▼User Int | erface | / 🕂 🗶 | | | |
| Guser I | interface | | | | |
| ▼Escalatio | n | | | | |
| Ready Esc | Claimed Subtasks |) started) Escalation2 | | | |

_ 3. In the People Assignment (Receiver) section of the human task editor, click the Single link to change the ownership pattern from single to parallel ownership

| People Assignment (Receiver) | + × | |
|------------------------------|-----------|-------------------|
| Potential Owners | Everybody | Ownership: Single |

4. In the next Change Ownership pattern dialog, select Parallel and then select Modify existing escalation definitions



- ____ 5. Click **OK**
 - __6. Now, assign a group of potential users who can be escalated and claim the human task

____a. In the human task editor, select the **Potential Users** attribute and then select **Properties** → **Assign People** in the lower quadrant of the work bench

| 器 Task Flows 🗟 | build Activities 🔲 Properties 🛛 🔀 Problems 🗑 Server Logs 🖗 Servers 🔍 🗸 🗖 🗖 |
|----------------|--|
| Staff role - | Potential Owners (Parallel ownership) |
| Assign People | People assignment criteria: Everybody |
| Completion | Assigns every authenticated user. |
| Aggregation | This people assignment criteria cannot be used with human tasks that use the parallel ownership pattern. |
| | For each qualifying person, claim the subtask automatically. |

____b. Now, select Group Members from the People assignment criteria drop down list

1) In the **Name/Value** table below, enter the unique name of the group you want to assign.

- GroupName:cn=Parallel Users,o=defaultWIMFileBasedRealm
- 2) Place the mouse icon on the value filed next to **IncludeSubgroups** and click to change from the ***** icon to \checkmark icon

| 🖁 Task Flows 📀 । | Build Activities 🔲 Properties 🕺 | 🔝 Problems 👸 Server Logs 👭 Servers | ~ - 8 |
|------------------|---|--|----------|
| 🚺 Staff role - I | Potential Owners (Paralle | l ownership) | |
| Assign People | People assignment criteria: | Group Members | ▼ Test |
| Propagation | | | |
| Completion | Assigns members of groups. Use this to create individual a | ssianments for every aroup member. | <u> </u> |
| Aggregation | Define a group name as a uni | queName. | ~ |
| | For each qualifying person | , claim the subtask automatically. | |
| | Name | Value | |
| | GroupName * | cn=Parallel Users,o=defaultWIMFileBasedRealm | |
| | IncludeSubgroups * | ✓ | |
| | Domain | | |
| | AlternativeGroupName1 | | |
| | AlternativeGroupName2 | | |

- 3) Click the **Test** button to verify if the group name you entered actually exists. The **Test People Search** dialog shown up as shown below:
 - Select WebSphere Process Server from the drop down list

| 🗂 Test People Search | × |
|---|----------|
| Select a server to perform the Test People Query. | |
| Server: | |
| WebSphere Process Server v7.0 at localhost | • |
| | Submit |
| • | ОК |

4) Click the **Submit** button. You should see all the users who are members of the Parallel Users listed as shown below:

| 🐒 Test People Search | × |
|---|--------|
| Select a server to perform the Test People Query. | |
| Server: | |
| WebSphere Process Server v7.0 at localhost | • |
| | Submit |
| The following people have been found: | |
| bdaniel dedwards dcampbell jjames | |
| ? | ОК |

5) Click OK

_____ c. Now, select the **Properties** → **Propagation** tab for the Potential Users attribute and then select All for Specify which people assignments are propagated to the subtasks drop down list

| 器 Task Flows 📀 | Build Activities 🔲 Properties 🛛 🔣 Problems 👸 Server Logs 👫 Servers 👘 🏹 🗖 |
|----------------|--|
| 🜔 Staff role - | Potential Owners (Parallel ownership) |
| Assign People | Specify which people assignments are propagated to the subtasks: |
| Propagation | |
| Completion | Choose "All" to allow subtask owners to see other owner's responses. |
| Aggregation | Choose "Administrator" to limit this ability to members of the administrator role. |
| | Choose "None" to keep individual responses hidden. |

____ d. Now, select the **Properties** \rightarrow **Completion** tab for the Potential Users attribute

| 🖁 Task Flows | 🗞 Build Activities 🔲 🗖 Propertie | s 🔀 🛛 🔝 Problem | is 🛅 Server Logs | 해 Servers | |
|------------------------------|----------------------------------|--|---|-------------------|-----------------|
| 🜔 Staff role | - Potential Owners (Par | allel ownership) | | | |
| Assign People Propagation | Specify the conditions und | der which the task end n the time that elapse | ds before all owners d since it was create | have complet d | ed their tasks. |
| Completion | <u>C</u> alendar type: | Simple | | | More |
| Aggregation | O Days | 0 Hours | 0 📑 Minutes | 0 💌 | 5econds |
| | • | | | | |
| | End the task when the | e following condition is | met | | |
| | Expression language: | Simple condition | | | |

- 1) Select the check box for End the task when the following condition is met
- 2) Select XPath 1.0 from the Expression language drop down list
- 3) Click the **Edit** button next to the XPath expression text area. The **XPath Expression Builder** wizard shows up as shown below:
 - Type or use Insert Simple XPath utility to achieve the expression, tel:getCountOfCompletedSubtasks() > 7.0 * tel:getCountOfSubtasks()

Note: Tell about the expression

| 街 XPath Expression Builder | × |
|--|----------|
| Build an XPath Expression | 1 |
| Type an XPath expression below with the help of content assist. Use "Insert Simple XPath" if you need more guidance. | > |
| Insert Simple XPath | |
| tel:getCountOfCompletedSubtasks() > 7.0 * tel:getCountOfSubtasks() | A |
| | v |
| Content assist available (Ctrl+space) | |
| © OK | Cancel |

- 4) Click OK
- 5) The **Properties → Completion** tab should look like in the picture below:

| 路 Task Flows 🗟 | build Activities 🔲 Properties 🛛 🛛 🛣 Problems 👸 Server Logs 👯 Servers 👘 🍸 🗖 🗖 |
|------------------------------|--|
| 🜔 Staff role - | Potential Owners (Parallel ownership) |
| Assign People Propagation | Specify the conditions under which the task ends before all owners have completed their tasks. End the task based on the time that elapsed since it was created |
| Completion | <u>C</u> alendar type: Simple <u>More</u> |
| Aggregation | O Days Hours Minutes Seconds End the task when the following condition is met |
| | Expression language: XPath 1.0 tel:getCountOfCompletedSubtasks() > 7.0 * tel:getCountOfSubtasks() Edit |

____e. Now, select the **Properties** -> Aggregation tab for the Potential Users attribute

| 路 Task Flows 📀 | Build Activities 🔲 Properties 🔀 📃 🚼 Problems 🗑 Server Logs 👭 Servers 👘 🏹 🗖 🗖 |
|----------------|--|
| 🜔 Staff role - | Potential Owners (Parallel ownership) |
| Assign People | Specify how the output data of the tasks is aggregated. The choice of function depends on the data type of the |
| Propagation | Output Data Type Function |
| Completion | 🖃 🔤 operation1Result |
| Aggregation | 🖃 🖻 outputi |
| | <pre>voteResult boolean <no aggregation=""></no></pre> |
| | comment string <no aggregation=""></no> |

- 1) Select **<no aggregation>** in the **Function** column for **voteResult** so the function button () appears
- 2) Click the button () to select an aggregate function for **voteResult** boolean output. Enter the information below in the **Select an Aggregate Function** dialog
 - Function : Select vote from the drop down list
 - Parameter : Type 25 for value

| 🔝 Select an Aggregate Function | | | | _ 🗆 🗵 | |
|--------------------------------|--------------|------|-------|-------|--------|
| Eunction: | vote | | | | - |
| Parameter: | Name | Туре | Value | | |
| | percentage * | int | 25 | | |
| | | | | | |
| | · | | | | |
| | | | | ж | Cancel |

- 3) Click **OK**
- 4) Now, select **<no aggregation>** in the **Function** column for **comment** so the function button () appears

a) Function : Select **mostFrequentOccurence** from the drop down list

| 🟦 Select an Aggregate Function | | | | | |
|--------------------------------|--------------------|------|-------|----|--------|
| Function: | mostFrequentOccure | ence | | | • |
| Parameter: | Name | Туре | Value | | |
| | | | | | |
| | , | | | ок | Cancel |

6) Click OK

7) The **Properties → Aggregation** tab should look like in the picture below:

| 🖁 Task Flows 🗟 | Build Activities 🔲 Properties 🕱 🛛 🚼 Problems 👸 Server Logs 👫 Servers 🖉 🧮 🗖 |
|----------------|--|
| 🜔 Staff role - | Potential Owners (Parallel ownership) |
| Assign People | specify how the output data of the tasks is aggregated. The choice of function depends on the data type of the |
| Propagation | Output Data Type Function |
| Completion | 🖃 🔀 operation1Result |
| Aggregation | 🖃 🖻 output1 |
| | 🕑 voteResult boolean vote(25) |
| | comment string mostFrequentOccurence() |

____ f. Save the changes to the human task editor. From the menu select File \rightarrow Save (Ctrl + S)

____g. The final view of the human task editor should look like in the picture below:

| ▼To-do Task | | | | | |
|-------------------------|---------------------------------|--------------------|--------------|--------------|---|
| Name ParallelRoutingTa | ask1 | | Display Name | | <not applicable=""></not> |
| ▼Service Interface | | | | | |
| (I) Interface | Vote | | | | |
| Operation | operation1 | | | | |
| 🕼 Input | input1 | | | <u>Votin</u> | gResult |
| 📫 Output | output1 | | | VotingResult | |
| ▼People Assignment (Red | ceiver) 🔶 🛉 | × | | | |
| 🜔 Potential Owners | Group Members | | | | Ownership: <u>Parallel</u> |
| | (| GroupM | Vame * | cr | n=Parallel Users,o=defaultWIMFileBasedRealm |
| | I | IncludeSubgroups * | | | × |
| ▼User Interface 🔶 🕂 💥 | | | | | |
| Guser Interface | | | | | |
| ▼Escalation 🖉 🐖 | | | | | |
| | 5 | | | | |
| Ready Claimed | Subtask started | | | | |
| | Escalation1 | Ē | scalation2 | | |

_____7. Close the human task editor

Part 4: Test for parallel routing

In this part of the lab, you will deploy the process application to the WebSphere Process Server test environment, use the integrated test client to create an inline human task, and then use the Business process Choreographer explorer to create subtasks as different potential owners.

- Add the projects to the WebSphere Process Server test environment. Add the ParallelRoutingCompTestProjectApp and ParallelRoutingDemoApp 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 All> to add the ParallelRoutingCompTestProjectApp and ParallelRoutingDemoApp projects to the Configured projects text area

| Add and Remove Projects Modify the projects that are configured on the server |
|---|
| Modify the projects that are configured on the server |
| |
| Move projects to the right to configure them on the server |
| Available projects: Configured projects: |
| ParallelRoutingCompTestProjectApp |
| < Remove |
| Add All >> |
| << Remove All |
| ✓ If server is started, publish changes immediately |
| (?) < Back Next > Finish Cance |

____ c. Ensure the projects are moved to Configured projects text area. Click Finish

____ d. Wait while the projects are being published to the server

| 📅 Task Flows 🗟 Build Activities 🔲 I | Properties 🔝 Problems 🔞 Server Logs | s 👭 Servers 🛛 🗖 🗖 |
|-------------------------------------|-------------------------------------|-------------------|
| | | 🎋 🜔 🖉 🔳 🔛 🛅 |
| Server 🔺 | State | Status |
| 🔛 🔡 WebSphere Business Monitor Sei | r 🔚 Stopped | |
| 🗖 🖬 WebSphere Process Server v7.0 | 👫 Started | Publishing |
| 🗄 📄 ParallelRoutingCompTestProg | j | |
| 🗉 🛅 ParllelRoutingDemoApp | | |

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

| 🔠 Task Flows 🙆 Build Activities 🔲 | Properties 🔝 Problems 🔞 Server Log | s 👭 Servers 🛛 🖳 🗖 |
|-----------------------------------|------------------------------------|-------------------|
| | | 参 🜔 🖉 📒 🔑 🛅 |
| Server 🔺 | State | Status |
| 😹 WebSphere Business Monitor Se | r 🔚 Stopped | |
| 😑 🧱 WebSphere Process Server v7.0 |) 🚠 Started | Synchronized |
| 🛨 葿 ParallelRoutingCompTestPro | j ҧ Started | Synchronized |
| 🗄 📄 ParllelRoutingDemoApp | 🖡 Started | Synchronized |

- 2. Create process instances
 - ____a. In the Business Integration view, expand **ParllelRoutingDemo** and double click on **Assembly Diagram** (Assembly Diagram) to open it in an Assembly Diagram editor
 - ParallelRoutingCompTestProject
 ParllelRoutingDemo
 Rosembly Diagram
 Dependencies
 Dependencies
 Integration Logic
 - ____b. From the **ParllelRoutingDemo** assembly diagram, right click over **ParllelRouting** and select **Test Component** from the context menu



- ____ c. The ParllelRouting_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 voteResult, click under the Value column and select true from the drop down list

| Ę | İ | | |
|---|---------------------------|------------------|------------|
| | Name | Туре | Value |
| | 🗆 🖳 input1 | VotingResult | ав |
| | 🔷 👘 voteResult | boolean | false 🔻 |
| | in Comment | string | Ifalse |
| | | | true |
| | | | |
| G | To edit values, start typ | ina or press F2. | |

2) For comment, click under the Value column and type Do you approve this vote?

| Initial request parameters: • Value editor • XML ed | itor | | | | |
|---|--------------|-----------------------------|---|--|--|
| 🕴 🖄 📄 | | Ĩ | 3 | | |
| Name | Туре | Value | | | |
| 🖃 🖳 input1 | VotingResult | ав | Γ | | |
| 🕂 💭 voteResult | boolean | 🕮 true | | | |
| 🛄 🛄 comment | string | 📧 Do you approve this vote? | | | |
| | | | | | |
| 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

| Beployment Location | |
|--|------------|
| Select a Deployment Location | |
| This server instance is currently running. | |
| Deployment location: | |
| 🖃 🔤 WebSphere Process Servers | New Server |
| WebSphere Business Monitor Server v7.0 on WebSphere Process Server | |
| WebSphere Process Server v7.0 at localhost | |
| | |
| | |
| Mode: Run | |
| Use this location as the default and do not ask again | |
| ? Finish | Cancel |

___ 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

| 🤀 User Login - Default Module Test 🛛 🛛 🔀 |
|--|
| Security is enabled on the selected runtime environment(s). Sign in to continue the test. |
| User ID:* |
| admin |
| Password:* |
| ••••• |
| $\hfill \square$ Use the authentication settings in the preference and never ask again |
| OK Cancel |

- ____i. Click OK. Wait until the integration test client starts
- j. You should see the events occurred in a test trace shown in the picture below indicating the voting process has started:

Operation:

Initial request parameters:

operation1

Events

This area displays the events in a test trace. Select an event to display its properties in the General Properties and Detailed Properties sections.

| | r ' | Θ | Value editor 🛛 🛛 🕮 | . editor | |
|--|-----|---|--------------------|----------|-----------------------------|
| → ■ ↔ ▼ Ⅲ ▼ ⊡ ↔ ⊟ → Isuako (Decalionericanoscritical) | | Ŗ | ¥ 🖪 | | □ |
| Re Invoke (Parallelik odding: operation 1) | | | Name | Туре | Value |
| Invoke (ParallelRouting:operation1) | • | | 🗆 💾 input1 | Voting | аь |
| 🗉 👤 Fine-Grained Trace (ParallelRouting:ParallelRouting) | M | | voteRes | boolean | 💷 true |
| 🔁 Receive (operation1) | | | 💭 commen | string | 💷 Do you approve this vote? |
| | | | | | |
| | | | | | |

_ 3. Launch the Business Process Choreographer (BPC) Explorer site. Refer to the table below for the users that are members of the Parallel Users group and the potential owners of the human task. You will login to the Business Process Choreographer Explorer and complete the human task using the users mention below in sequence:

| User name | Password |
|-----------|----------|
| bdaniel | wid |
| dcampbell | wid |
| dedwards | wid |
| jjames | wid |

- 4. In the Servers view, right click over WebSphere Process Server v7.0 and then select Launch → Business Process Choreographer from the context menu
 - ____a. Enter the username (bdaniel) and password (wid) and click Login.

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

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



___6. In the **My To-dos** panel to the right, you should see should see a task named HumanTask listed as shown below:

| My To-dos | | | | | | | | |
|------------------------------------|---------------------|---------------------------|--------------|-----------------|----------------|----------|--|--|
| Use this page to work on tasks tha | at are assig | ned to you. [| i | | | | | |
| Work on Release Transfer | Start | Change Busin | iess Catego | ry Refresh | | | | |
| 🔲 Priority 🗘 Task Name 🗘 State | e 🗘 🛛 Kind | \$ | Owner 🗘 | Originator 🗘 | Escalated 🔅 | Suspende | | |
| 🗹 5 HumanTask Clair | med Colla | boration Tas | k bdaniel | admin | no | no | | |
| Items found: 1 Items selected: 1 | | << | Page 1 | of 1 > I | tems per page | : 20 💌 | | |
| 7. Select the check box for | the task ar | nd then click | the Work c | n button | | | | |
| P. Coloct the check best of | | | | | | | | |
| 8. In the next lask messag | je panel, ci | ick the Add | under the I | ask Output N | essage section | m | | |
| Task Message | | | | | | | | |
| Use this page to provide the o | data require | ed to comple [.] | te the task. | i | | | | |
| Complete Save Releas | e Cance | I | | | | | | |
| Task Name | HumanTas | k | | | | | | |
| Task Input Message | | | | | | | | |
| | Form Vi | ew | | | | | | |
| | input1 | voteResult | Result 🔽 | | | | | |
| | | comment | Do you ap | prove this vote | ? | | | |
| | View S | ource | | | | - | | |
| | VICW C | Joance | | | | | | |
| Task Output Message | F | | | | | | | |
| | Form VI | ew | | | | | | |
| | output1 | voteResul | t - Add | | | | | |
| | | comment | | | |] | | |
| | Edit So | ource | | | | | | |

- 9. In the next panel, enter the information below under the **Task Output Message** section
 - ____a. Ensure the check box for **voteResult** is selected

____b. Comment : yes

| Task Message | | | | |
|---|-----------------------------------|--|--|--|
| Use this page to provide the data required to complete the task. $lacksquare$ | | | | |
| Complete Save Release | Cancel | | | |
| Task Name H | lumanTask | | | |
| Task Input Message | Form View | | | |
| | input1 voteResult 🔽 | | | |
| | comment Do you approve this vote? | | | |
| | View Source | | | |
| Task Output Message | | | | |
| | Form View | | | |
| | output1 voteResult Remove | | | |
| | comment yes | | | |
| | Edit Source | | | |

____ c. Click the **Complete** button

- _____ 10. Click Logout.
- _____ 11. Enter the username (dcampbell) and password (wid) and click Login
- _____12. In the left navigation pane, click the **My To-dos** link under the **Task Instances** section
- 13. In the My To-dos panel to the right, you should see should see a task named HumanTask listed as shown below:

| My To-dos | | |
|---|-------------------------------------|-------------------------|
| Use this page to work on tasks that are | assigned to you. 🗓 | |
| Work on Release Transfer Sta | rt Change Business Category Refresh | |
| 📄 Priority 🗘 Task Name 🗘 State 众 | Kind 🗘 💫 Owner 🗘 Originator 🗘 | Escalated 🔅 🛛 Suspender |
| 🗹 5 HumanTask Claimed | Collaboration Task dcampbell admin | no no |
| Items found: 1 Items selected: 1 | Page 1 of 1 >> It | ems per page: 20 💌 |

- _____14. Select the check box for the task and then click the **Work on** button
- _____15. In the next Task Message panel, click the Add under the Task Output Message section
- _____16. In the next panel, enter the information below under the Task Output Message section
 - ____a. Clear the check box for voteResult

____b. Comment : no

| Task Message | | | | |
|--|-----------------------------------|--|--|--|
| Use this page to provide the data required to complete the task. $ar{f l}$ | | | | |
| Complete Save Release Cancel | | | | |
| ask Name HumanTask | | | | |
| Task Input Message | Message Form View | | | |
| | input1 voteResult 🔽 | | | |
| | comment Do you approve this vote? | | | |
| | View Source | | | |
| Task Output Message | | | | |
| | Form View | | | |
| | output1 voteResult 🔲 Remove | | | |
| | comment no | | | |
| | Edit Source | | | |

___ c. Click the Complete button

- _____ 17. Click **Logout**.
- _____ 18. Enter the username (dedwards) and password (wid) and click Login
- _____19. In the left navigation pane, click the **My To-dos** link under the **Task Instances** section
- ____ 20. In the My To-dos panel to the right, you should see should see a task named HumanTask listed as shown below:

| My To-dos | | |
|--|-----------------------------------|------------------------------|
| Use this page to work on tasks that ar | e assigned to you. 🗓 | |
| Work on Release Transfer St | art Change Business Category Re | fresh |
| 📄 Priority 🗘 Task Name 🗘 State 🗘 | Kind 🗘 🔋 Owner 🗘 Origin | ator 🗘 Escalated 🗘 Suspended |
| ✓ 5 HumanTask Claimed | Collaboration Task dedwards admin | no no |
| Items found: 1 Items selected: 1 | 🥪 Page 1 of 1 | >>> Items per page: 20 💌 |

- _____ 21. Select the check box for the task and then click the **Work on** button
- _____ 22. In the next Task Message panel, click the Add under the Task Output Message section
- _____23. In the next panel, enter the information below under the **Task Output Message** section
 - ____a. Clear the check box for voteResult

| | b. Comment : no | | | | | | | | |
|--|---|-------|-------|------------------|----------|---------|--------------|------------|-------|
| - | | | | | | | | | |
| _ | _ c. Click the Complete button | | | | | | | | |
| 24. | Click Logout. | | | | | | | | |
| 25. | Enter the username (jjames) and password (wid |) ar | nd c | lick Lo | gin | | | | |
| 26. | In the left navigation pane, click the My To-dos line | k ur | nde | r the T a | ask Ins | tance | s section | | |
| 27. | In the My To-dos panel to the right, you should see shown below: | e sl | hou | ld see | a task ı | named | l HumanTa | ask listed | las |
| My To | -dos | | | | | | | | |
| Use this | page to work on tasks that are assigned to you. $old i$ | | | | | | | | |
| Work o | n Release Transfer Start Change Business | Cat | ego | ry R | efresh | | | | |
| Prio | | ner | 10 | Origi | nator 🔿 | Esca | alated 🔿 | Suspend | e |
| 5 | HumanTask Claimed Collaboration Task jj | ame | es | admi | n | no | Ť | no . | |
| Items fou | ınd: 1 Items selected: 1 | 'age | e 1 (| of 1 | >> | Items | per page: | 20 💌 | |
| 28 | Select the check box for the task and then click the | • W | ork | on bu | tton | | | | |
| 00 | | | | T 1 | • | | | | |
| 29. | In the next lask Message panel, click the Add un | der | the | lask | Output | Mess | sage section | on | |
| 30. | In the next panel, enter the information below under | er th | ne T | ask O | utput N | lessa | ge section | | |
| - | _ a. Clear the check box for voteResult | | | | | | | | |
| _ | _ b. Comment : no | | | | | | | | |
| - | _ c. Click the Complete button | | | | | | | | |
| 31. | Click Logout | | | | | | | | |
| 32. | Back to the Integration test client you should see th | ne a | aggi | regatio | n result | t as sh | own below | v: | |
| Events | | F | Retu | rn paran | neters: | | | | |
| This area o | licplays the events in a test trace. Select an event to display its | 1 | Valu | e Editor | XML So | urce | | | |
| properties in the General Properties and Detailed Properties sections. | | | E | 86 | F | | | | |
| More | | r | | | Name | | Туре | | Value |
| > 🔳 | 🍫 ▾ 🏛 ▾ 🕞 券 🔡 | | | | output1 | | VotingResu | ilt 💷 | |
| □ 🐩 : | Invoke (ParallelRouting:operation1) | | | | 📁 vote | eResult | boolean | 💷 fals | е |
| | 🏠 Invoke started | | | | 🔃 com | ment | string | ab no | |
| | Invoke (ParallelRouting:operation1) | 1 | | | | | | | |
| | X Fine-Grained Trace (ParallelRouting:ParallelRouting) | 1 | | | | | | | |
| | | | | | | | | | |
| | Human I ask (operation 1) | | | | | | | | |
| | 👋 Reply | | | | | | | | |
| | Toucke returned | | | | | | | | |
| | Invoke returned | | | | | | | | |
| | | | | | | | | | |

Note: Explain about the result here ...

_____ 33. 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 \rightarrow Open Perspective \rightarrow 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 ParallelRoutingCompTestProject ParellelRoutingDemo

All other projects are generated upon import of the project interchange

- 4. Save in C:/LabFiles70/WPS/ParallelRouting/solution
- 5. Name the project interchange WPIv70_WPS_Finished_ParallelRouting_PI.zip

What you did in this exercise

In this lab, you saw how to migrate a business process application using WebSphere Integration Developer V7.0, deploy the application to the process server, and then migrate the existing process instances from the older process application to the current 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 six projects 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.

| Build Activities Properties Problems 👭 Servers 🔀 | | 🎋 🔘 🖉 🐁 🔳 🖽 🗖 |
|--|---------------------------|---------------|
| Server | Status | State |
| WebSphere Process Server v6.1 | 遣 Stopped | Republish |
| | New | P Server |
| | 音 Add and Remove Projects | |
| | | _ |

- 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.

| 🚯 New Server | | × | | | |
|--|--|--------|--|--|--|
| WebSphere Server S | Settings | | | | |
| Input settings for the new WebSphere server. | | | | | |
| | | | | | |
| WebSphere profile name: | | ~ | | | |
| Server connection type a | and admin port | | | | |
| \bigcirc <u>R</u> MI (Designed to impl | rove communication with the server) | | | | |
| ORB bootstrap port: | 2809 | | | | |
| • SOAP (Designed to be | more firewall compatible) | | | | |
| SOAP connector port | : 8880 | | | | |
| Run server with resour | ces within the workspace | | | | |
| Security is enabled on t | his server | | | | |
| Current active auther | tication settings: | | | | |
| User <u>I</u> D: | ssadmin | | | | |
| Pa <u>s</u> sword: | ••••• | | | | |
| Server na <u>m</u> e: | sssr011 | | | | |
| Server type | | | | | |
| BASE, Express or unit | anaged Network Deployment server | | | | |
| Network Deployment | server | | | | |
| Network Deployment | server name: | | | | |
| The server name is i <cell name="">/<no< td=""><td>n the form of: ide name>/<server name=""></server></td><td></td></no<></cell> | n the form of: ide name>/ <server name=""></server> | | | | |
| For example, localhost/localhost/server1. In a cluster environment, | | | | | |
| <pre>ctel server name is in the form or:</pre> | | | | | |
| Detect Click this button to detect the server type. | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| (i) | < <u>B</u> ack <u>N</u> ext > <u>Finish</u> | Cancel | | | |

8. Click Finish.

9. The new server should be seen in the Server view.

| Build Activities Properties Problems 👭 Servers 🛛 | | 🎋 🔘 🖉 % 🔳 🖽 🗖 🗖 |
|--|-----------|-----------------|
| Server | Status | State |
| 🚮 WebSphere Process Server v6.1 | 🛅 Stopped | Republish |
| 🗱 WebSphere Process v6.1 Server @ mvsxxx.rtp.raleigh.ibm.com | 遣 Stopped | Republish |
| | | |
| | | |

- 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 cllsr01 open for e-business; process id is 000001200000002