



## Avaya Solution & Interoperability Test Lab

# **Configuring Lombardi Teamworks with Avaya Communications Process Manager to Provide a Solution for Avaya Communications Enabled Business Processes**

## **- Issue 1.0**

### **Abstract**

These Application Notes describe the procedures for configuring Lombardi Teamworks with Avaya Communications Process Manager (CPM) to provide a solution for Avaya Communications Enabled Business Processes (CEBP). For these Application Notes, a sample Avaya CEBP solution for processing fraudulent credit card transactions is presented.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

## 1. Introduction

These Application Notes describe the procedures for configuring Lombardi Teamworks with Avaya Communications Process Manager (CPM) to provide a solution for Avaya Communications Enabled Business Processes (CEBP). For these Application Notes, a sample Avaya CEBP solution for processing fraudulent credit card transactions is presented.

**Figure 1** illustrates the sample configuration utilized for these Application Notes.

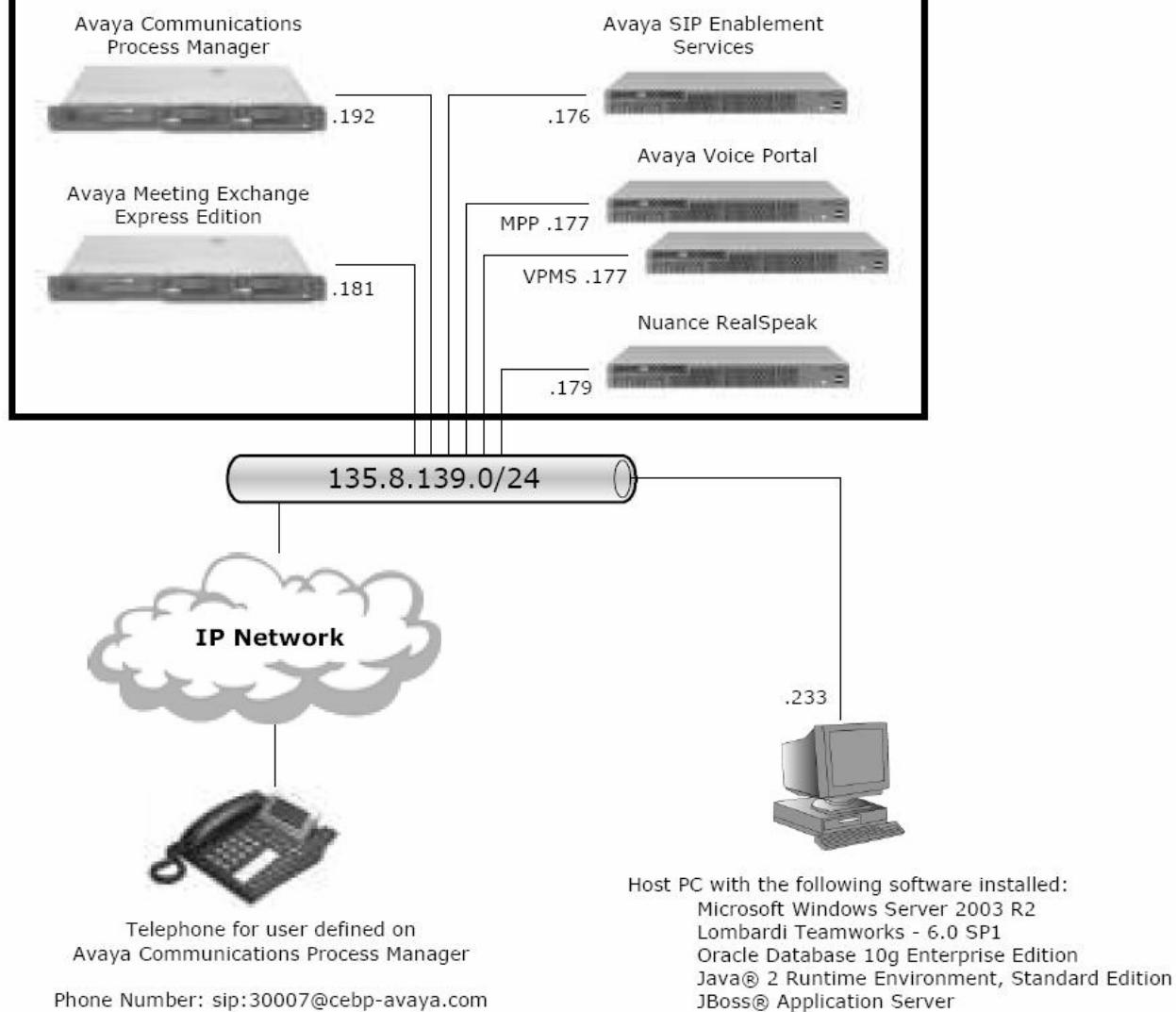
Lombardi Teamworks is a Business Process Management (BPM) system that, when used in conjunction with Avaya CPM, provides continuous closed-loop communications for Avaya CEBP. Lombardi Teamworks manages the overall process, tasks, etc. and utilizes Avaya CPM for continuous closed-loop communications. Lombardi Teamworks was installed [4] on a PC with the Microsoft Windows Server 2003 R2 operating system (Host or Local PC). Additionally, the Host PC also had the following installed:

- Oracle Database 10g Enterprise Edition
- Java® 2 Runtime Environment, Standard Edition
- JBoss® Application Server

Avaya CPM is a Service-Oriented Architecture (SOA) based platform that exposes web services to enable continuous, closed-loop communications. All Avaya CEBP communications are continuous and “closed loop”, e.g., information about actions taken by users can be communicated back to the originating system that triggers an event, affecting the business process in real-time. Once an action is set in motion, Avaya CEBP helps assure that the business process keeps moving toward resolution. Refer to [1] and [2] for required/optional hardware/software components regarding Avaya CPM deployments.

For this sample configuration, Avaya CPM was comprised of a server hosting the Avaya CPM software application, Avaya SIP Enablement Services, Avaya Meeting Exchange Express Edition (Meeting Exchange), Avaya Voice Portal and Nuance RealSpeak. The Avaya Voice Portal VPMS and MPP components were configured on one physical server. Avaya CPM provided notification for fraudulent credit card transactions to users, where a user has an account defined on Avaya CPM.

## Avaya Communications Process Manager



**Figure 1: Sample Configuration**

## 2. Equipment and Software Validated

The following equipment and software versions were used for this sample configuration:

Equipment	Software Version
Host PC - Microsoft Windows Server 2003 R2 <ul style="list-style-type: none"><li>• Lombardi Teamworks - 6.0 SP1</li><li>• Oracle Database 10g Enterprise Edition</li><li>• Java® 2 Runtime Environment, Standard Edition</li><li>• JBoss® Application Server</li></ul>	6.0.1 10.2.0.1.0 build 1.5.0_14-b03 4.0.5
Avaya Communications Process Manager - 2.1 <ul style="list-style-type: none"><li>• Avaya Communications Process Manager</li><li>• Avaya SIP Enablement Services</li><li>• Avaya Meeting Exchange Express Edition</li><li>• Avaya Voice Portal</li><li>• Nuance RealSpeak</li></ul>	cpm 2.1.53 4.0-04.0.033.6 2.5.60.0 4.0.0.0.2901 4.0.10

**Table 1: Equipment and Software Versions**

## 3. Avaya Communications Process Manager Configuration

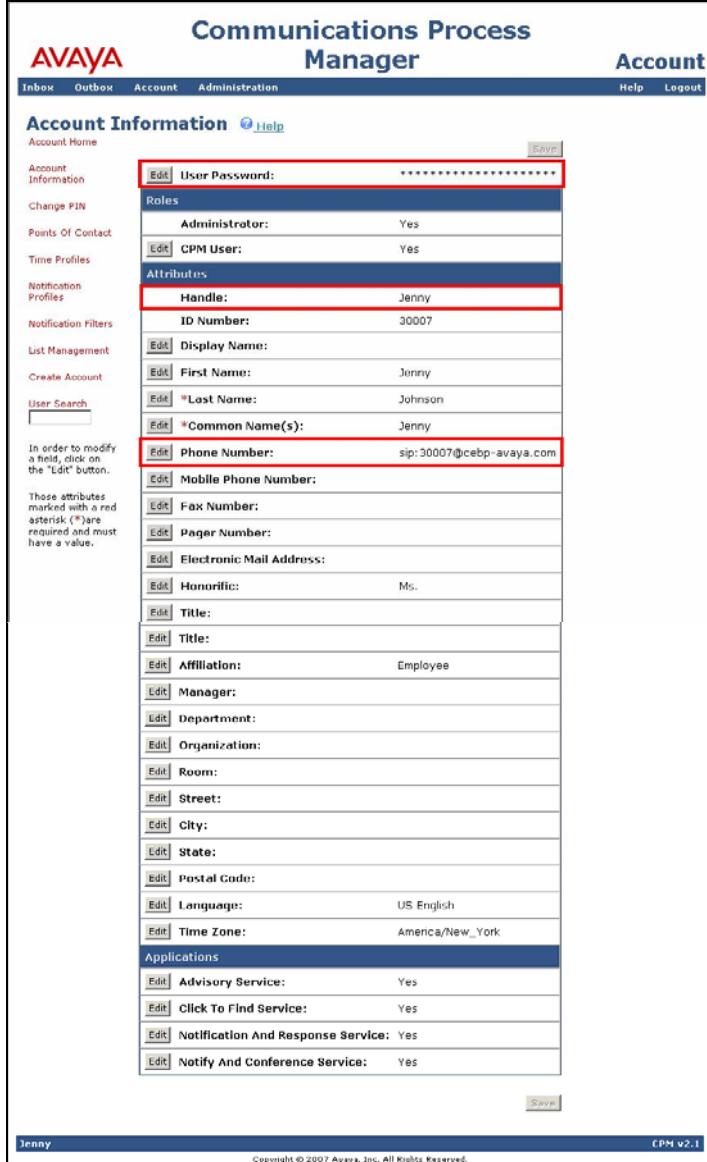
This section describes the configuration utilized by Avaya CPM to interoperate with Lombardi Teamworks. For this sample configuration, it is assumed that Avaya CPM is provisioned to communicate with Avaya communication resources, e.g., Avaya Voice Portal, Avaya Meeting Exchange and Avaya SIP Enablement Services. Refer to [1] and [2] for additional information regarding the administration of Avaya CPM. Avaya CPM has two user interfaces:

- Web Portal - A web-based thin client that lets users manage their account, e.g., provision contact rules so their notifications are based on their preferences and availability. For this sample configuration, the Web Portal interface was used to invoke web services [2] to both users and transient users. The Web Portal is accessed over a secure connection by entering **https://<Avaya CPM IP Address or Fully Qualified Domain Name (FQDN)>** into a web browser's Uniform Resource Locator (URL) bar.
- Operations Administration and Maintenance (OAM) - A web-based thin client user interface that lets a system administrator configure Avaya CPM with connectivity to Avaya communication resources. The OAM interface also provides access to system status, statistics, licenses, security certificates, logs, and alarms. For this sample configuration, the OAM interface was used to provision Avaya CPM for dial-in services. The OAM interface is accessed over a secure connection by entering **https://<Avaya CPM IP Address or FQDN>/admin** into a web browser's URL bar.

*Note: Some features described in these Application Notes require licensing. If a required feature is not enabled or there is insufficient capacity, contact an authorized Avaya account representative to make the appropriate changes.*

### 3.1. Verify Avaya Communications Process Manager

This section describes the steps for verifying a user account that has been provisioned on Avaya CPM. It is assumed this account is operational and has an associated telephone configured.

Step	Description
3.1.1	<p>From the Avaya CPM OAM interface, open a user account as follows:</p> <ul style="list-style-type: none"> <li>Click <b>Account → Account Information</b>.</li> <li>From the <b>Account Information</b> page, Note the <b>Handle</b> and <b>User Password</b> [<i>Not Shown, 30007</i>] fields respectively. This user should also have a <b>Phone Number</b> provisioned.</li> </ul> 

## 4. Lombardi Teamworks Configuration

This section describes the configuration for enabling Lombardi Teamworks to interoperate with Avaya CPM. The configuration in this section assumes that Lombardi Teamworks is installed and has network connectivity with Avaya CPM. Refer to **Appendix B** for information regarding installation requirements for Lombardi Teamworks. Refer to [4] for information regarding the administration of Lombardi Teamworks.

### 4.1. Install Avaya Specific System Components

This section describes the steps for installing Avaya specific system components via graphical user interface provided in the Authoring Environment. These components will enable processes for processing fraudulent credit card transactions.

Step	Description
<b>4.1.1</b>	Repeat the steps in <b>Appendix B3</b> to install Avaya specific system components. Contact an authorized Avaya account representative to obtain the Avaya settings file.

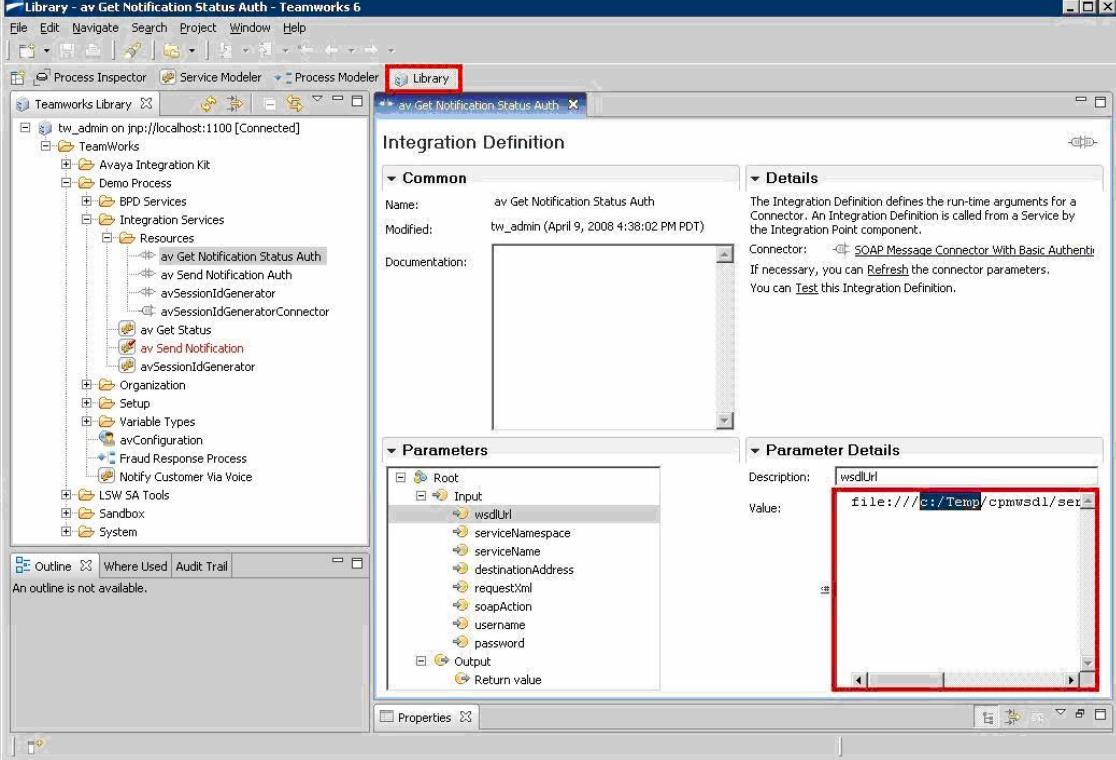
## 4.2. Web Services Description Language and XML Schema

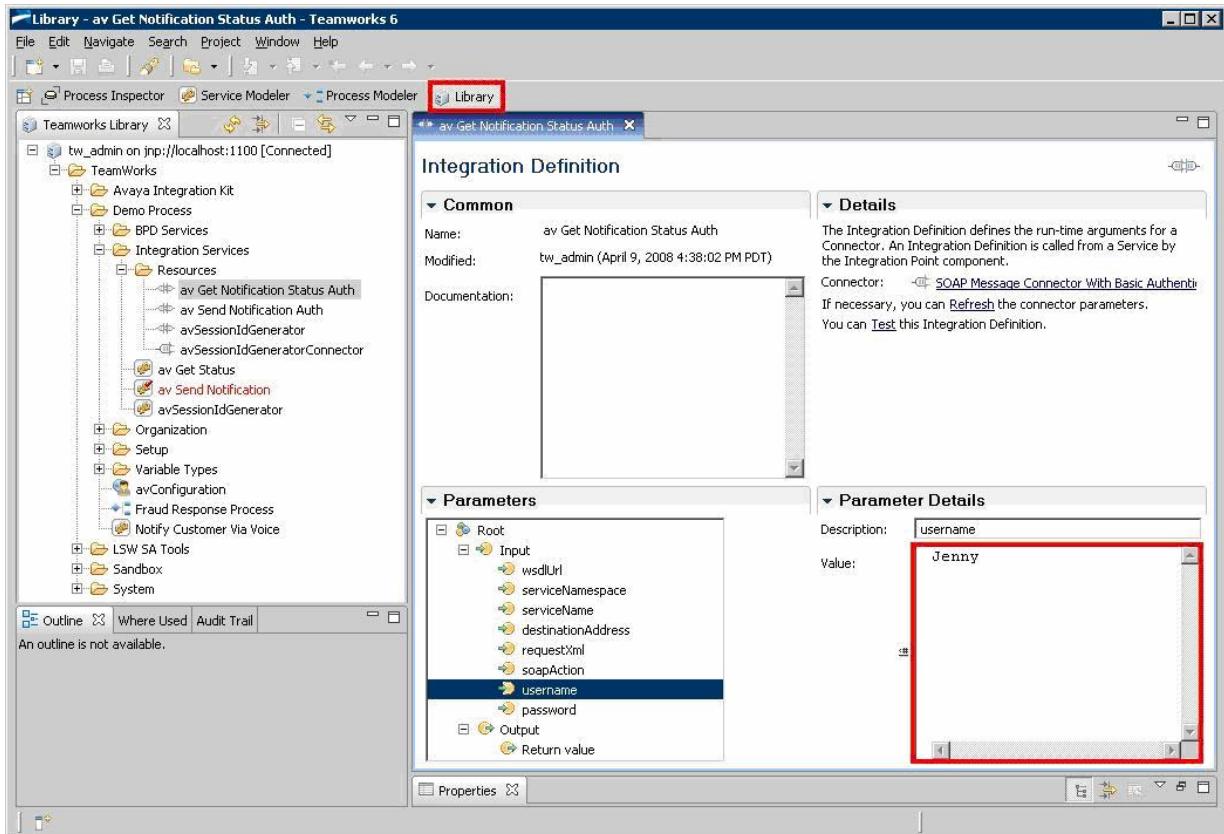
This section describes the steps to account for the directory where the Web Services Description Language (WSDL) and XML schema files are located on the Host PC. These files are utilized by the Avaya Specific Components installed in **Section 4.1**. Contact an authorized Avaya account representative to obtain theses files.

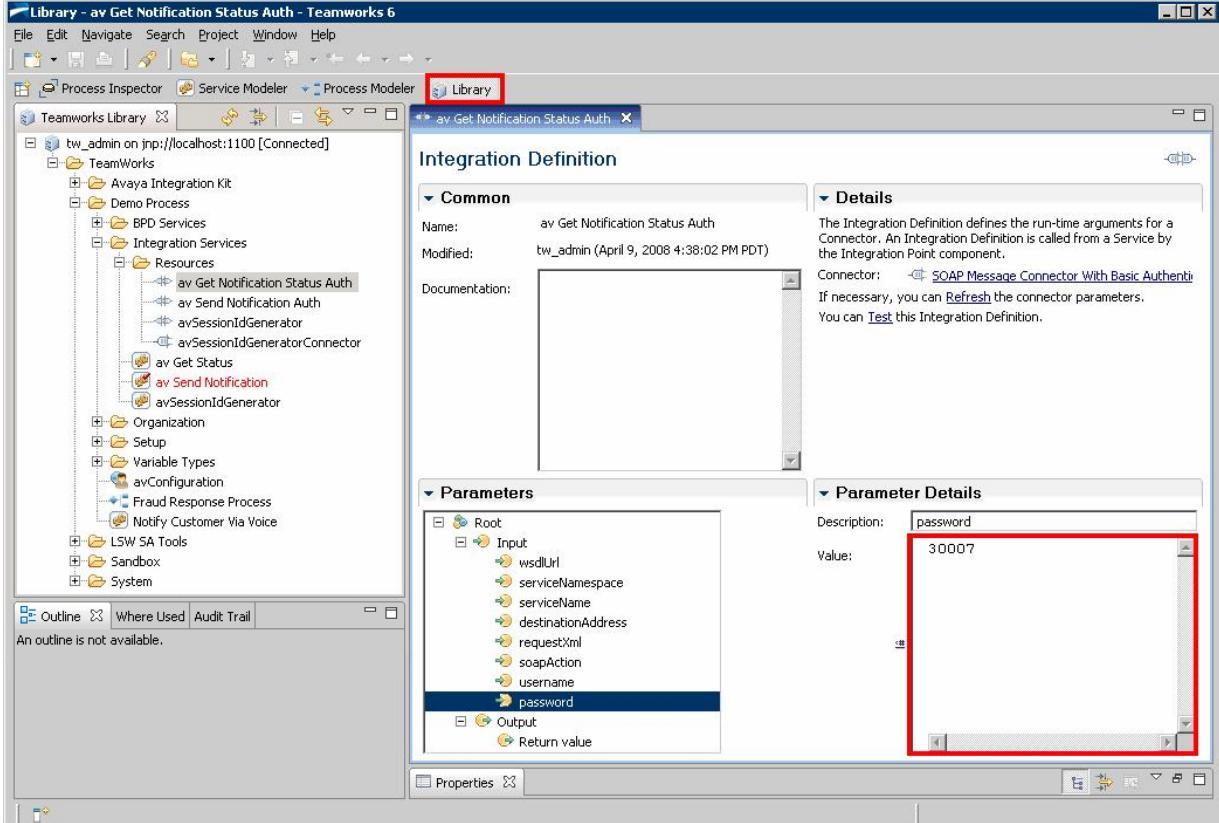
Step	Description
4.2.1	<p>Copy the WSDL and XML schema files to a directory on the Host PC. For this sample configuration, the files were copied to: <b>C:\Temp</b>. The directory where the files are copied must match the directory denoted by the <b>schemaLocation</b> variable in the files.</p> <ul style="list-style-type: none"> <li>• Open the <b>NotificationAndResponseService.xsd</b> file with a text editor to verify the setting for the <b>schemaLocation</b> variable.             <ul style="list-style-type: none"> <li>○ If the root directory where the WSDL files were copied is not equal to the <b>schemaLocation</b> variable, edit the <b>schemaLocation</b> variable appropriately and save the changes.</li> </ul> </li> </ul> <pre> &lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;!--     Definition of the common types that are used in various Diamond Services. --&gt; &lt;xsd:schema targetNamespace="http://xml.avaya.com/diamond/schema/2007/07/NotificationAndResponse Service"     xmlns="http://www.w3.org/2001/XMLSchema"     xmlns:externalcommon="http://xml.avaya.com/diamond/schema/2007/07/external- common"      xmlns:nrsSchema="http://xml.avaya.com/diamond/schema/2007/07/NotificationAndResponse Service"     xmlns:xsd="http://www.w3.org/2001/XMLSchema"     elementFormDefault="qualified"&gt;  &lt;!-- minor_version=1 --&gt;      &lt;xsd:import namespace="http://xml.avaya.com/diamond/schema/2007/07/external- common"         schemaLocation="file:///C:/Temp/cpmwsdl/services/external-common.xsd"/&gt; </pre>
4.2.2	<p>Repeat <b>Step 4.2.1</b> for the following files:</p> <ul style="list-style-type: none"> <li>• NotificationAndResponseService.wsdl</li> <li>• SessionIdGenerator.wsdl</li> <li>• AdvisoryService.xsd</li> <li>• AdvisoryService.wsdl</li> </ul>

### 4.3. Modify Avaya Specific Components

This section describes the steps to modify the Avaya Specific Components installed in **Section 4.1**. These steps enable Avaya CPM to process fraudulent credit card transactions delivered from Lombardi Teamworks.

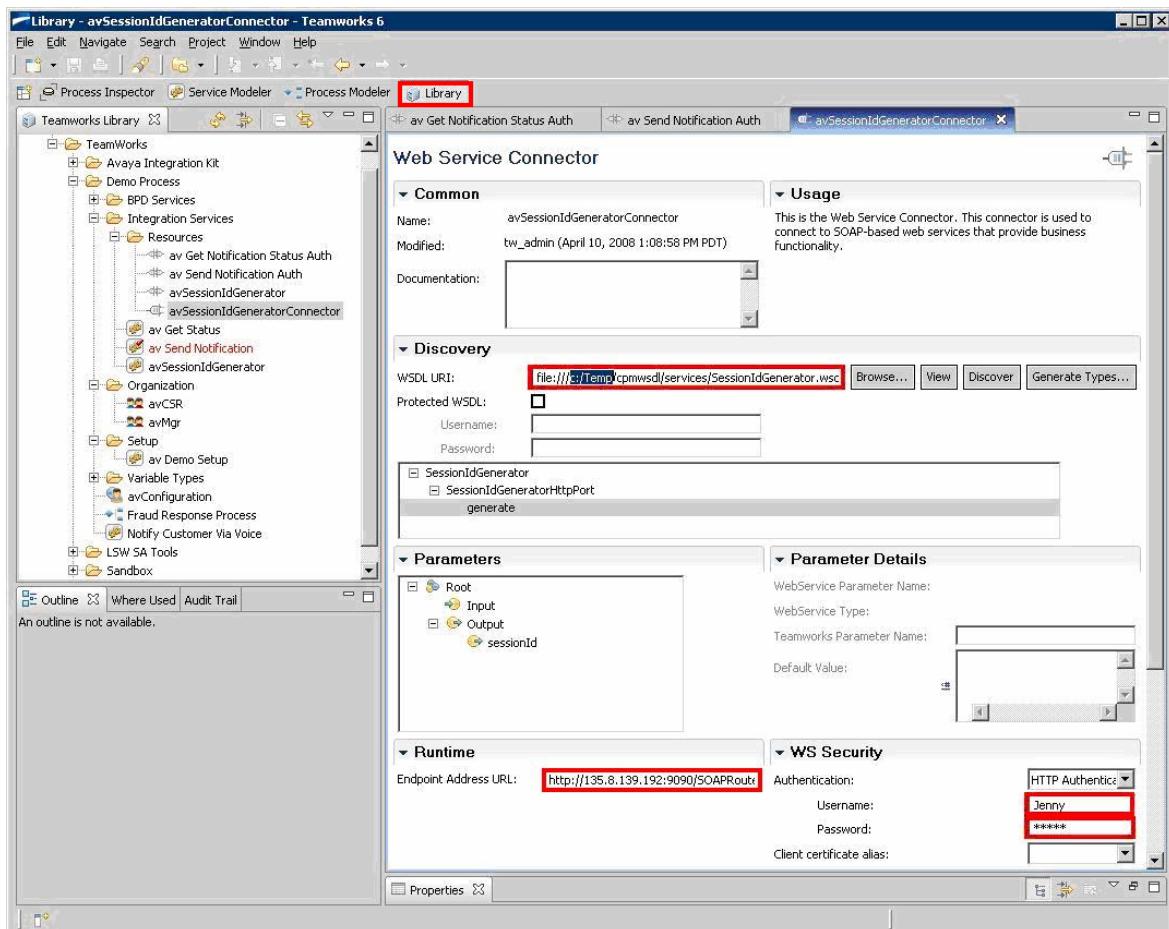
Step	Description
4.3.1	<p>From the Authoring Environment, verify the configuration as follows:</p> <ul style="list-style-type: none"><li>• If the Process Server is not initialized, start the Process Server (see <b>Appendix C</b>).</li><li>• Start the Authoring Environment and then log on to Lombardi Teamworks as an administrative user [1].</li><li>• From the <b>Library</b> tab, select <b>TeamWorks ➔ Demo Processes ➔ Integration Services ➔ Resources ➔ av Get Notification Status Auth</b>.</li><li>• Verify the <b>wsdlUrl</b> parameter for the <b>av Get Notification Status Auth</b> resource corresponds to the root directory (<b>c:/Temp</b>) where the WSDL and XML schema files were copied (see <b>Section 4.2</b>).</li></ul> <p><i>Note: If modifications are necessary, right-click on the resource name (<b>av Get Notification Status Auth</b>) and select <b>Check Out</b>. Save changes by selecting <b>File ➔ Save</b> from the Authoring Environment main menu. Then right-click on the resource name and select <b>Check In</b>.</i></p> 

Step	Description
4.3.2	<p>Verify the <b>username</b> parameter corresponds to the user configured on Avaya CPM (see <b>Section 3.1</b>).</p> <p><i>Note: If modifications are necessary, right-click on the resource name (<b>av Get Notification Status Auth</b>) and select <b>Check Out</b>. Save changes by selecting <b>File ➔ Save</b> from the Authoring Environment main menu. Then right-click on the resource name and select <b>Check In</b>.</i></p> 

Step	Description
4.3.3	<p>Verify the <b>password</b> parameter corresponds to a user account provisioned on Avaya CPM. For this sample configuration, the user account displayed in <b>Step 3.1.1</b> was utilized.</p> <p><i>Note: If modifications are necessary, right-click on the resource name (<b>av Get Notification Status Auth</b>) and select <b>Check Out</b>. Save changes by selecting <b>File ➔ Save</b> from the Authoring Environment main menu. Then right-click on the resource name and select <b>Check In</b>.</i></p> 
4.3.4	Repeat the Steps 4.3.1 - 4.3.3 for the <b>av Send Notification Auth</b> resource.

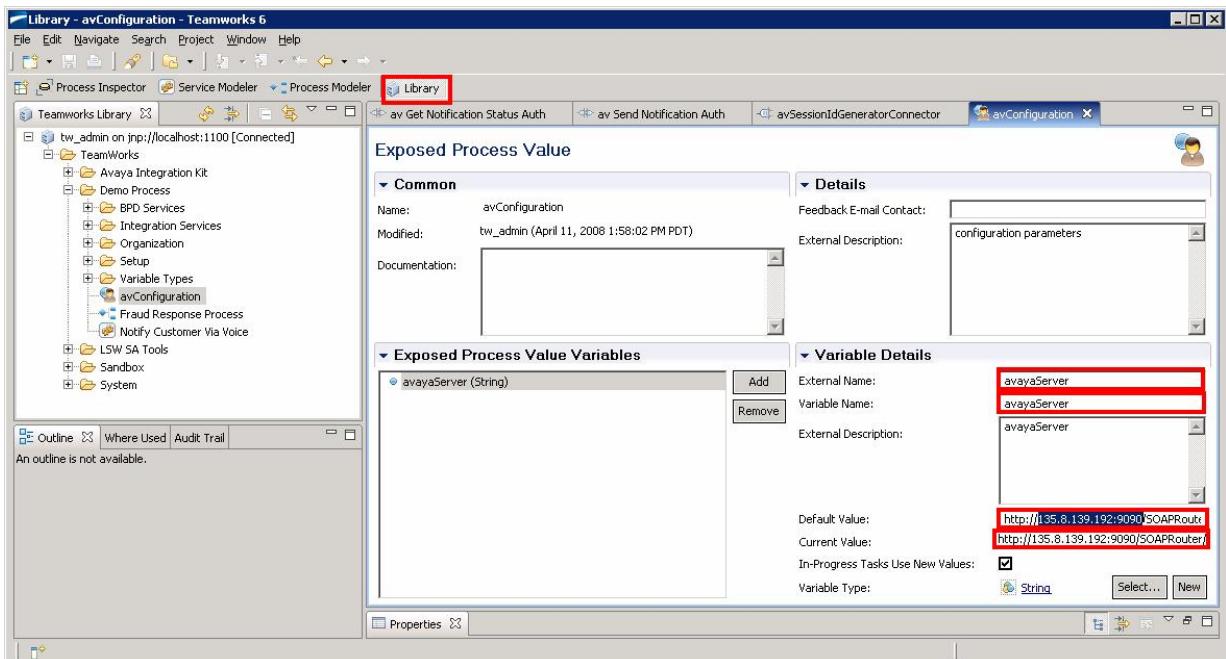
Step	Description
4.3.5	<p>From the <b>Library</b> tab, select <b>TeamWorks</b> → <b>Demo Processes</b> → <b>Integration Services</b> → <b>Resources</b> → <b>avSessionIdGeneratorConnector</b>.</p> <ul style="list-style-type: none"> <li>Verify the <b>WSDL URI</b> entry corresponds to the root directory (<b>c:/Temp</b>) where the WSDL and XML schema files were copied (see <b>Section 4.2</b>).</li> <li>Verify the <b>Endpoint Address URL</b> entry corresponds to the IP address or FQDN of Avaya CPM. Note port <b>9090</b> is used and must be open on Avaya CPM (see <b>Step 6.2</b>). For this sample configuration, the following value was entered: <b>http://135.8.139.192:9090/SOAPRouter/services/SessionIdGeneratorHttpPort</b>.</li> <li>Verify the <b>Username</b> and <b>Password</b> parameters correspond to the user configured on Avaya CPM (see <b>Section 3.1</b>).</li> </ul>

*Note: If modifications are necessary, right-click on the resource name (**avSessionIdGeneratorConnector**) and select **Check Out**. Save changes by selecting **File** → **Save** from the Authoring Environment main menu. Then right-click on the resource name and select **Check In**.*



Step	Description
4.3.6	<p>From the <b>Library</b> tab, select <b>TeamWorks</b> → <b>Demo Processes</b> → <b>avConfiguration</b>.</p> <ul style="list-style-type: none"> <li>Verify the <b>Exposed Process Value</b> variable is configured. For this sample configuration, it was set to <b>avayaServer</b>.</li> <li>Verify the <b>Default Value</b> and <b>Current Value</b> entries correspond to the IP address or FQDN of Avaya CPM. Note port <b>9090</b> is used and must be open on Avaya CPM (see <b>Step 6.2</b>). For this sample configuration, the following value for the <b>Default Value</b> was entered:  <b>http:// 135.8.139.192:9090/SOAPRouter/services/NotifyAndRespondService.</b></li> </ul>

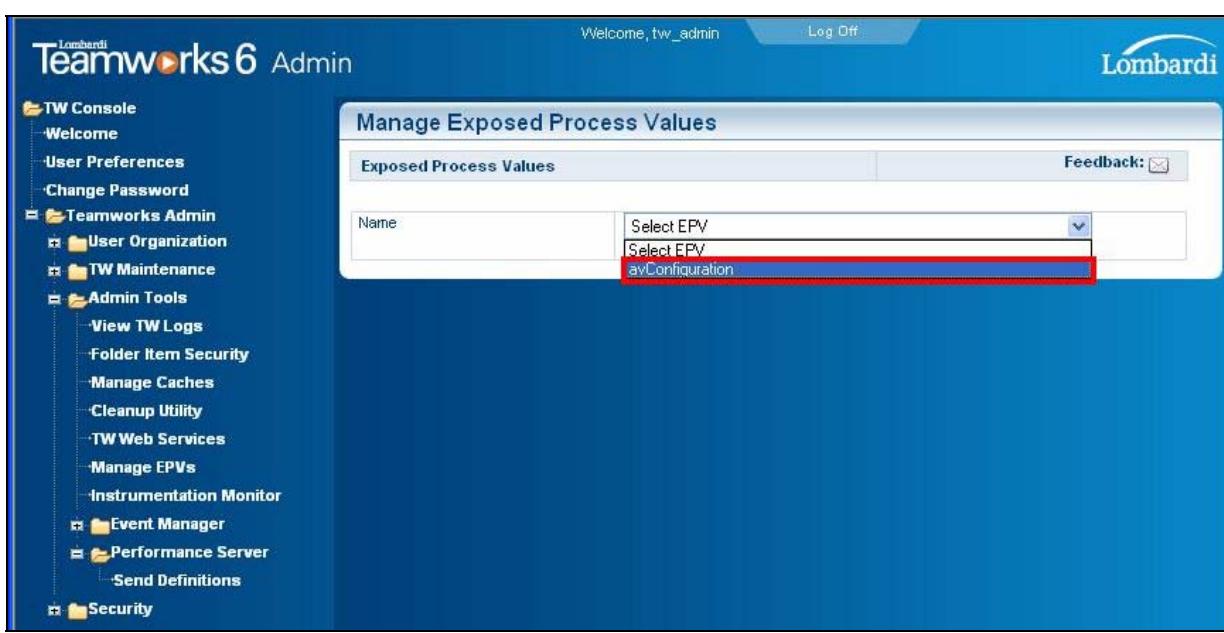
*Note: If modifications are necessary, right-click on the resource name (**avConfiguration**) and select **Check Out**. Save changes by selecting **File** → **Save** from the Authoring Environment main menu. Then right-click on the resource name and select **Check In**.*

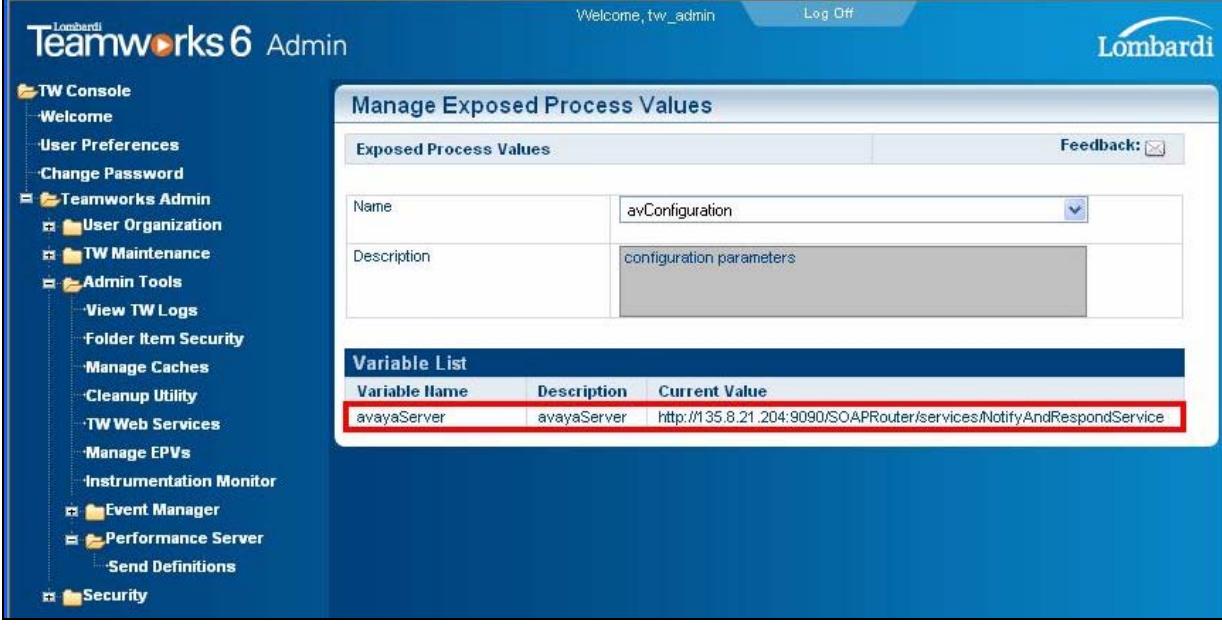


## 4.4. Configure Process Server

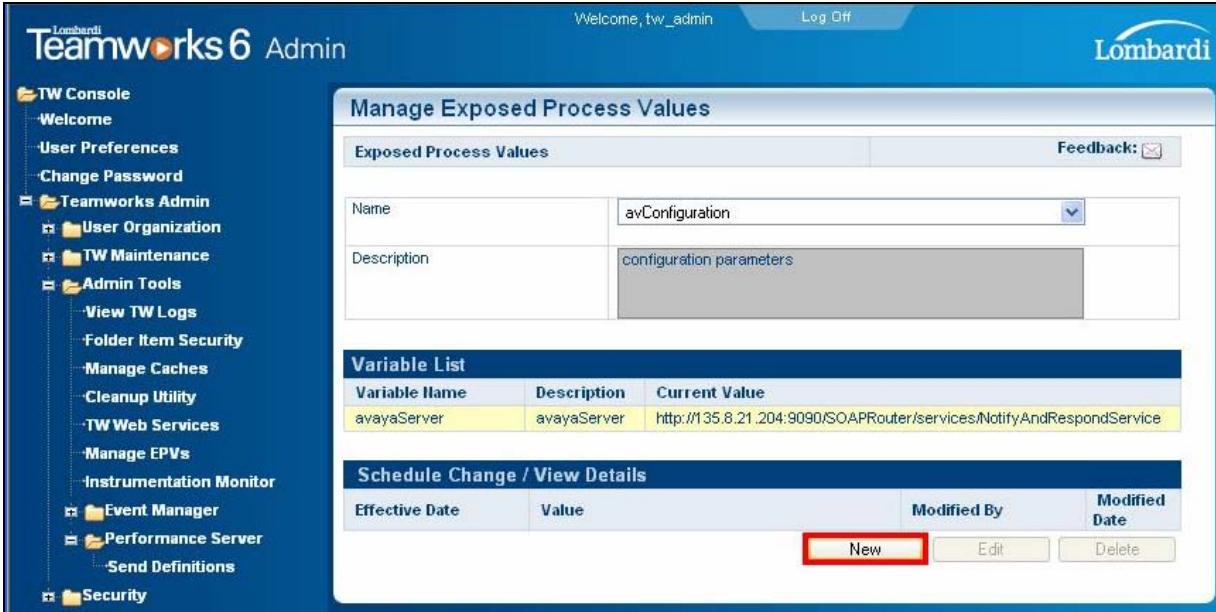
This section describes the steps for configuring Lombardi Teamworks Exposed Process Values (EPVs) via the Lombardi Teamworks Process Server Console. The Process Server Console is made up of the following major areas, parts of which may not be accessible to a user depending on specified user permissions:

- User Organization
- Teamworks Maintenance
- Administrative Tools
- Security.

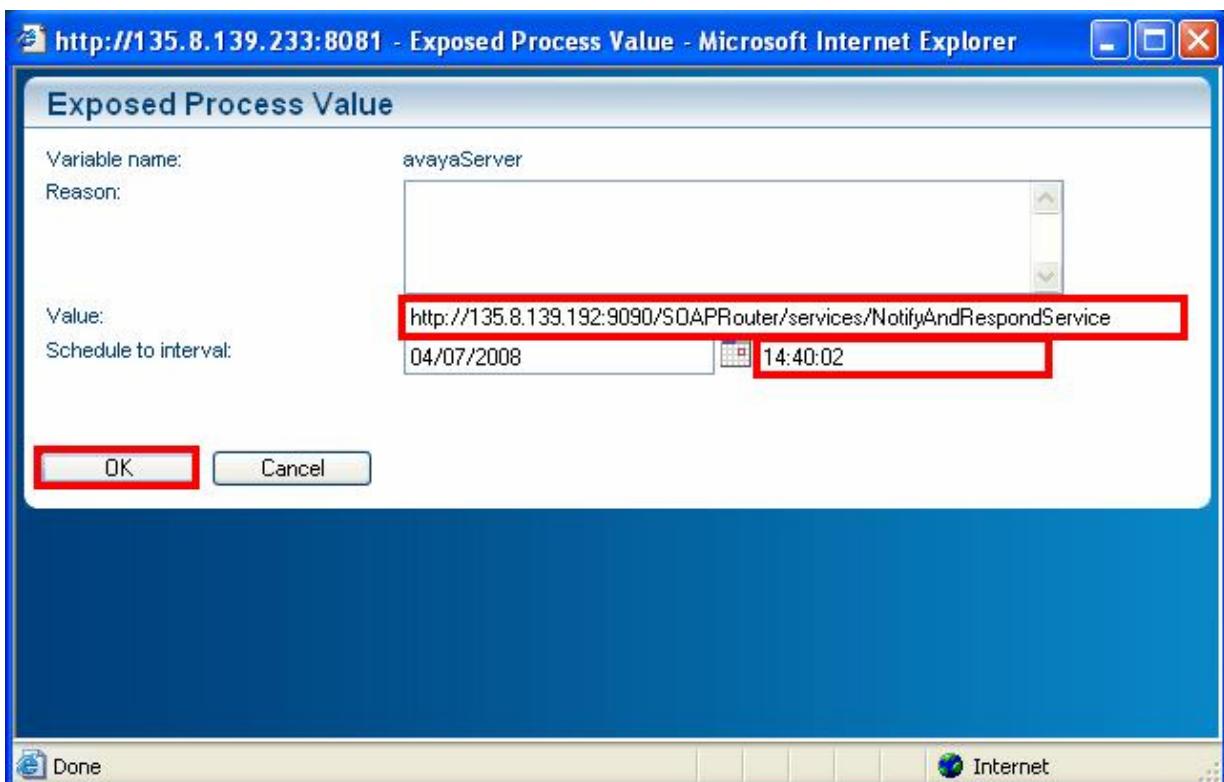
Step	Description
4.4.1	To enable Lombardi Teamworks to communicate with Avaya CPM, provision Avaya CPM as an EPV as follows: <ul style="list-style-type: none"><li>• Verify that the process and performance servers are started (see <b>Appendix C</b>).</li><li>• Open a standard web browser and enter <b>http://&lt;Lombardi Teamworks IP Address or FQDN&gt;:8081/teamworks</b> into the web browser's URL bar.</li><li>• Log in to the Process Server Console with administrative privileges.</li><li>• From the Process Server Console, select <b>TW Console ➔ Teamworks Admin ➔ Admin Tools ➔ Manage EPVs</b>.</li><li>• From the <b>Manage Exposed Process Values</b> page, select <b>avConfiguration</b> from the drop-down list for the <b>Name</b> field.</li></ul> 

Step	Description						
4.4.2	<p>From the <b>Manage Exposed Process Values</b> page, click the entry for <b>avayaServer</b> in the <b>Variable List</b>.</p>  <table border="1" data-bbox="638 734 1481 798"> <thead> <tr> <th data-bbox="638 734 780 756">Variable Name</th> <th data-bbox="780 734 905 756">Description</th> <th data-bbox="905 734 1031 756">Current Value</th> </tr> </thead> <tbody> <tr style="background-color: red;"> <td data-bbox="638 798 780 819">avayaServer</td> <td data-bbox="780 798 905 819">avayaServer</td> <td data-bbox="905 798 1031 819">http://135.8.21.204:9090/SOAPRouter/services/NotifyAndRespondService</td> </tr> </tbody> </table>	Variable Name	Description	Current Value	avayaServer	avayaServer	http://135.8.21.204:9090/SOAPRouter/services/NotifyAndRespondService
Variable Name	Description	Current Value					
avayaServer	avayaServer	http://135.8.21.204:9090/SOAPRouter/services/NotifyAndRespondService					

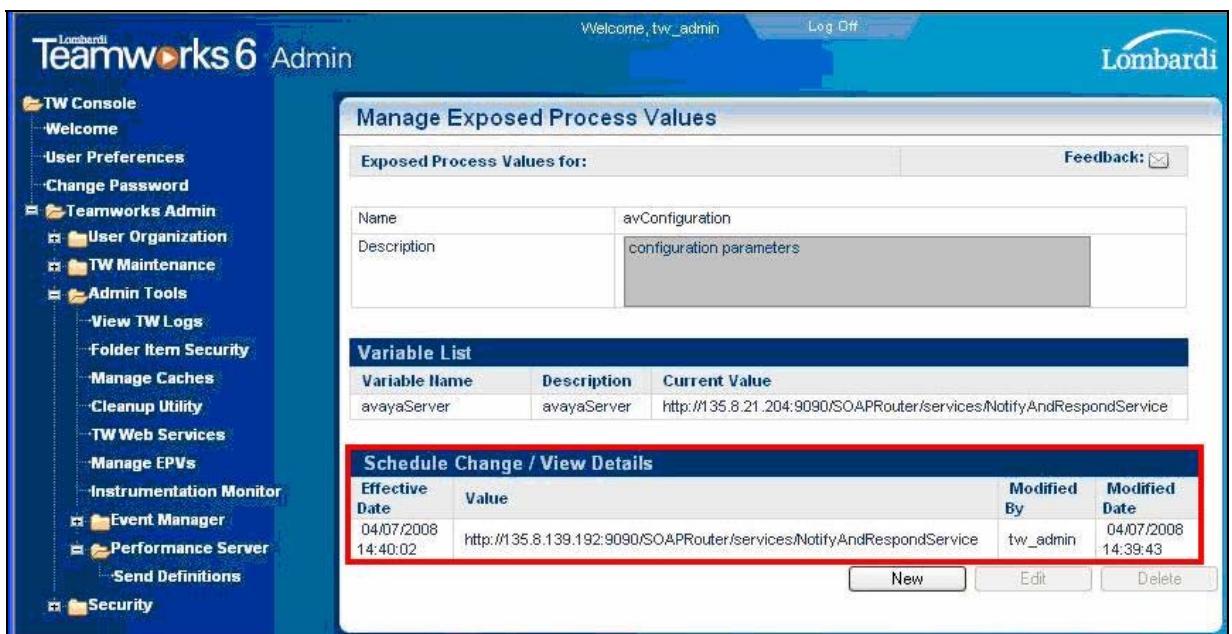
<b>Step</b>	<b>Description</b>
<b>4.4.3</b>	From the <b>Manage Exposed Process Values</b> page, click <b>New</b> .



The screenshot shows the Lombardi Teamworks 6 Admin interface. The left sidebar contains a navigation tree with categories like TW Console, Teamworks Admin, TW Maintenance, Admin Tools, Event Manager, Performance Server, and Security. The main content area is titled 'Manage Exposed Process Values'. It has three sections: 'Exposed Process Values' (with a table showing a row for 'avConfiguration'), 'Variable List' (showing a single row for 'avayaServer'), and 'Schedule Change / View Details' (with a table and a red box around the 'New' button). The top right of the screen shows 'Welcome, tw\_admin' and 'Log Off'.

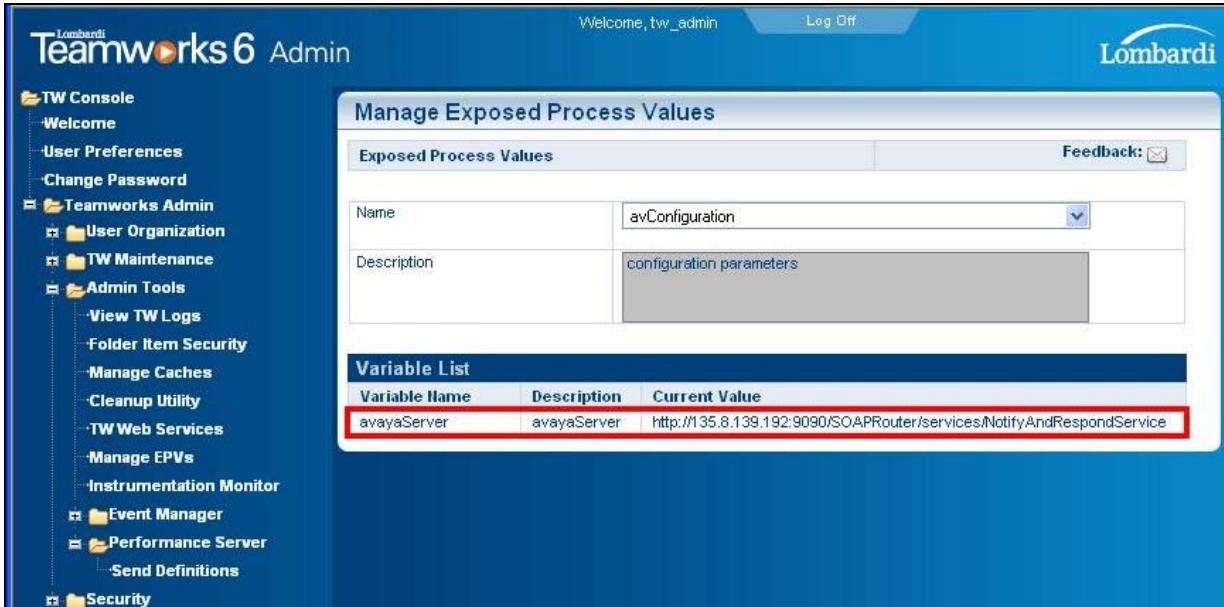
Step	Description
4.4.4	<p>From the <b>Exposed Process Value</b> page, provision as displayed.</p> <ul style="list-style-type: none"> <li>Enter the URL of Avaya CPM as displayed. For this sample configuration the URL must include: <b>9090/SOAPRouter/services/NotifyAndRespondService</b> as defined by <b>Step 4.3.6</b>.</li> <li>Enter a time greater than the default entry for the <b>Schedule to interval</b> field. Using the default setting for the time will result in an error (see <b>Step 6.1</b>). For this sample configuration, the <b>Schedule to interval</b> field was provisioned for two minutes greater than the current time.</li> <li>Click <b>OK</b>.</li> </ul> 

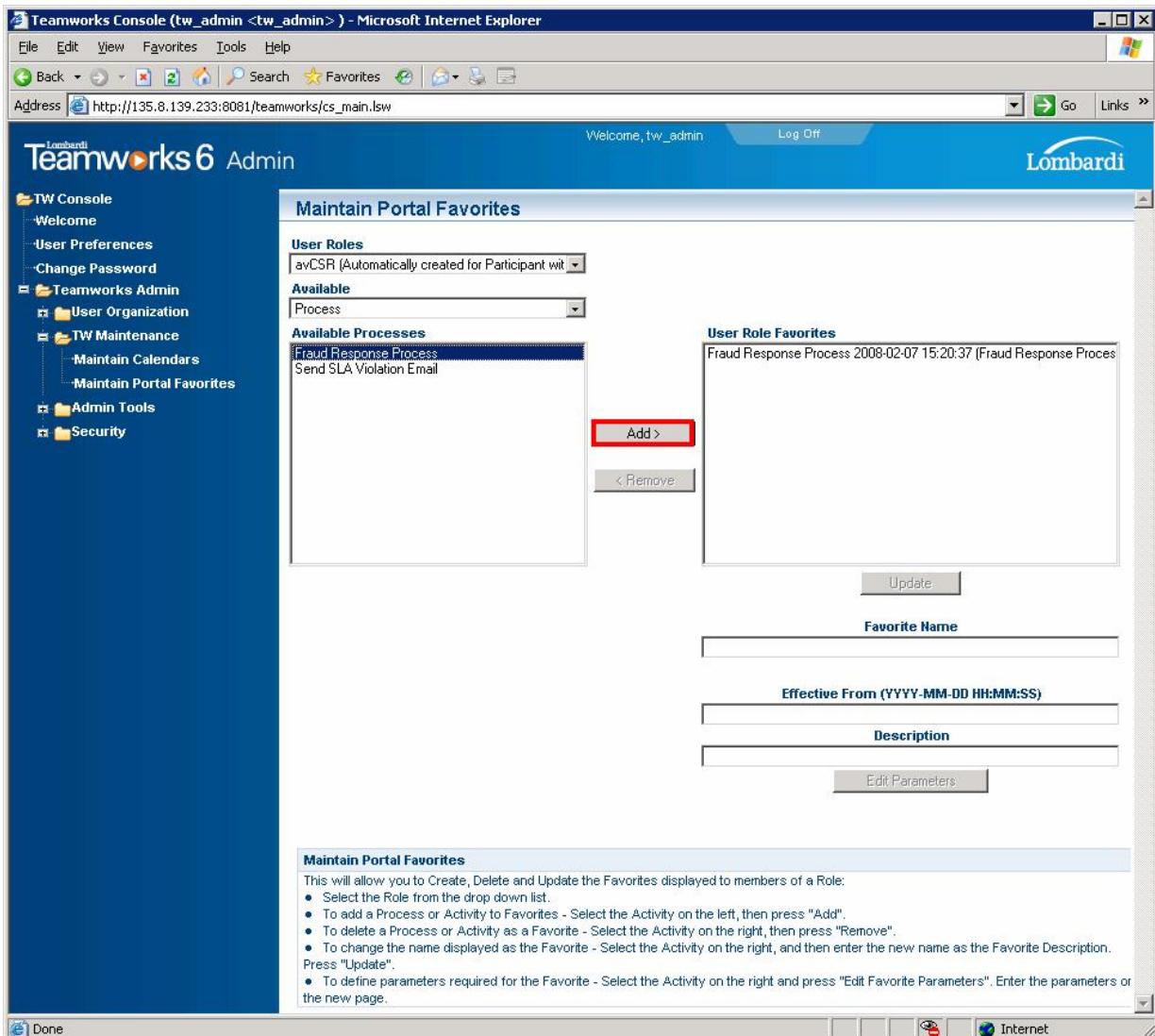
Step	Description
4.4.5	From the Manage Exposed Process Values page, verify entry is successfully added under Schedule Change / View Details.

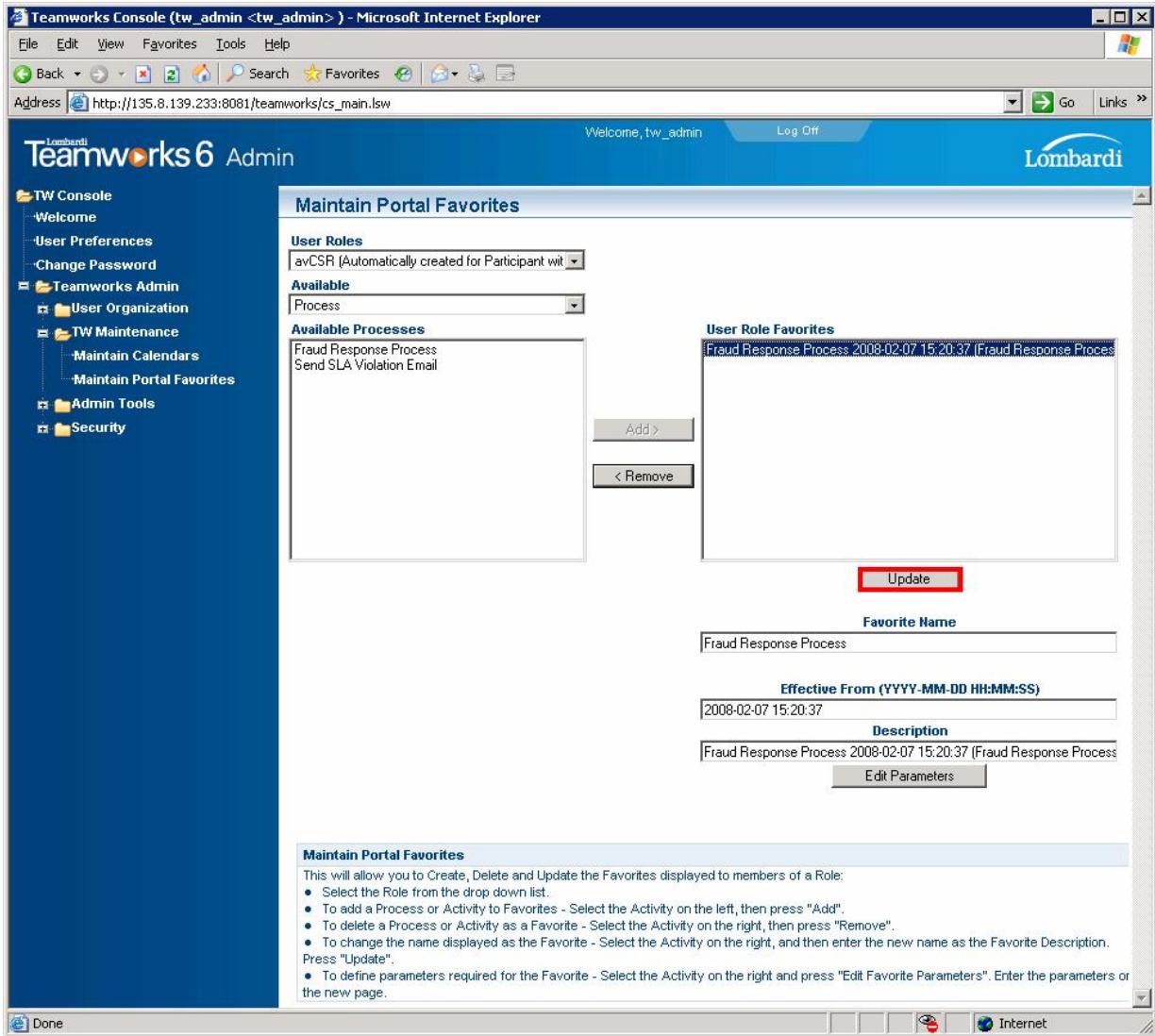


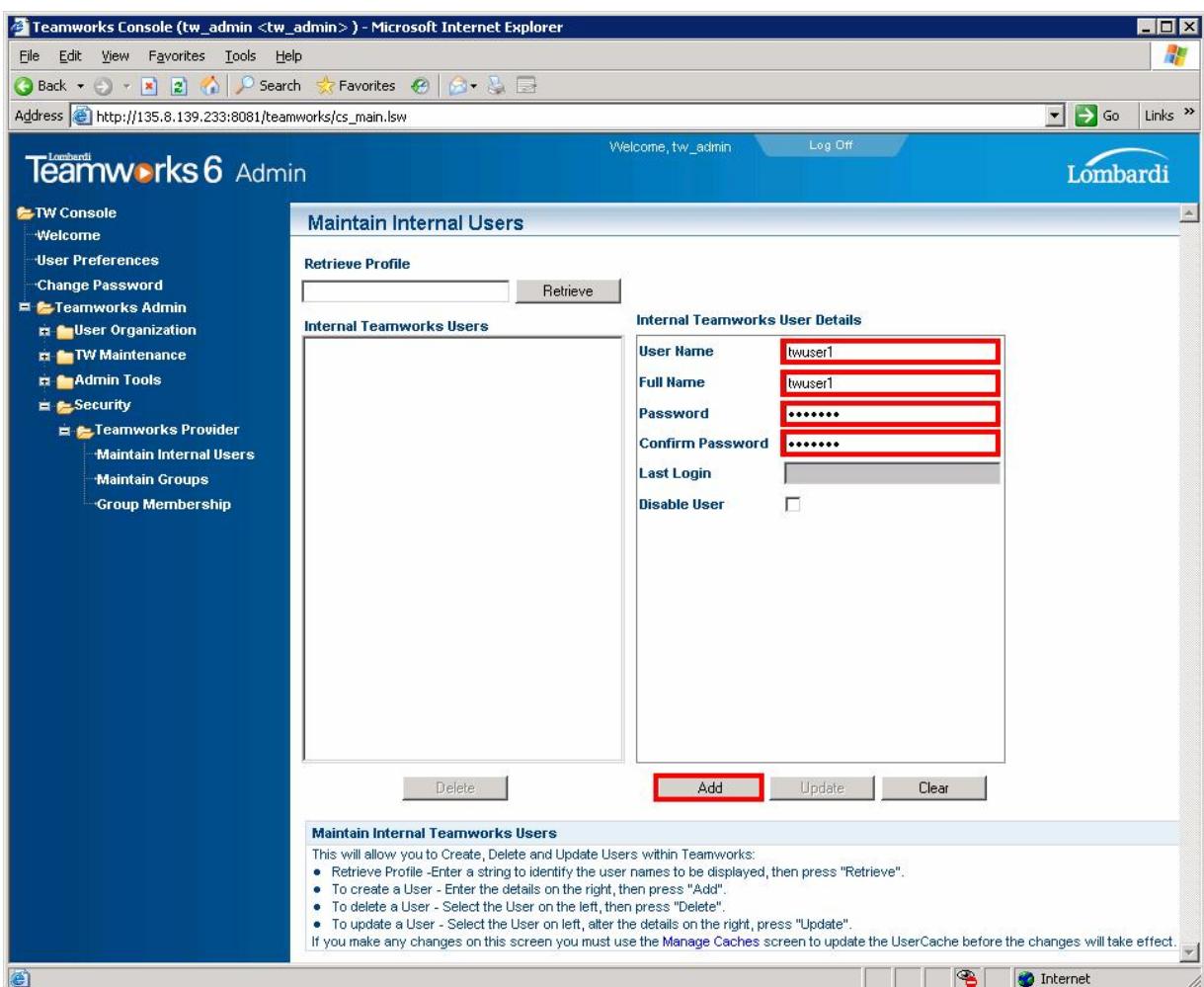
The screenshot shows the Lombardi Teamworks 6 Admin interface. The left sidebar contains navigation links for TW Console, User Preferences, Change Password, Teamworks Admin (with sub-links for User Organization, TW Maintenance, Admin Tools, View TW Logs, Folder Item Security, Manage Caches, Cleanup Utility, TW Web Services, Manage EPVs, Instrumentation Monitor, Event Manager, Performance Server, Send Definitions, and Security), and a Feedback link. The main content area has tabs for 'Manage Exposed Process Values', 'Variable List', and 'Schedule Change / View Details'. The 'Schedule Change / View Details' tab is active and displays a table with one row:

Effective Date	Value	Modified By	Modified Date
04/07/2008 14:40:02	http://135.8.21.204:9090/SOAPRouter/services/NotifyAndRespondService	tw_admin	04/07/2008 14:39:43

Step	Description						
4.4.6	<p>Verify the change to the MPV is successful as follows:</p> <ul style="list-style-type: none"> <li>Following the time when the EPV was scheduled to update, refresh to the <b>Manage Exposed Process Values</b> page.           <ul style="list-style-type: none"> <li>Verify the entry for the <b>avayaServer</b> has been updated.</li> </ul> </li> </ul>  <table border="1" data-bbox="633 783 1481 889"> <thead> <tr> <th data-bbox="641 783 780 804">Variable Name</th> <th data-bbox="780 783 902 804">Description</th> <th data-bbox="902 783 1057 804">Current Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="641 846 780 868">avayaServer</td> <td data-bbox="780 846 902 868">avayaServer</td> <td data-bbox="902 846 1057 868">http://135.8.139.192:9090/SOAPRouter/services/NotifyAndRespondService</td> </tr> </tbody> </table>	Variable Name	Description	Current Value	avayaServer	avayaServer	http://135.8.139.192:9090/SOAPRouter/services/NotifyAndRespondService
Variable Name	Description	Current Value					
avayaServer	avayaServer	http://135.8.139.192:9090/SOAPRouter/services/NotifyAndRespondService					

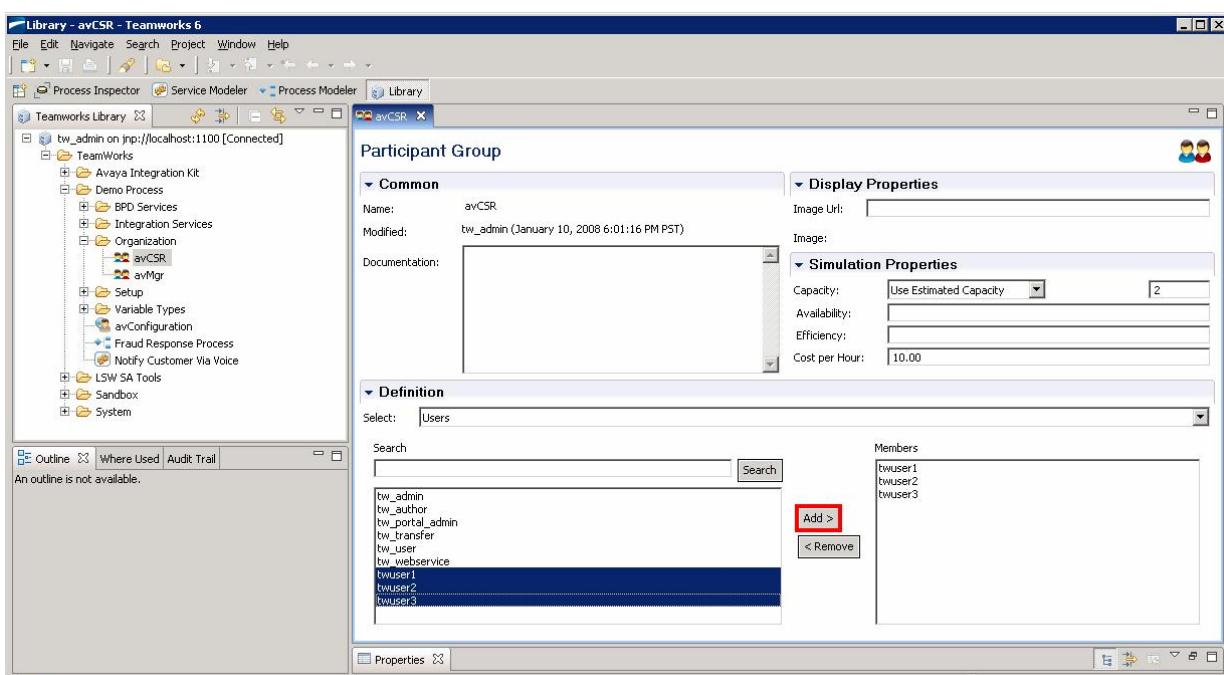
Step	Description
4.4.7	<p>To enable a user to start a process or a service from the Favorites list, provision Portal Favorites as follows:</p> <ul style="list-style-type: none"> <li>From the Process Server Console, select <b>TW Console ➔ Teamworks Admin ➔ TW Maintenance ➔ Manage Portal Favorites</b>.</li> <li>From the <b>Manage Portal Favorites</b> page: <ul style="list-style-type: none"> <li>Select <b>avCSR (Automatically created for Participant with Id:3)</b> from the drop-down list for the <b>User Roles</b> field.</li> <li>Select <b>Process</b> from the drop-down list for the <b>Available</b> field.</li> <li>Select <b>Fraud Response Process</b> and click <b>Add&gt;</b>.</li> </ul> </li> </ul> 

Step	Description
4.4.8	<p>Click Update.</p> 

Step	Description
4.4.9	<p>Add Internal Users on Lombardi Teamworks as follows:</p> <ul style="list-style-type: none"> <li>From the Process Server Console, select <b>TW Console</b> → <b>Teamworks Admin</b> → <b>Security</b> → <b>Teamworks Provider</b> → <b>Maintain Internal Users</b>.</li> <li>From the <b>Manage Internal Users</b> page: <ul style="list-style-type: none"> <li>Enter a descriptive name in the <b>User Name</b> field.</li> <li>Enter a descriptive name in the <b>Full Name</b> field.</li> <li>Enter a password in the <b>Password</b> and <b>Confirm Password</b> fields respectively.</li> <li>Click <b>Add</b>.</li> </ul> </li> </ul> 
4.4.10	<p>Repeat Step 4.4.9 to add two additional users configured as follows:</p> <ul style="list-style-type: none"> <li><b>User Name</b> field: <b>twuser2</b>, <b>Full Name</b> field: <b>twuser2</b>, <b>Password</b> field: <b>twuser2</b>.</li> <li><b>User Name</b> field: <b>twuser3</b>, <b>Full Name</b> field: <b>twuser3</b>, <b>Password</b> field: <b>twuser3</b>.</li> </ul>

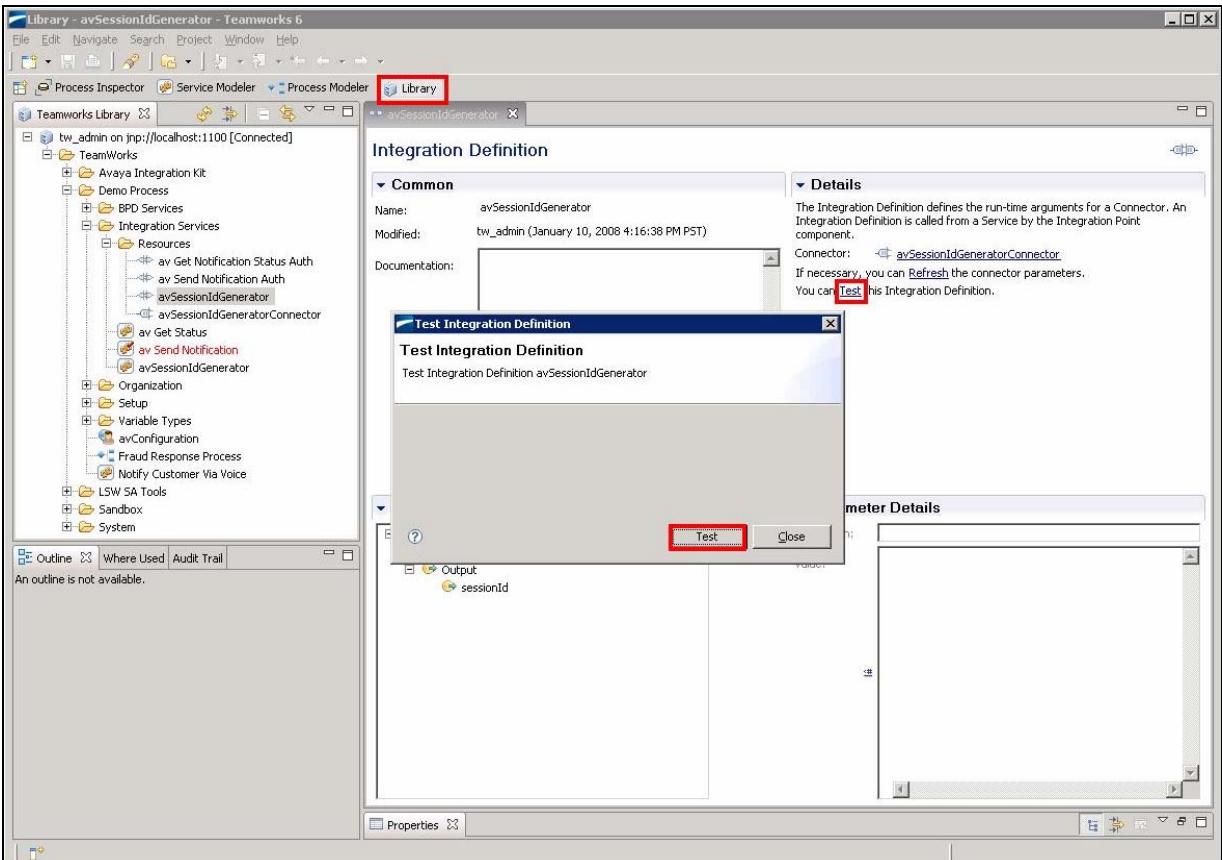
## 4.5. Add Users to Avaya Specific Components

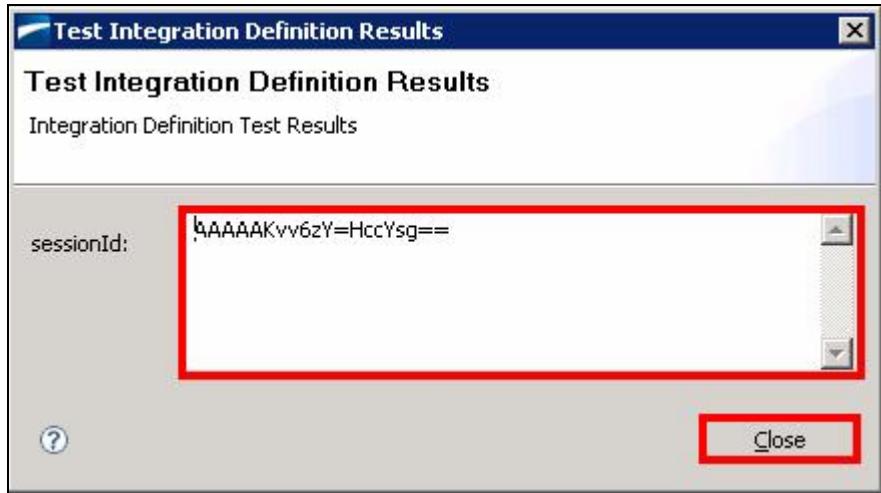
This section describes the steps to add the users to the Avaya Specific Components installed in **Section 4.1** and modified in **Section 4.3**.

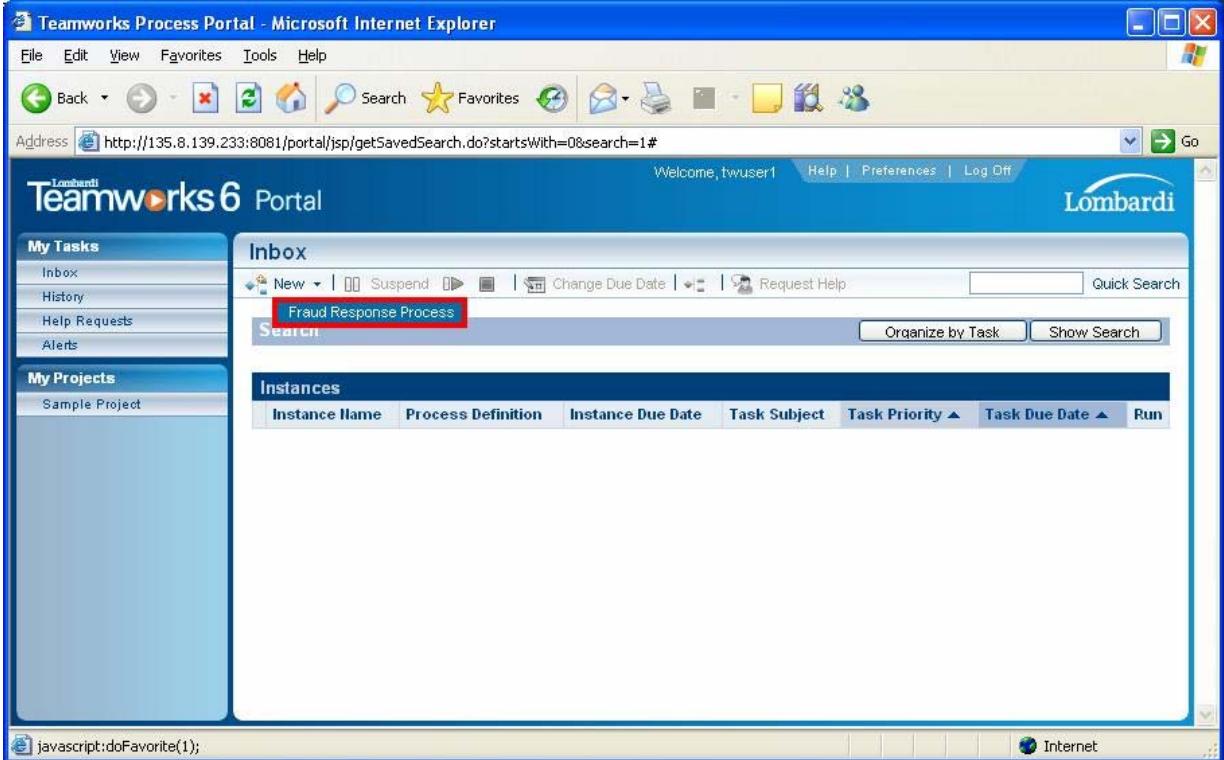
Step	Description
<b>4.5.1</b>	<p>From the Authoring Environment, add the users created in <b>Steps 4.4.9 - 4.4.10</b> as follows:</p> <ul style="list-style-type: none"> <li>From the <b>Teamworks Library</b>, select <b>TeamWorks → Demo Processes → Organization → avCSR</b>.</li> <li>Right-click on the resource name (<b>avCSR</b>) and select <b>Check Out</b>.</li> <li>Select the users created in <b>Steps 4.4.9 - 4.4.10</b> and click <b>Add&gt;</b>.</li> <li>Save changes by selecting <b>File → Save</b> from the Authoring Environment main menu.</li> <li>Right-click on <b>avCSR</b> and select <b>Check In</b>.</li> </ul> 

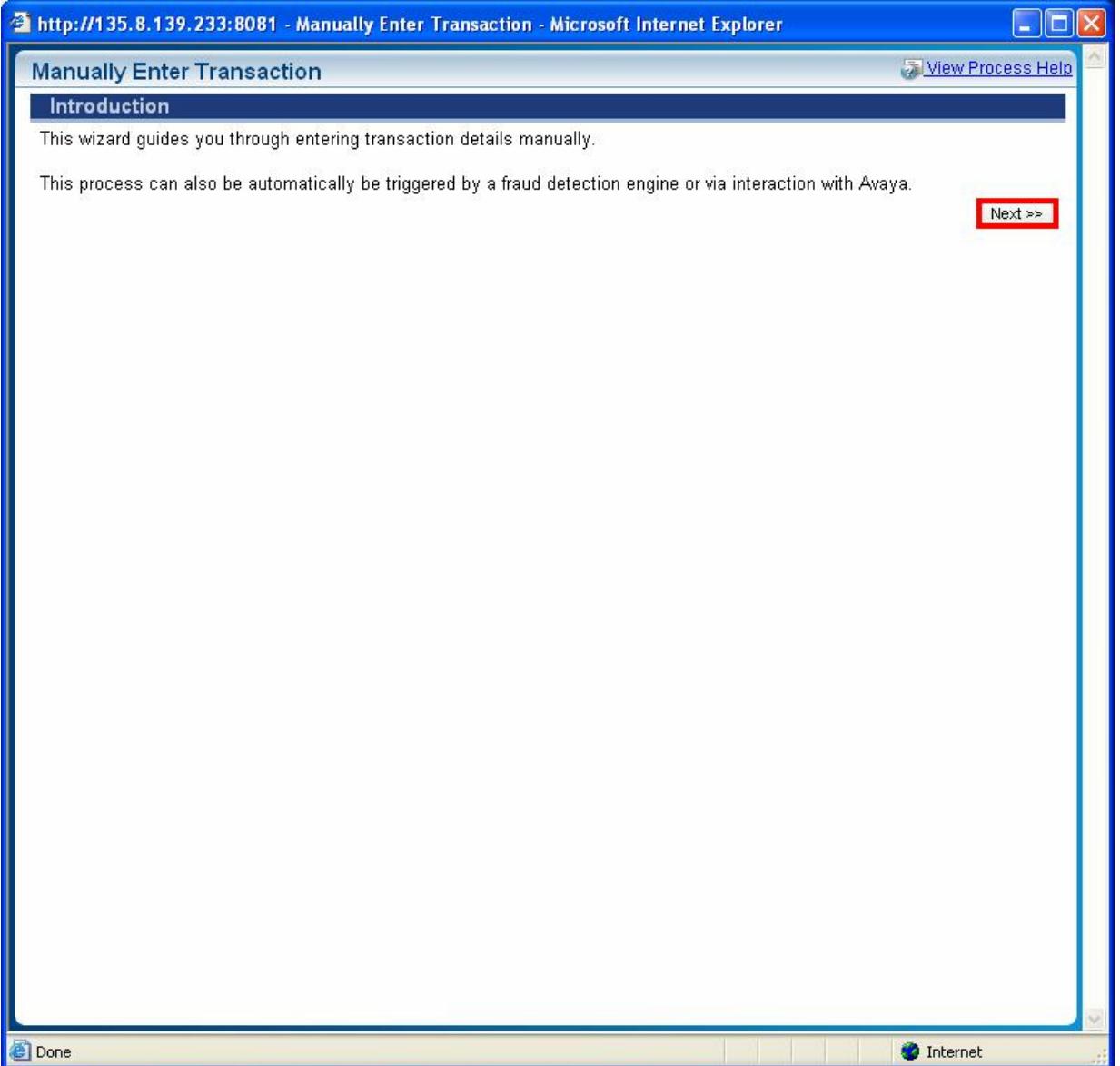
## 5. Verification Steps

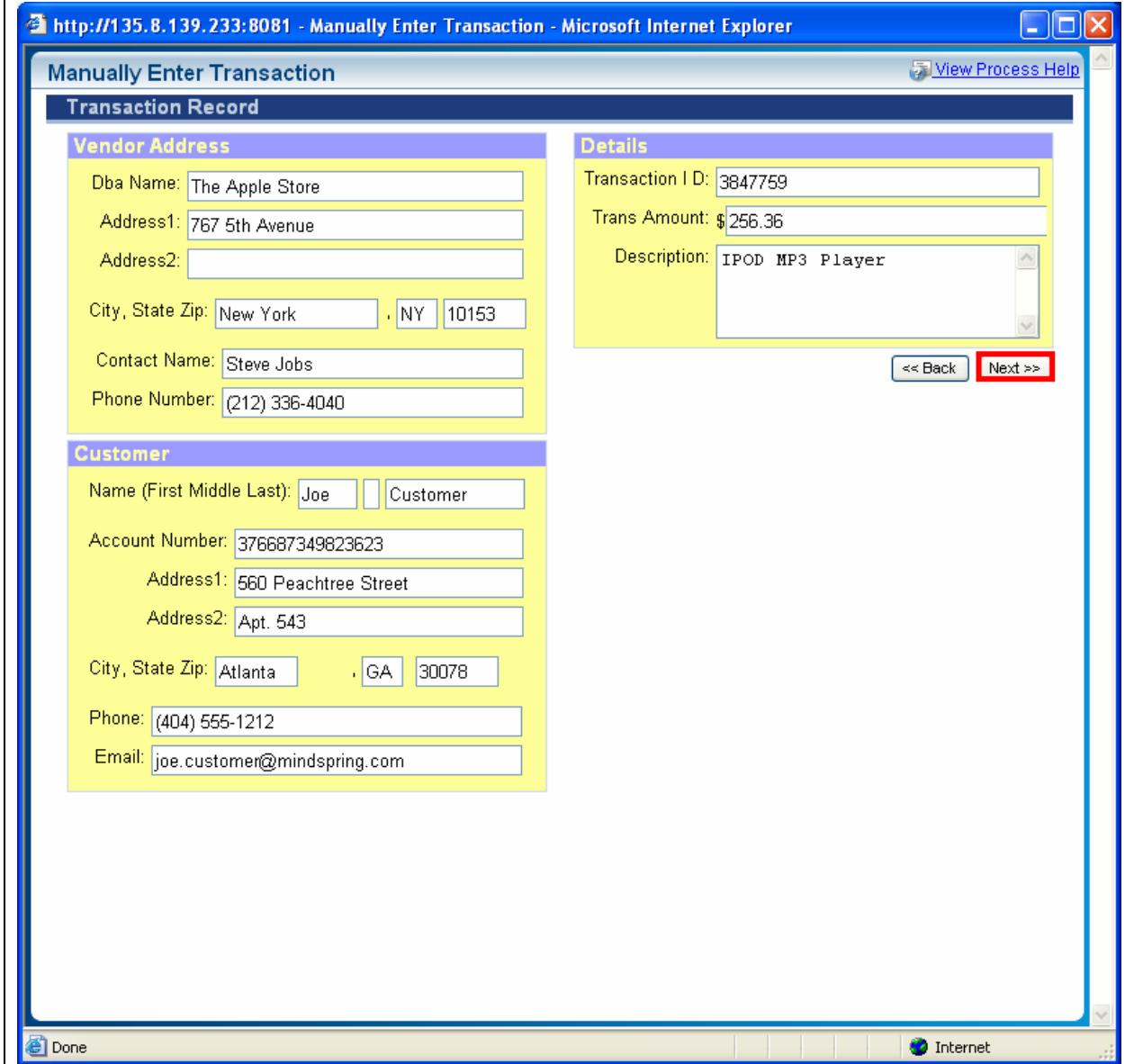
The following steps were used to verify the administrative steps presented in these Application Notes and are applicable for similar configurations in the field.

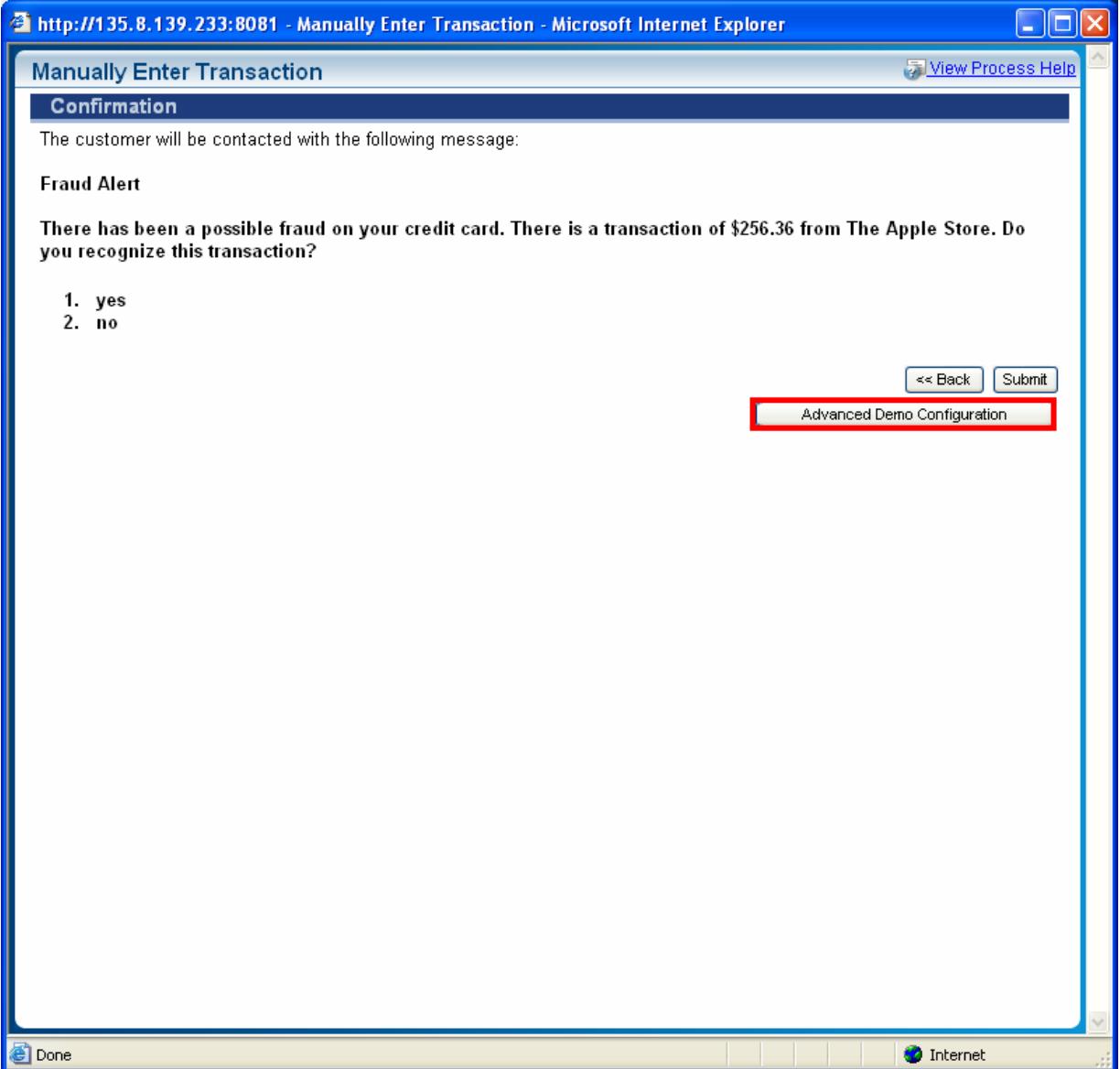
Step	Description
5.1	<p>From the Authoring Environment, verify connectivity between Avaya CPM and Lombardi Teamworks as follows:</p> <ul style="list-style-type: none"> <li>From the <b>Teamworks Library</b>, select <b>avSessionIdGenerator</b>.</li> <li>Click <b>Test</b>.</li> </ul> 

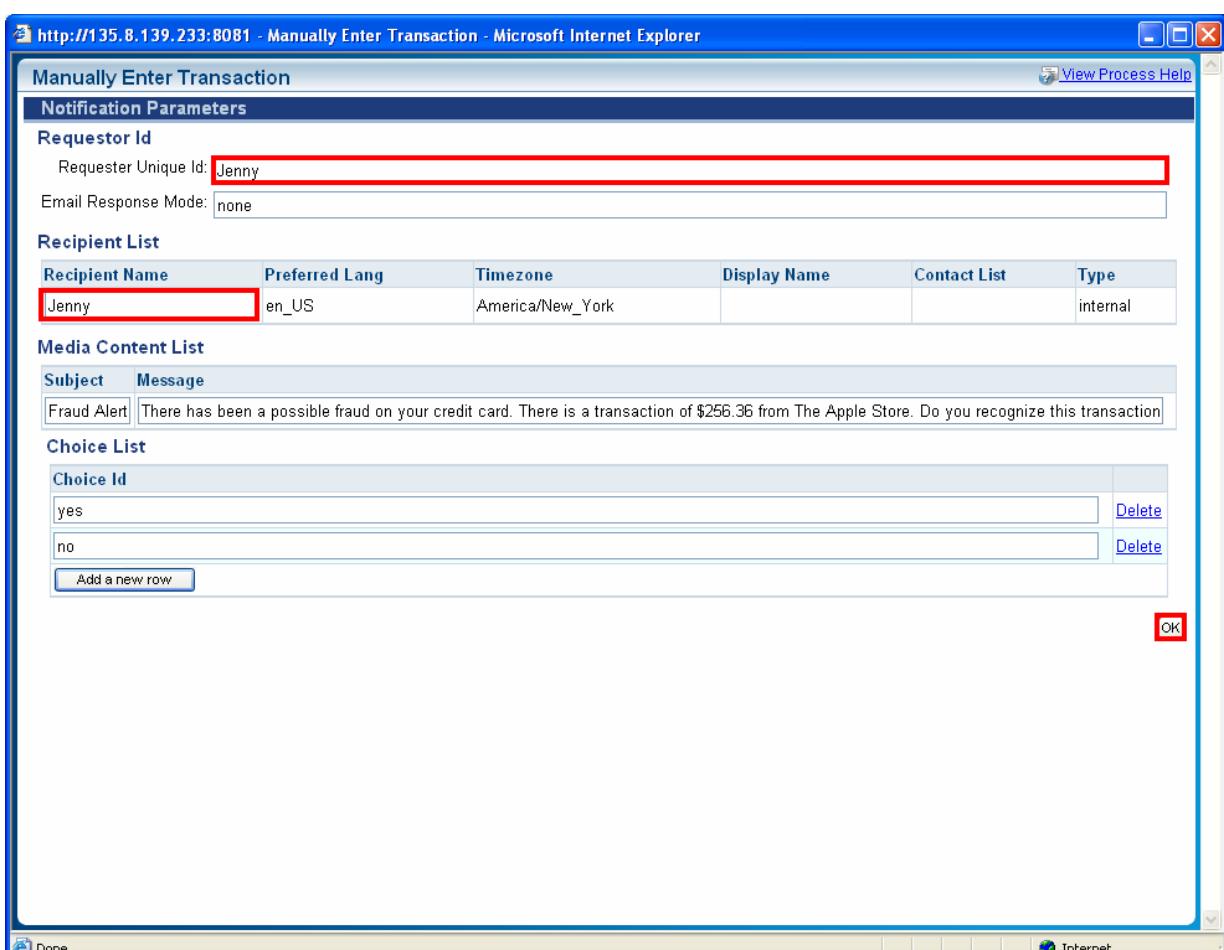
Step	Description
5.2	<p>From the pop-up window, click <b>Test</b>. If successful, a value is returned for the <b>sessionId</b> parameter. If the test fails, see <b>Step 6.2</b> and <b>Step 6.3</b>.</p> 

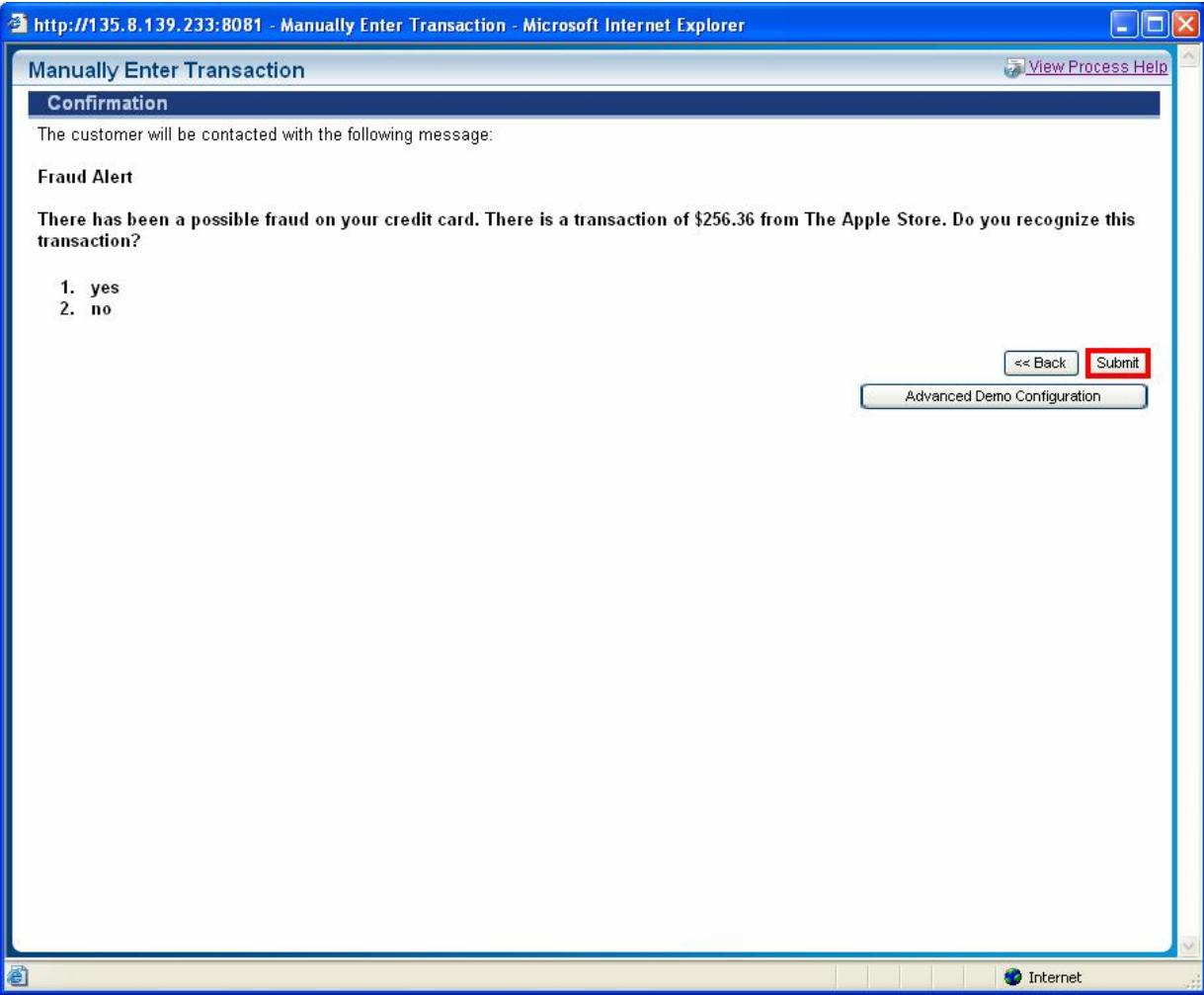
Step	Description
5.3	<p>Validate connectivity between Avaya CPM and Lombardi Teamworks by initiating a transaction for a <b>Fraud Response Process</b> as follows:</p> <ul style="list-style-type: none"> <li>Verify that the process and performance servers are started (see <b>Appendix C</b>).</li> <li>Open a standard web browser and enter <b>http://&lt;Lombardi Teamworks IP Address or FQDN&gt;:8081/portal</b> into the web browser's URL bar.</li> <li>Log in to the Process Server Console with user privileges, e.g., select a user account created in <b>Steps 4.4.9 - 4.4.10</b>.</li> <li>Select <b>New ➔ Fraud Response Process</b>.</li> </ul>  <p>The screenshot shows a Microsoft Internet Explorer window displaying the Lombardi Teamworks 6 Portal. The address bar shows the URL: http://135.8.139.233:8081/portal/jsp/getSavedSearch.do?startsWith=0&amp;search=1#. The main content area is titled 'Inbox' and shows a search result for 'Fraud Response Process'. The search bar has 'Fraud Response' typed into it, and the result is highlighted with a red box. The interface includes a sidebar with 'My Tasks' and 'My Projects' sections, and a header with user information and navigation links.</p>

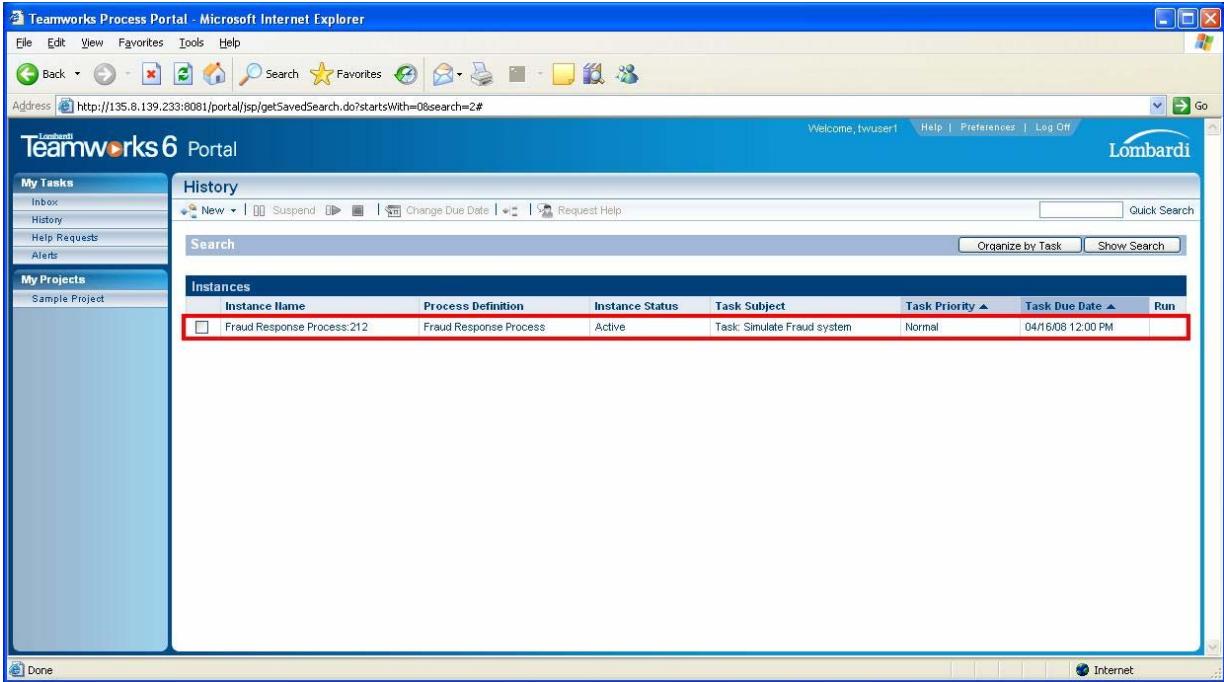
Step	Description
5.4	<p>From the pop-up window, click <b>Next &gt;&gt;</b>.</p> 

Step	Description
5.5	<p>Accept default text for transaction and click <b>Next &gt;&gt;</b>.</p> 

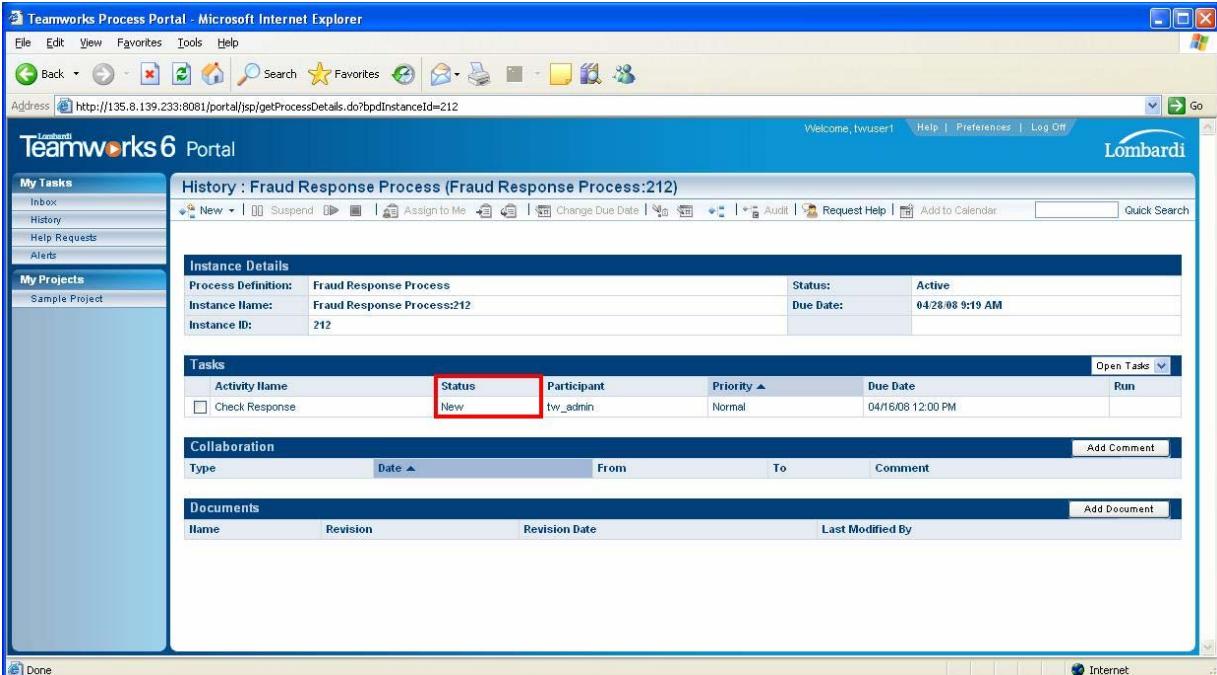
Step	Description
5.6	<p>Click Advanced Demo Configuration.</p>  <p>The customer will be contacted with the following message:</p> <p><b>Fraud Alert</b></p> <p>There has been a possible fraud on your credit card. There is a transaction of \$256.36 from The Apple Store. Do you recognize this transaction?</p> <p>1. yes 2. no</p> <p><a href="#">Advanced Demo Configuration</a></p>

<b>Step</b>	<b>Description</b>
<b>5.7</b>	<p>Verify a user account on Avaya CPM is entered in the <b>Requester Unique ID</b> and <b>Recipient Name</b> fields. For this sample configuration, the <b>Handle</b> for the user account displayed in Step 3.1.1 was entered for both fields. Click <b>OK</b>.</p> 

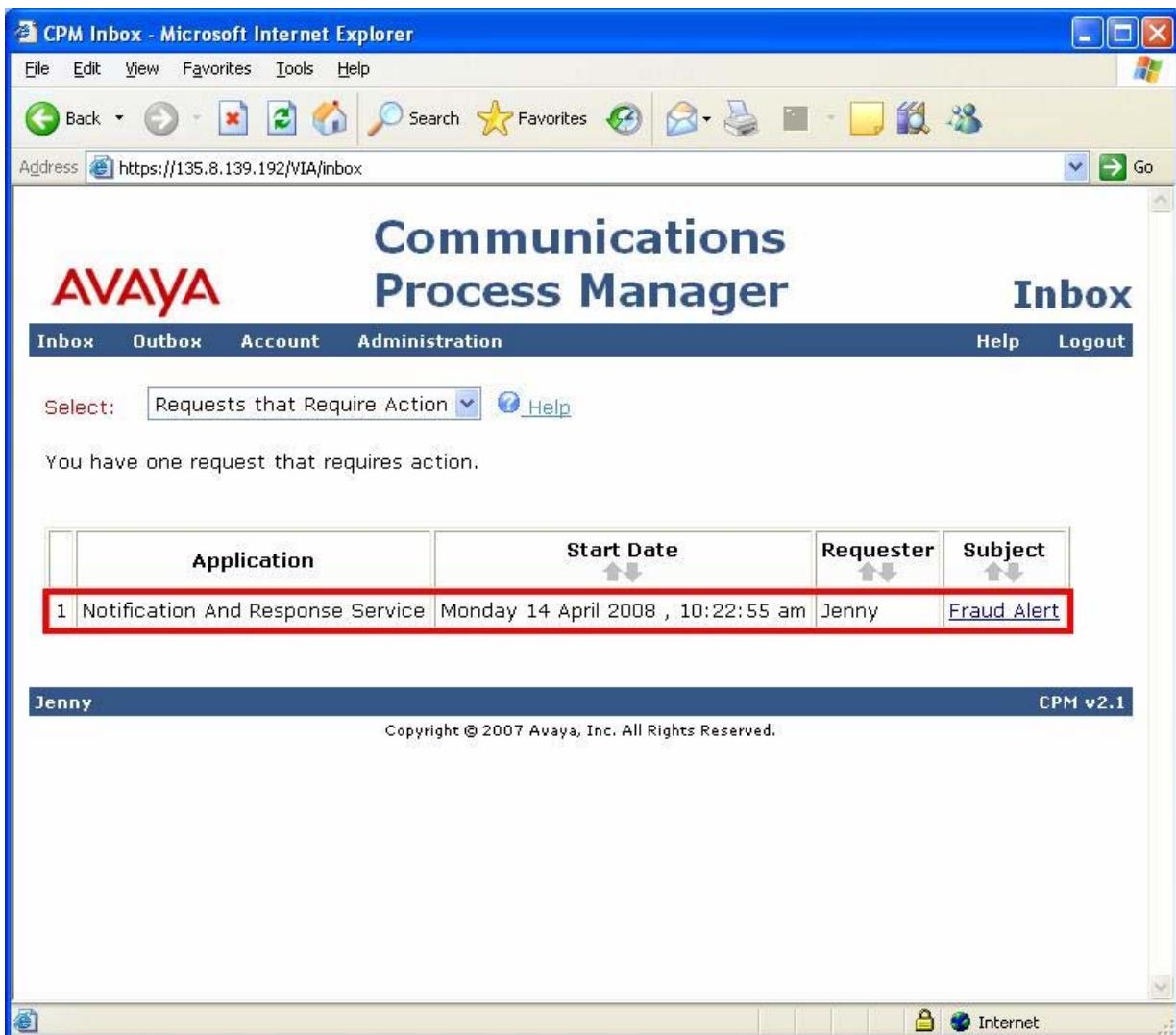
Step	Description
5.8	<p>Click Submit.</p>  <p>The customer will be contacted with the following message:</p> <p><b>Fraud Alert</b></p> <p>There has been a possible fraud on your credit card. There is a transaction of \$256.36 from The Apple Store. Do you recognize this transaction?</p> <p>1. yes 2. no</p> <p>&lt;&lt; Back <b>Submit</b></p> <p>Advanced Demo Configuration</p>

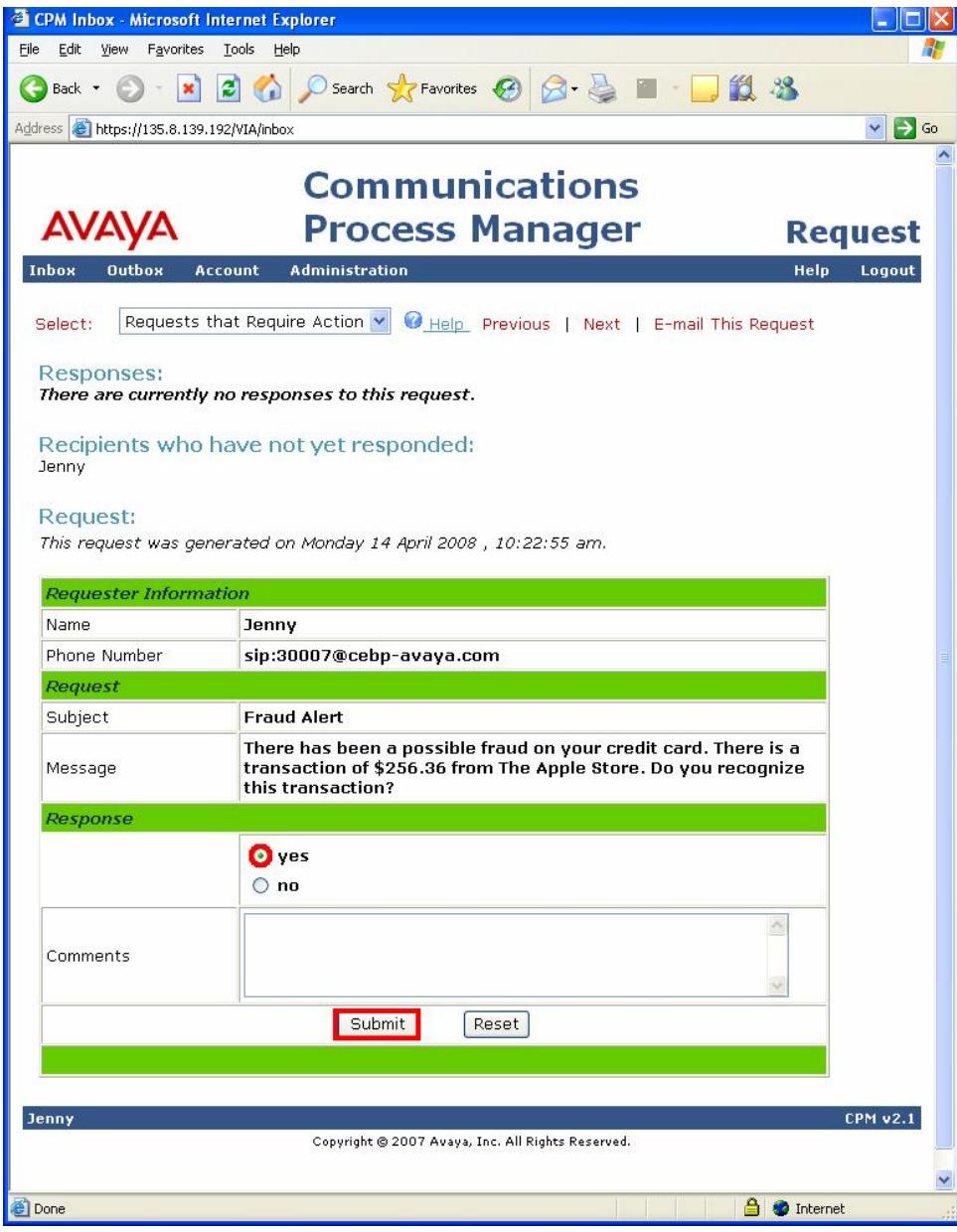
Step	Description														
5.9	<p>To view status of the transaction for the <b>Fraud Response Process</b>:</p> <ul style="list-style-type: none"> <li>• Click <b>History</b> under <b>My Tasks</b>.</li> <li>• Click the entry for <b>Fraud Response Process 212</b>.</li> </ul>  <p>The screenshot shows the Teamworks 6 Portal interface. On the left, there's a sidebar with 'My Tasks' (Inbox, History, Help Requests, Alerts) and 'My Projects' (Sample Project). The main area is titled 'History' and contains a table with the following data:</p> <table border="1"> <thead> <tr> <th>Instance Name</th> <th>Process Definition</th> <th>Instance Status</th> <th>Task Subject</th> <th>Task Priority</th> <th>Task Due Date</th> <th>Run</th> </tr> </thead> <tbody> <tr> <td>Fraud Response Process:212</td> <td>Fraud Response Process</td> <td>Active</td> <td>Task: Simulate Fraud system</td> <td>Normal</td> <td>04/16/08 12:00 PM</td> <td></td> </tr> </tbody> </table>	Instance Name	Process Definition	Instance Status	Task Subject	Task Priority	Task Due Date	Run	Fraud Response Process:212	Fraud Response Process	Active	Task: Simulate Fraud system	Normal	04/16/08 12:00 PM	
Instance Name	Process Definition	Instance Status	Task Subject	Task Priority	Task Due Date	Run									
Fraud Response Process:212	Fraud Response Process	Active	Task: Simulate Fraud system	Normal	04/16/08 12:00 PM										

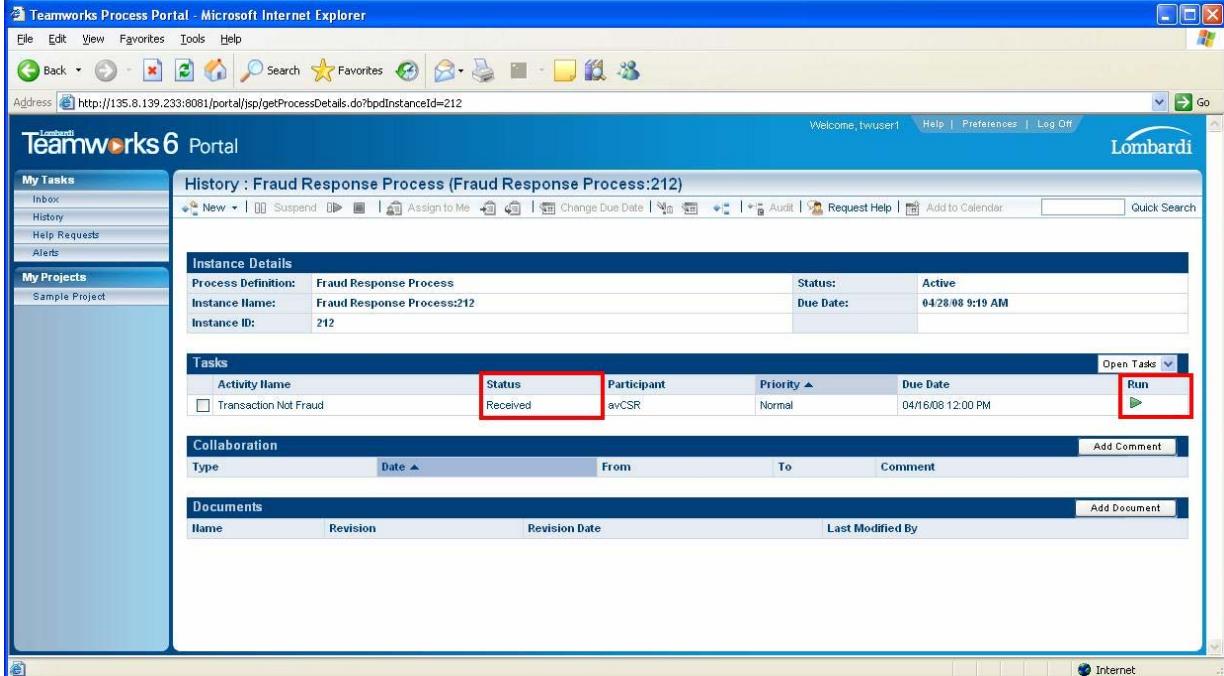
<b>Step</b>	<b>Description</b>
<b>5.10</b>	Verify the Status field returns <b>New</b> .

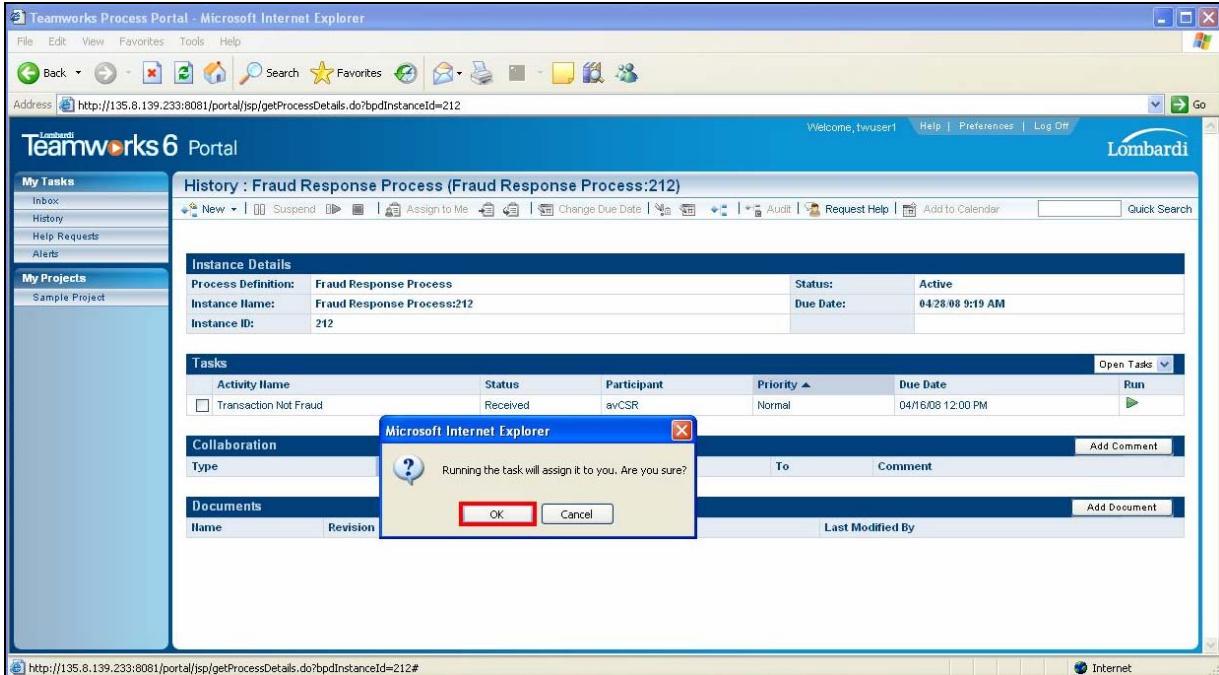


The screenshot shows the Lombardi Teamworks6 Portal interface. The main title bar reads "Teamworks6 Portal - Microsoft Internet Explorer". The address bar shows the URL "http://135.8.139.233:8081/portal/jsp/getProcessDetails.do?bpInstanceId=212". The page title is "History : Fraud Response Process (Fraud Response Process:212)". On the left, there's a sidebar with "My Tasks" (Inbox, History, Help Requests, Alerts) and "My Projects" (Sample Project). The main content area displays "Instance Details" for a Fraud Response Process instance named "Fraud Response Process:212" with ID 212. It shows fields for Process Definition, Instance Name, and Instance ID, all set to "Fraud Response Process". Below this is a "Tasks" section containing a table with one row: "Check Response" (Activity Name), "New" (Status, highlighted with a red box), "tw\_admin" (Participant), "Normal" (Priority), and "04/16/08 12:00 PM" (Due Date). There are also sections for "Collaboration" and "Documents". At the bottom right of the portal window, there's a "Done" button and a "Internet" icon.

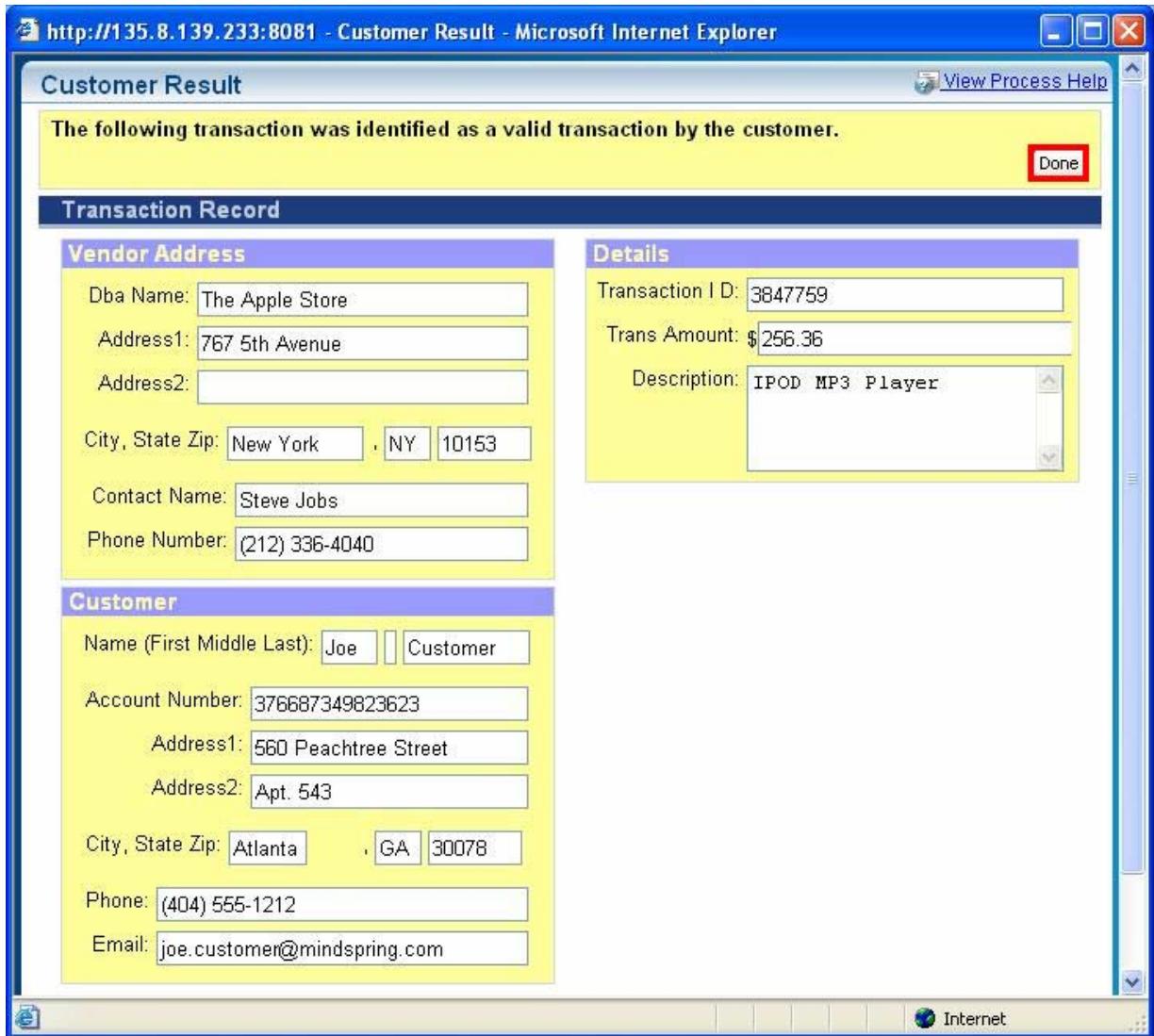
<b>Step</b>	<b>Description</b>
<b>5.11</b>	<p>Verify the following:</p> <ul style="list-style-type: none"> <li>The telephone associated with the user account on Avaya CPM (see <b>Step 3.1.1</b>) rings.</li> <li>Log in to the user account on Avaya CPM (see <b>Step 3.1.1</b>) and verify the <b>Inbox</b> screen reflects the transaction for the <b>Fraud Response Process</b> submitted in <b>Step 5.8</b>.           <ul style="list-style-type: none"> <li>Click <b>Fraud Alert</b> in the <b>Subject</b> column.</li> </ul> </li> </ul> 

Step	Description
5.12	<p>From the <b>Request</b> screen, respond to the <b>Fraud Alert</b> and click <b>Submit</b>.</p> <p><i>Note: For these Application Notes, the response was provided via the web interface. The response could also have been provided via the telephone.</i></p>  <p>The screenshot displays the CPM Request interface. At the top, the title bar reads 'CPM Inbox - Microsoft Internet Explorer'. Below it is a toolbar with standard browser icons. The main content area has a blue header with the Avaya logo and 'Communications Process Manager' text. A 'Request' tab is visible on the right. The main body contains sections for 'Responses' (empty), 'Recipients who have not yet responded' (Jenny), and 'Request' (subject: Fraud Alert, message: 'There has been a possible fraud on your credit card. There is a transaction of \$256.36 from The Apple Store. Do you recognize this transaction?'). A 'Response' section includes a 'yes' radio button (selected) and a 'no' radio button. At the bottom, there are 'Submit' and 'Reset' buttons, with 'Submit' being highlighted with a red box. The status bar at the bottom shows 'Jenny' and 'CPM v2.1'.</p>

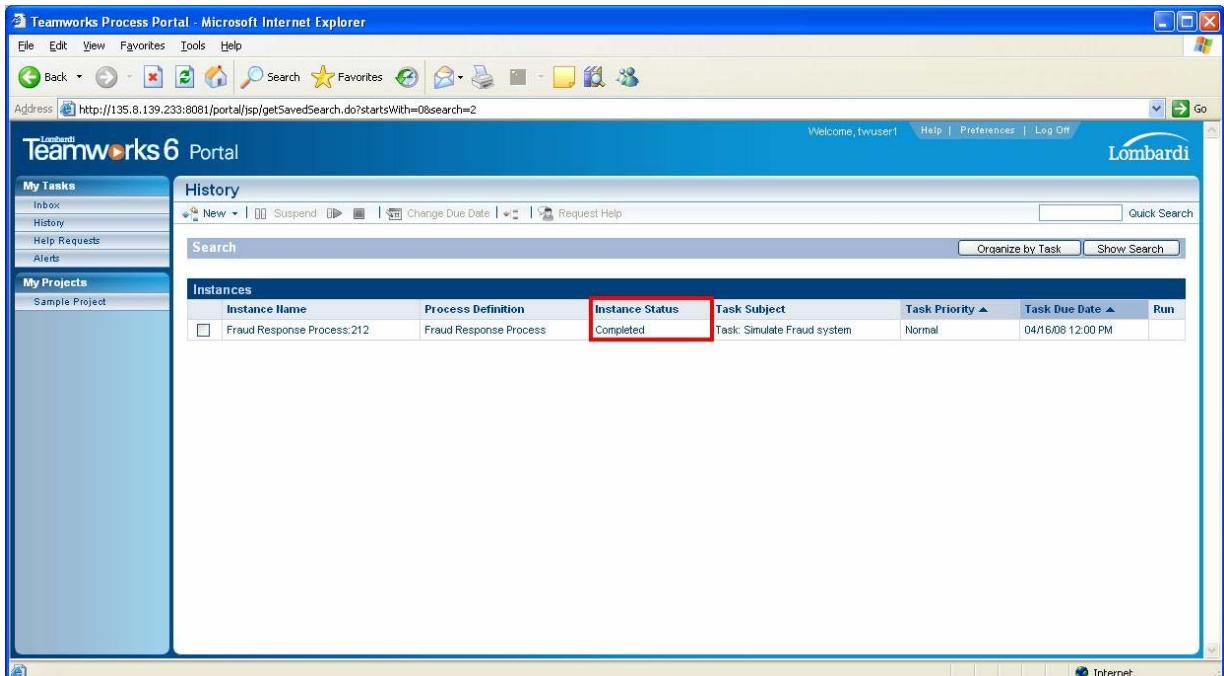
Step	Description
5.13	<p>Following the response from the user on Avaya CPM, verify the <b>Status</b> field is updated to <b>Received</b>. To complete this transaction, click  in the <b>Run</b> column.</p> 

Step	Description
5.14	<p>From the pop-up window, click <b>OK</b>.</p>  <p>The screenshot shows a Microsoft Internet Explorer window displaying the Teamworks6 Portal. The main page shows a history of a Fraud Response Process instance (Fraud Response Process:212). A task titled 'Transaction Not Fraud' is listed in the 'Tasks' section. A modal dialog box titled 'Microsoft Internet Explorer' is overlaid on the page, asking 'Running the task will assign it to you. Are you sure?'. The 'OK' button is highlighted with a red box.</p>

<b>Step</b>	<b>Description</b>
<b>5.15</b>	To confirm the results of this transaction, click <b>Done</b> .



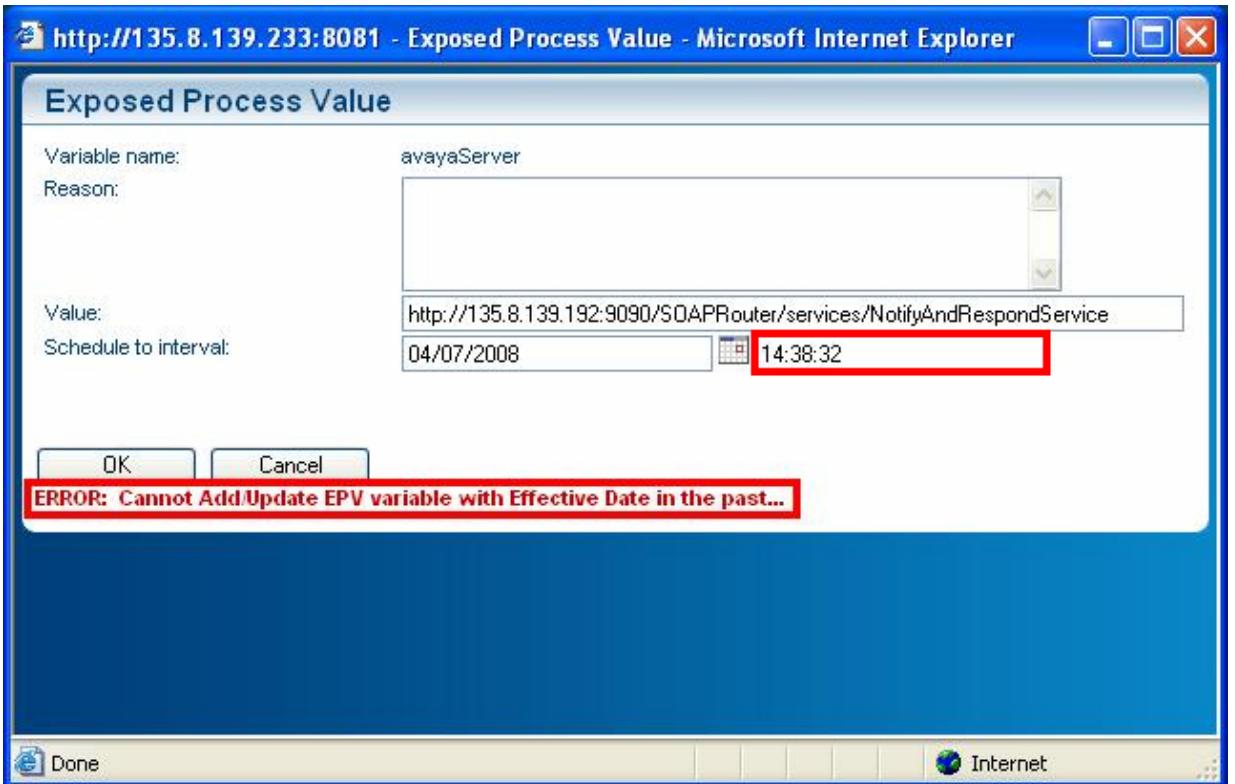
<b>Step</b>	<b>Description</b>
<b>5.16</b>	Verify the <b>Status</b> field is updated to <b>Completed</b> .

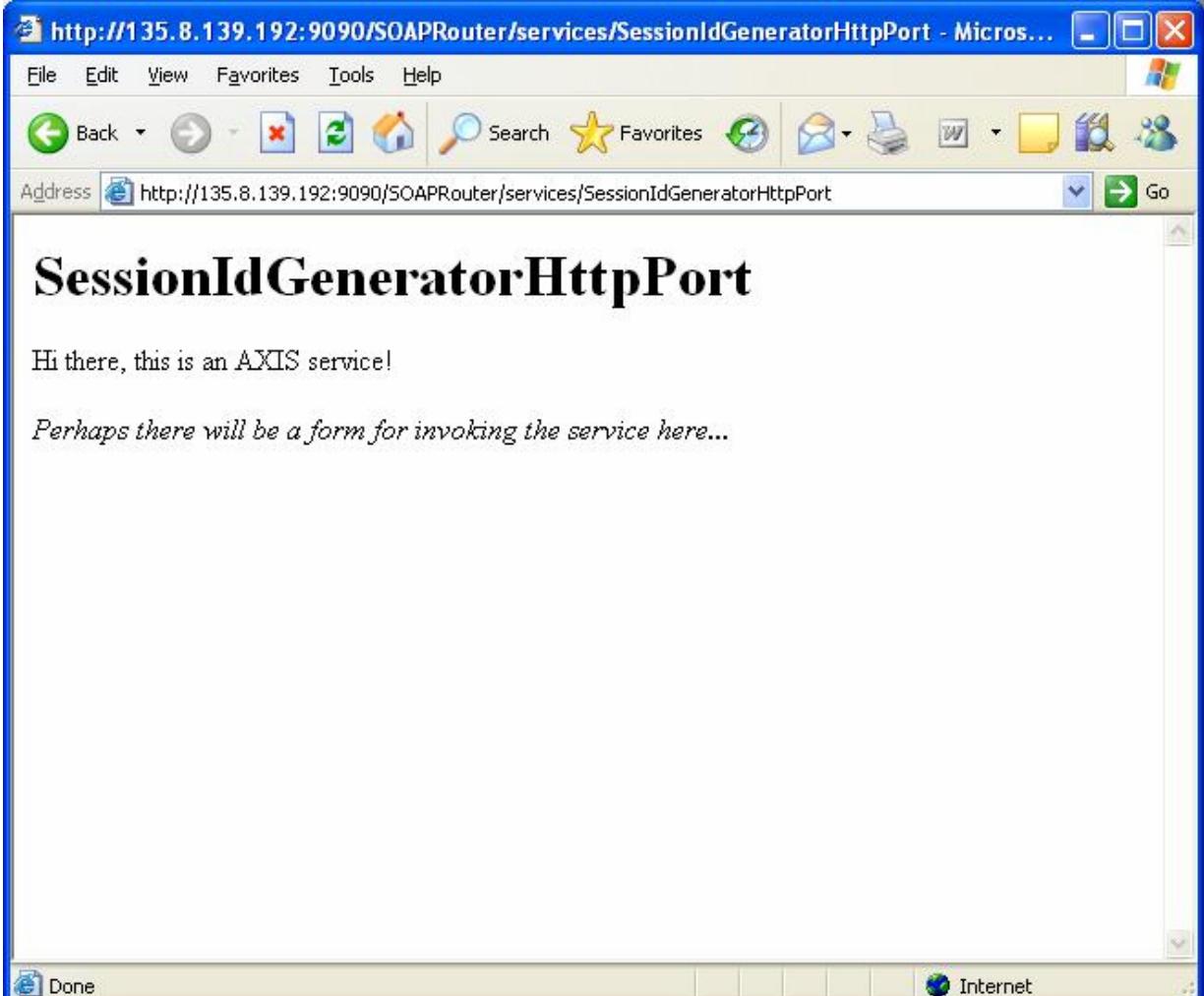


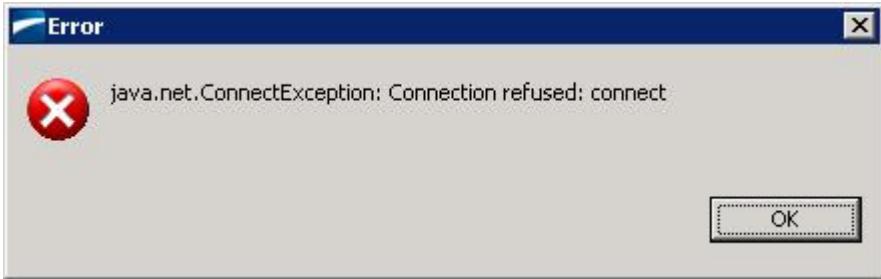
The screenshot shows a Microsoft Internet Explorer window displaying the Teamworks Process Portal. The URL in the address bar is <http://135.8.139.233:8081/portal/jsp/getSavedSearch.do?startsWith=0&search=2>. The page title is "Teamworks Process Portal - Microsoft Internet Explorer". The main content area is titled "History" and contains a table titled "Instances". The table has columns: Instance Name, Process Definition, Instance Status, Task Subject, Task Priority, Task Due Date, and Run. The first row shows "Fraud Response Process:212" under "Instance Name" and "Fraud Response Process" under "Process Definition". The "Instance Status" cell is highlighted with a red box and contains the value "Completed". The "Task Subject" cell contains "Task: Simulate Fraud system", "Task Priority" is "Normal", and "Task Due Date" is "04/16/08 12:00 PM".

## 6. Troubleshooting

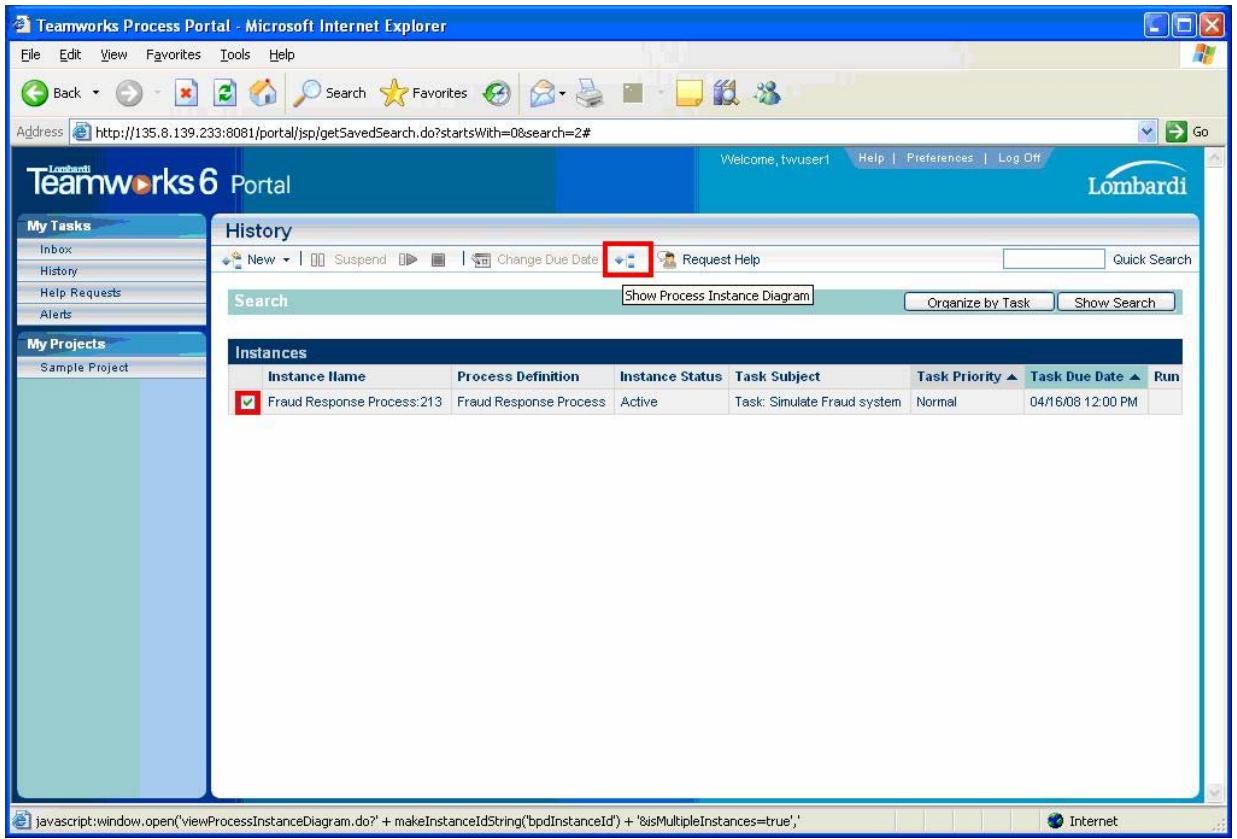
The following steps were used to troubleshoot the administrative steps presented in these Application Notes and are applicable for similar configurations in the field.

Step	Description
6.1	This error was due to attempting to schedule an update to an EPV at a time less than or equal to the current time. Correct this error by entering a time greater than the current time.   A screenshot of a Microsoft Internet Explorer window titled "Exposed Process Value". The window contains fields for "Variable name" (avayaServer), "Reason" (empty), "Value" (http://135.8.139.192:9090/SOAPRouter/services/NotifyAndRespondService), and "Schedule to interval" (04/07/2008 14:38:32). A red box highlights the date and time entry. A red error message at the bottom reads "ERROR: Cannot Add/Update EPV variable with Effective Date in the past...".  The browser status bar shows "Done" and "Internet".

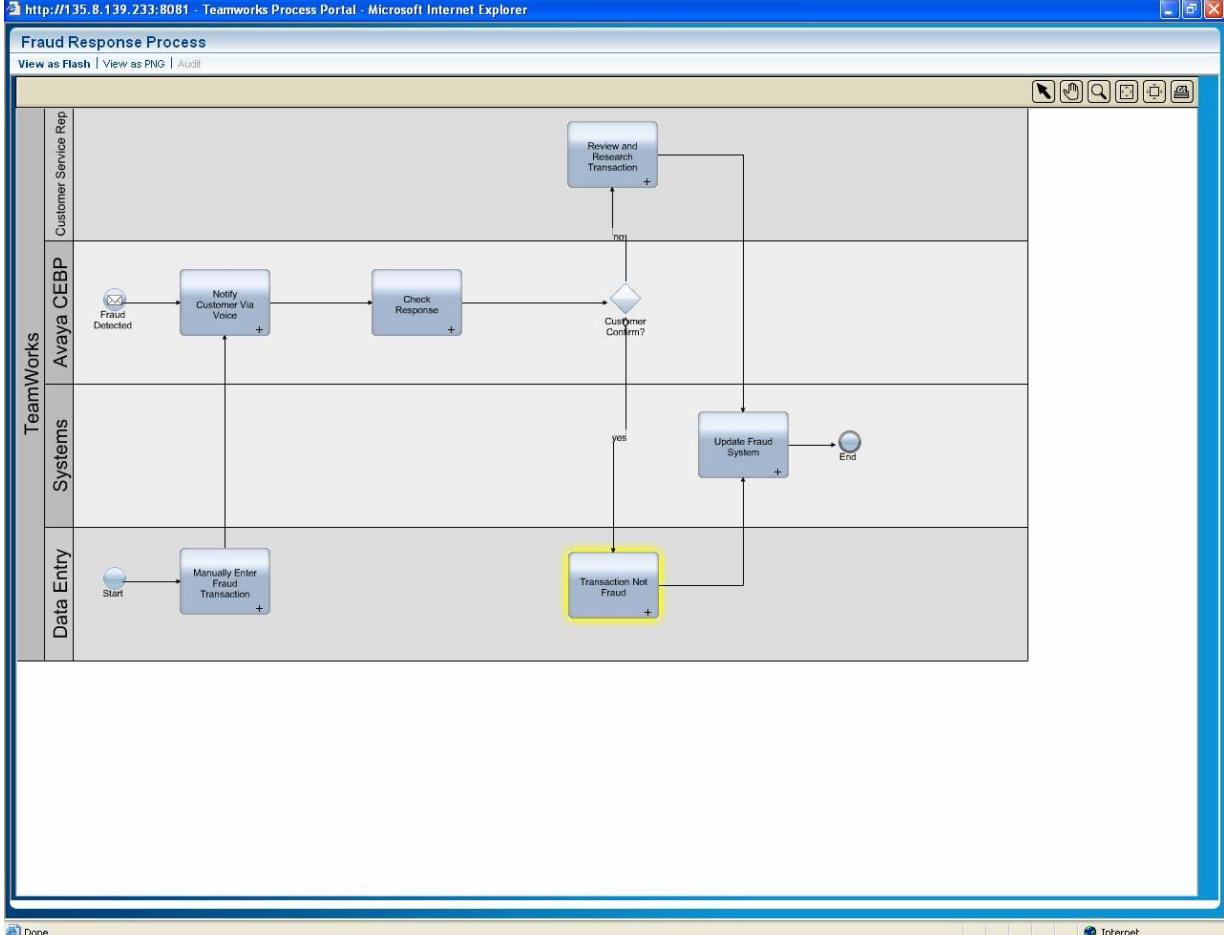
Step	Description
6.2	<p>If the connectivity test between Avaya CPM and Lombardi Teamworks fails in <b>Step 5.2</b>, verify port 9090 is open on Avaya CPM as follows:</p> <ul style="list-style-type: none"> <li>• Enter <b>http://&lt;Avaya CPM IP Address or FQDN&gt;:9090/SOAPRouter/services/SessionIdGeneratorHttpPort</b> into a web browser's URL bar.</li> <li>• Verify the response as displayed below.</li> </ul> 

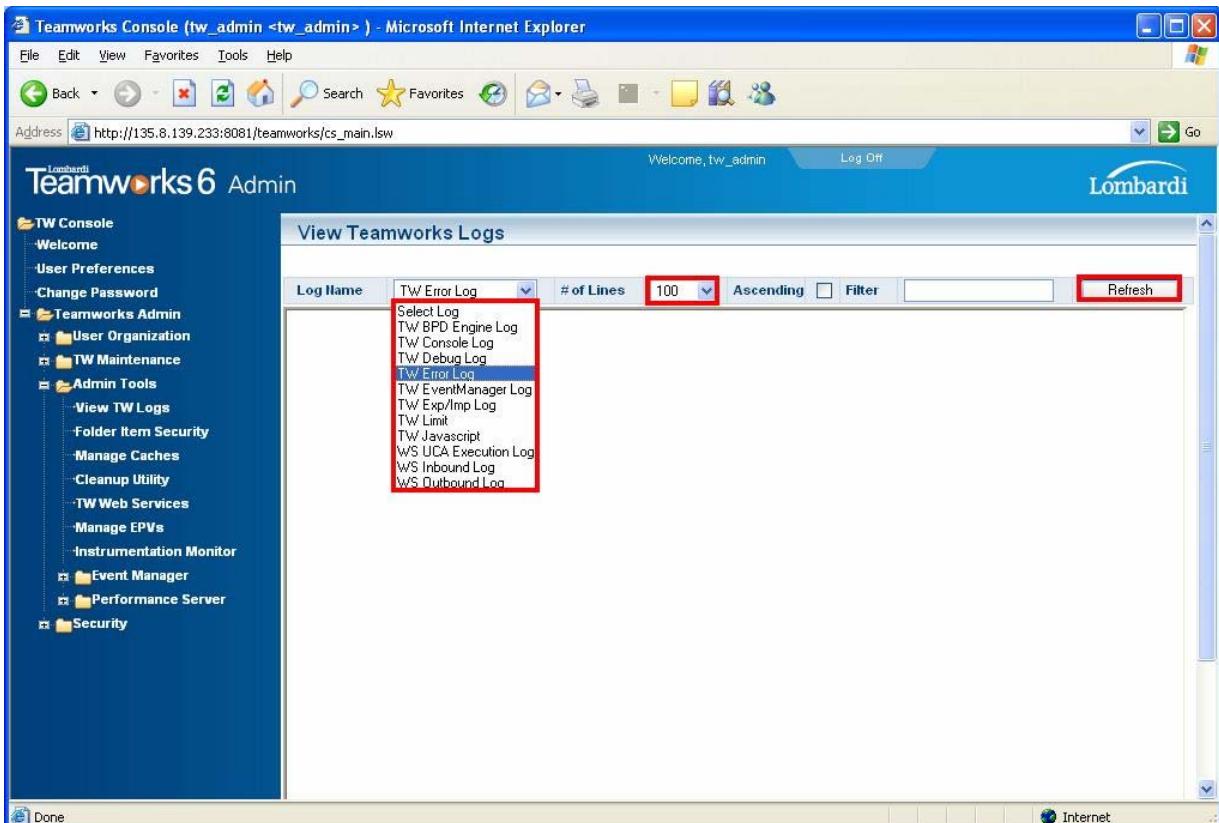
Step	Description
6.3	<p>If the following error message is returned from the connectivity test between Avaya CPM and Lombardi Teamworks in <b>Step 5.1</b>, verify the <b>Endpoint Address URL</b> entry corresponds to the IP address or FQDN of Avaya CPM (see configuration in <b>Step 4.3.5</b>).</p> 

Step	Description
6.4	<p>Verify the <b>Process Instance Diagram</b> for the corresponding <b>Fraud Response Process</b> as follows:</p> <ul style="list-style-type: none"> <li>• Verify that the process and performance servers are started (see <b>Appendix C</b>).</li> <li>• Open a standard web browser and enter <b>http://&lt;Lombardi Teamworks IP Address or FQDN&gt;:8081/portal</b> into the web browser's URL bar.</li> <li>• Log in to the Process Server Console with user privileges, e.g., select a user account created in <b>Steps 4.4.9 - 4.4.10</b>.</li> <li>• Click <b>History</b> under <b>My Tasks</b>.</li> <li>• Select an entry for a <b>Fraud Response Process &lt;Number&gt;</b>.</li> <li>• Click .</li> </ul>



Step	Description
6.5	<p>From the pop-up window, verify the state of the <b>Fraud Response Process</b>. For this transaction, the state is <b>Check Response</b>, which corresponds to a <b>Status</b> field returning <b>New</b> (see Step 5.10).</p>

Step	Description
6.6	<p>Following input from a user on Avaya CPM, a <b>Fraud Response Process</b> may have the state <b>Transaction Not Fraud</b>. This corresponds to a <b>Status</b> field returning <b>Received</b> (see Step 5.13).</p>  <pre> graph TD     Start((Start)) --&gt; ManuallyEnter[Manually Enter Fraud Transaction]     ManuallyEnter --&gt; Notify[Notify Customer Via Voice]     Notify --&gt; Check[Check Response]     Check --&gt; Decision{Customer Confirm?}     Decision -- no --&gt; Review[Review and Research Transaction]     Review --&gt; Check     Decision -- yes --&gt; Update[Update Fraud System]     Update --&gt; End(((End)))     subgraph FraudResponse [Fraud Response Process]         direction LR         Start --&gt; ManuallyEnter         ManuallyEnter --&gt; Notify         Notify --&gt; Check         Check --&gt; Decision         Decision -- no --&gt; Review         Review --&gt; Check         Decision -- yes --&gt; Update         Update --&gt; End     end     </pre>

Step	Description
6.7	<p>View log files on Lombardi Teamworks:</p> <ul style="list-style-type: none"> <li>Verify that the process and performance servers are started (see <b>Appendix C</b>).</li> <li>Open a standard web browser and enter <b>http://&lt;Lombardi Teamworks IP Address or FQDN&gt;:8081/teamworks</b> into the web browser's URL bar.</li> <li>Log in to the Process Server Console with administrative privileges.</li> <li>From the Process Server Console, select <b>TW Console → Teamworks Admin → Admin Tools → View TW Logs</b>.</li> <li>Select the appropriate log from the drop-down list for the <b>Log Name</b> field.</li> <li>Select the appropriate number of lines to view from the drop-down list for the <b># of Lines</b> field.</li> <li>Click <b>Refresh</b>.</li> </ul> 

## **7. Conclusion**

These Application Notes present a solution comprised of Lombardi Teamworks with Avaya Communications Process Manager (CPM) to provide a solution for Avaya Communications Enabled Business Processes (CEBP). For these Application Notes, a sample Avaya CEBP solution for processing fraudulent credit card transactions is presented.

## **8. Additional References**

Avaya references are available at <http://support.avaya.com>.

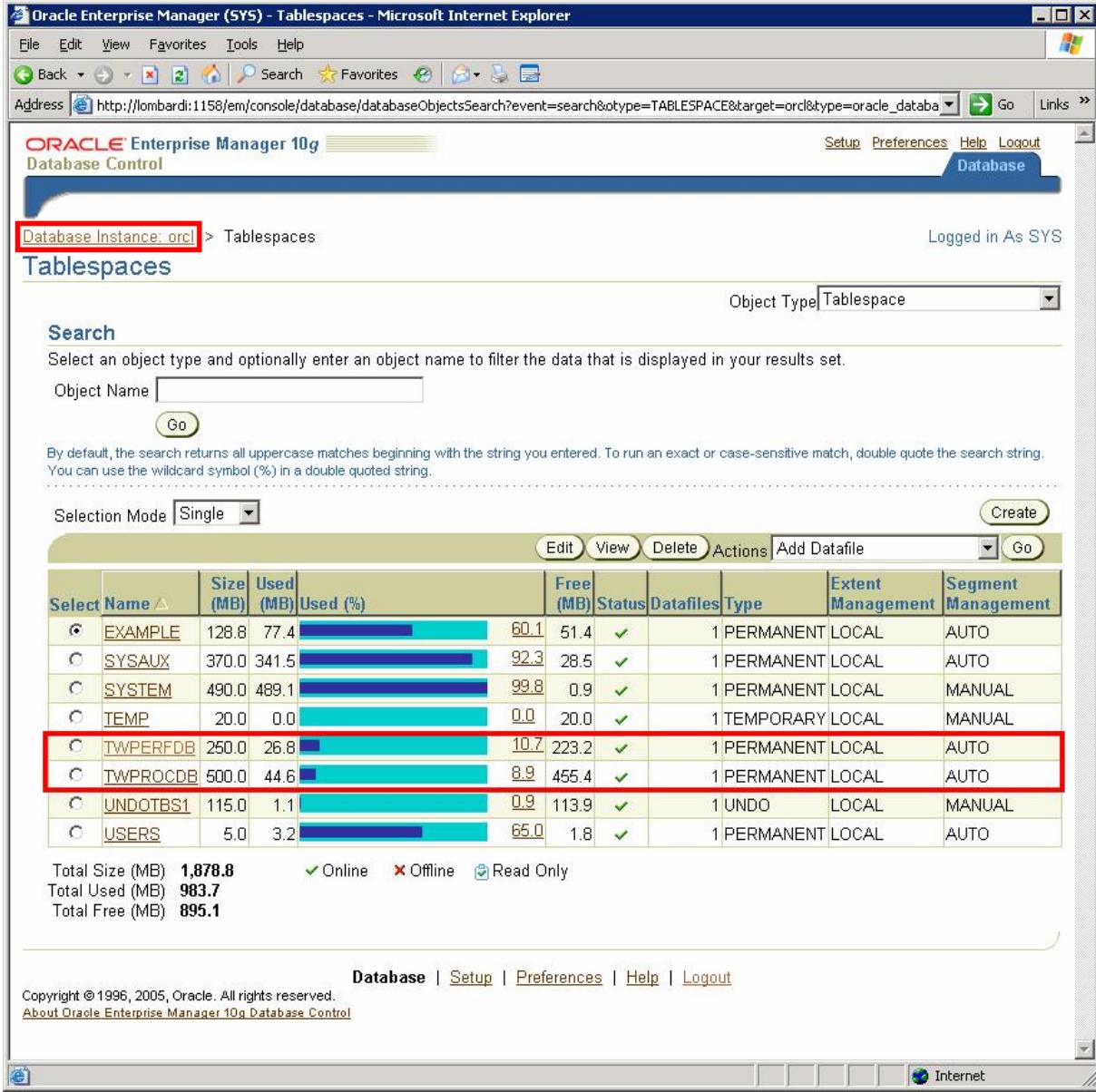
- [1] Communications Process Manager Installation and Configuration Guide, Issue 3, Doc ID 04-601158, December 2007.
- [2] Communications Process Manager Administration and Maintenance Guide, Issue 5, Doc ID 04-601159, December 2007.

Lombardi Teamworks references are available at <http://support.lombardi.com>

- [3] Teamworks 6 Enterprise SP1 Express Installation and Configuration Guide, September 28, 2007.
- [4] Teamworks 6 Enterprise SP1 Installation and Configuration Guide for JBoss with Windows, September 28, 2007.
- [5] Teamworks 6 Enterprise SP1 Administration Guide, September 28, 2007.

## 9. Appendix

### Appendix A - Oracle Enterprise Manager 10g Configuration

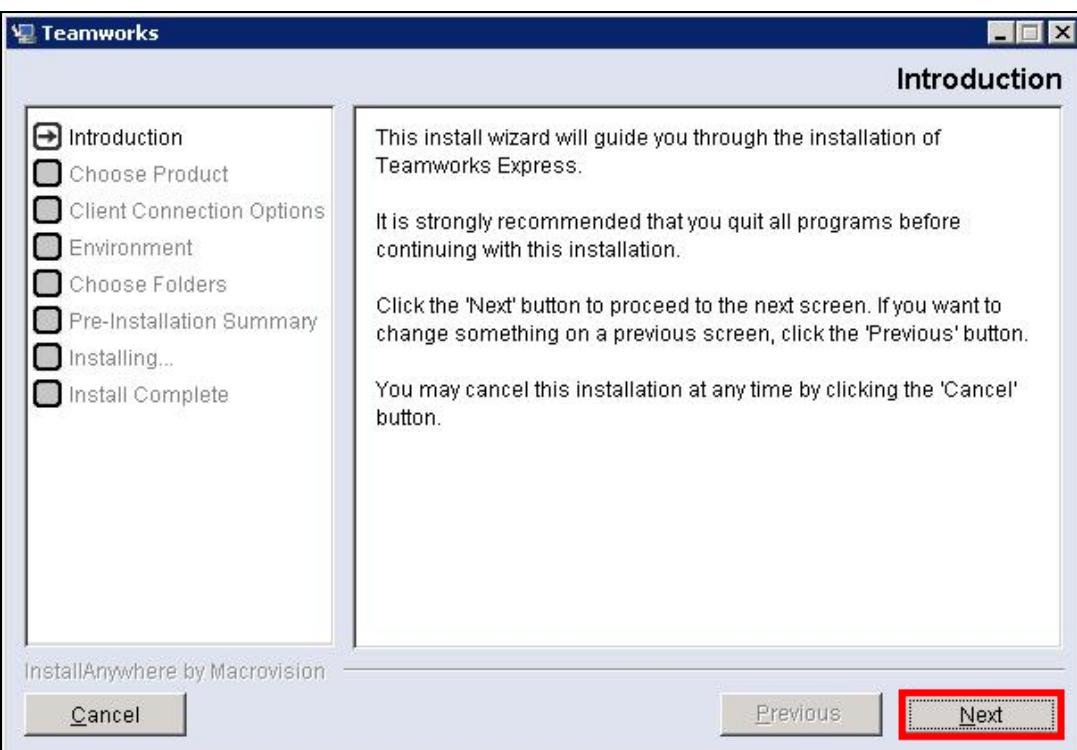
Step	Description																																																																																											
A1	<p>For this sample configuration, it is assumed that the Oracle Enterprise 10g Release 2 software has been installed and the <b>Tablespaces</b> for the Lombardi Teamworks Process and Performance servers have been defined.</p>  <table border="1"> <thead> <tr> <th>Select</th> <th>Name</th> <th>Size (MB)</th> <th>Used (MB)</th> <th>Used (%)</th> <th>Free (MB)</th> <th>Status</th> <th>Datafiles</th> <th>Type</th> <th>Extent Management</th> <th>Segment Management</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="radio"/></td> <td>EXAMPLE</td> <td>128.8</td> <td>77.4</td> <td>60.1</td> <td>51.4</td> <td>✓</td> <td>1</td> <td>PERMANENT LOCAL</td> <td>AUTO</td> </tr> <tr> <td><input type="radio"/></td> <td>SYSAUX</td> <td>370.0</td> <td>341.5</td> <td>92.3</td> <td>28.5</td> <td>✓</td> <td>1</td> <td>PERMANENT LOCAL</td> <td>AUTO</td> </tr> <tr> <td><input type="radio"/></td> <td>SYSTEM</td> <td>490.0</td> <td>489.1</td> <td>99.8</td> <td>0.9</td> <td>✓</td> <td>1</td> <td>PERMANENT LOCAL</td> <td>MANUAL</td> </tr> <tr> <td><input type="radio"/></td> <td>TEMP</td> <td>20.0</td> <td>0.0</td> <td>0.0</td> <td>20.0</td> <td>✓</td> <td>1</td> <td>TEMPORARY LOCAL</td> <td>MANUAL</td> </tr> <tr> <td><input type="radio"/></td> <td>TWPERFDB</td> <td>250.0</td> <td>26.8</td> <td>10.7</td> <td>223.2</td> <td>✓</td> <td>1</td> <td>PERMANENT LOCAL</td> <td>AUTO</td> </tr> <tr> <td><input type="radio"/></td> <td>TWPROMCDB</td> <td>500.0</td> <td>44.6</td> <td>8.9</td> <td>455.4</td> <td>✓</td> <td>1</td> <td>PERMANENT LOCAL</td> <td>AUTO</td> </tr> <tr> <td><input type="radio"/></td> <td>UNDOTBS1</td> <td>115.0</td> <td>1.1</td> <td>0.9</td> <td>113.9</td> <td>✓</td> <td>1</td> <td>UNDO LOCAL</td> <td>MANUAL</td> </tr> <tr> <td><input type="radio"/></td> <td>USERS</td> <td>5.0</td> <td>3.2</td> <td>65.0</td> <td>1.8</td> <td>✓</td> <td>1</td> <td>PERMANENT LOCAL</td> <td>AUTO</td> </tr> </tbody> </table> <p>Total Size (MB) <b>1,878.8</b>      ✓ Online    ✘ Offline    📁 Read Only    Total Used (MB) <b>983.7</b>    Total Free (MB) <b>895.1</b></p>	Select	Name	Size (MB)	Used (MB)	Used (%)	Free (MB)	Status	Datafiles	Type	Extent Management	Segment Management	<input checked="" type="radio"/>	EXAMPLE	128.8	77.4	60.1	51.4	✓	1	PERMANENT LOCAL	AUTO	<input type="radio"/>	SYSAUX	370.0	341.5	92.3	28.5	✓	1	PERMANENT LOCAL	AUTO	<input type="radio"/>	SYSTEM	490.0	489.1	99.8	0.9	✓	1	PERMANENT LOCAL	MANUAL	<input type="radio"/>	TEMP	20.0	0.0	0.0	20.0	✓	1	TEMPORARY LOCAL	MANUAL	<input type="radio"/>	TWPERFDB	250.0	26.8	10.7	223.2	✓	1	PERMANENT LOCAL	AUTO	<input type="radio"/>	TWPROMCDB	500.0	44.6	8.9	455.4	✓	1	PERMANENT LOCAL	AUTO	<input type="radio"/>	UNDOTBS1	115.0	1.1	0.9	113.9	✓	1	UNDO LOCAL	MANUAL	<input type="radio"/>	USERS	5.0	3.2	65.0	1.8	✓	1	PERMANENT LOCAL	AUTO
Select	Name	Size (MB)	Used (MB)	Used (%)	Free (MB)	Status	Datafiles	Type	Extent Management	Segment Management																																																																																		
<input checked="" type="radio"/>	EXAMPLE	128.8	77.4	60.1	51.4	✓	1	PERMANENT LOCAL	AUTO																																																																																			
<input type="radio"/>	SYSAUX	370.0	341.5	92.3	28.5	✓	1	PERMANENT LOCAL	AUTO																																																																																			
<input type="radio"/>	SYSTEM	490.0	489.1	99.8	0.9	✓	1	PERMANENT LOCAL	MANUAL																																																																																			
<input type="radio"/>	TEMP	20.0	0.0	0.0	20.0	✓	1	TEMPORARY LOCAL	MANUAL																																																																																			
<input type="radio"/>	TWPERFDB	250.0	26.8	10.7	223.2	✓	1	PERMANENT LOCAL	AUTO																																																																																			
<input type="radio"/>	TWPROMCDB	500.0	44.6	8.9	455.4	✓	1	PERMANENT LOCAL	AUTO																																																																																			
<input type="radio"/>	UNDOTBS1	115.0	1.1	0.9	113.9	✓	1	UNDO LOCAL	MANUAL																																																																																			
<input type="radio"/>	USERS	5.0	3.2	65.0	1.8	✓	1	PERMANENT LOCAL	AUTO																																																																																			

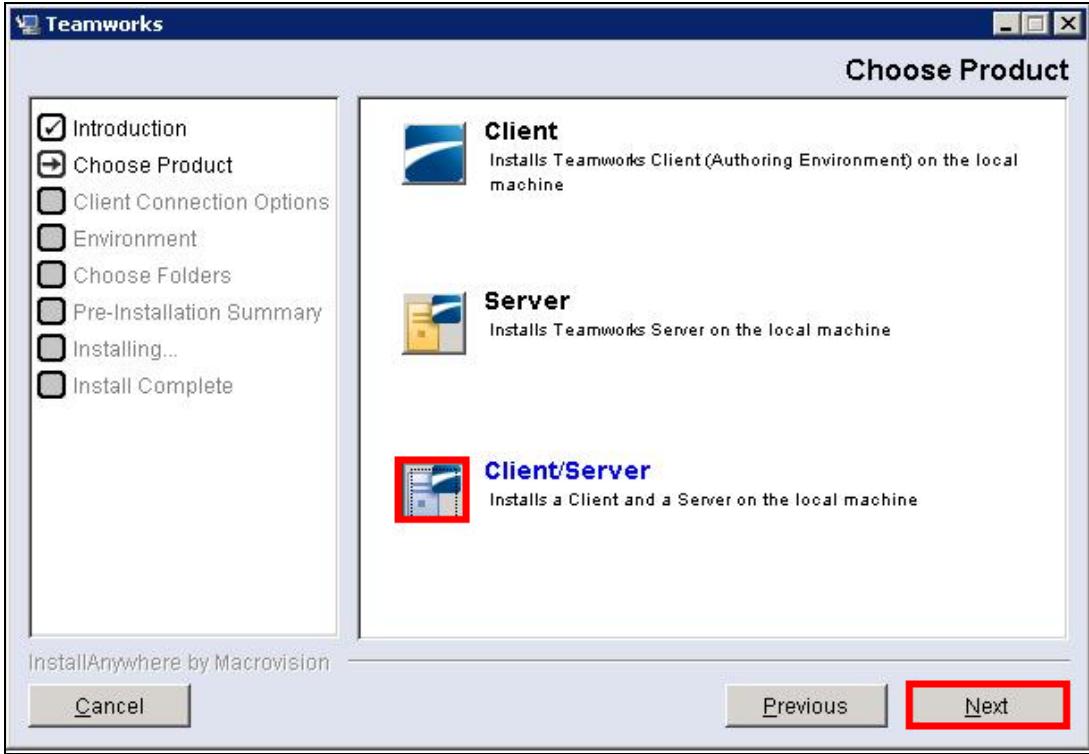
## Appendix B - Lombardi Teamworks Installation

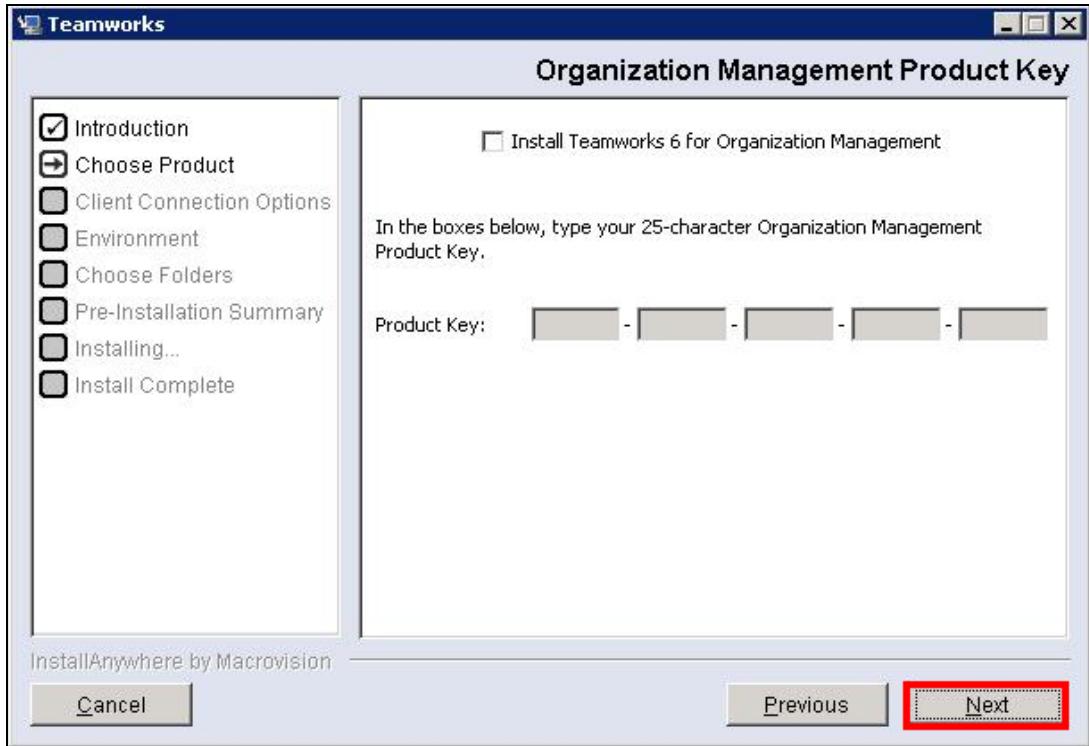
This section describes the steps for installing Lombardi Teamworks on a Windows based PC. The configuration described in this section assumes the software requirements to support Lombardi Teamworks are satisfied. Refer to [3] and [4] for additional information regarding installation requirements for Lombardi Teamworks.

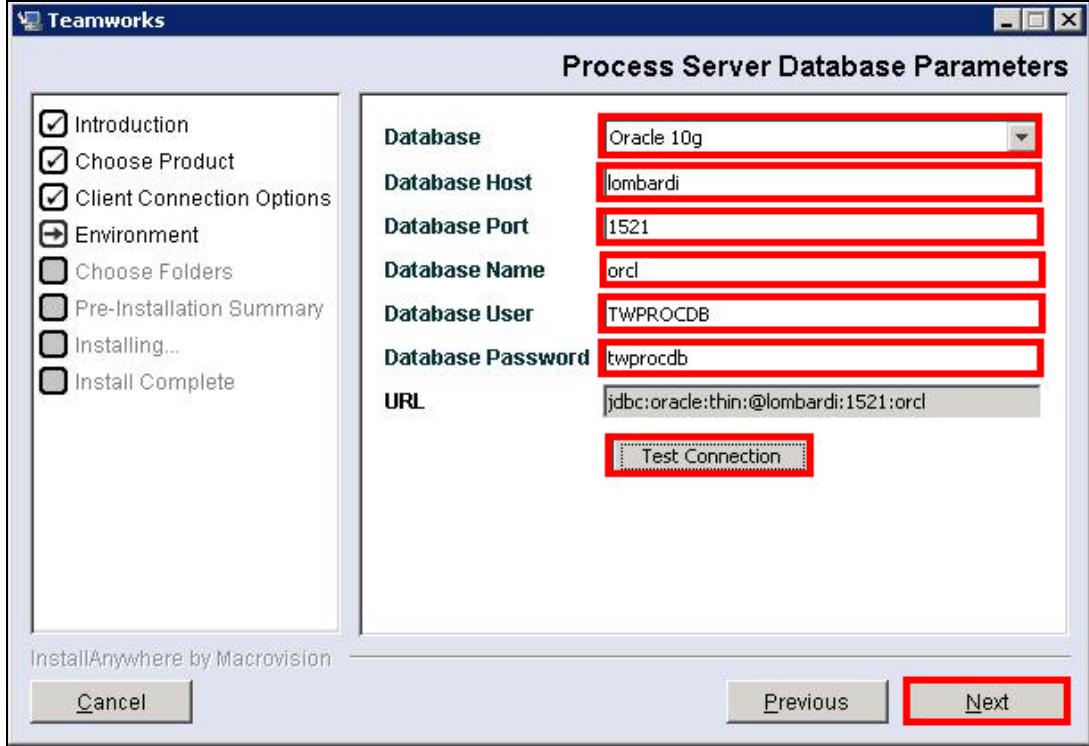
### B1 - Lombardi Teamworks Enterprise Express Installer

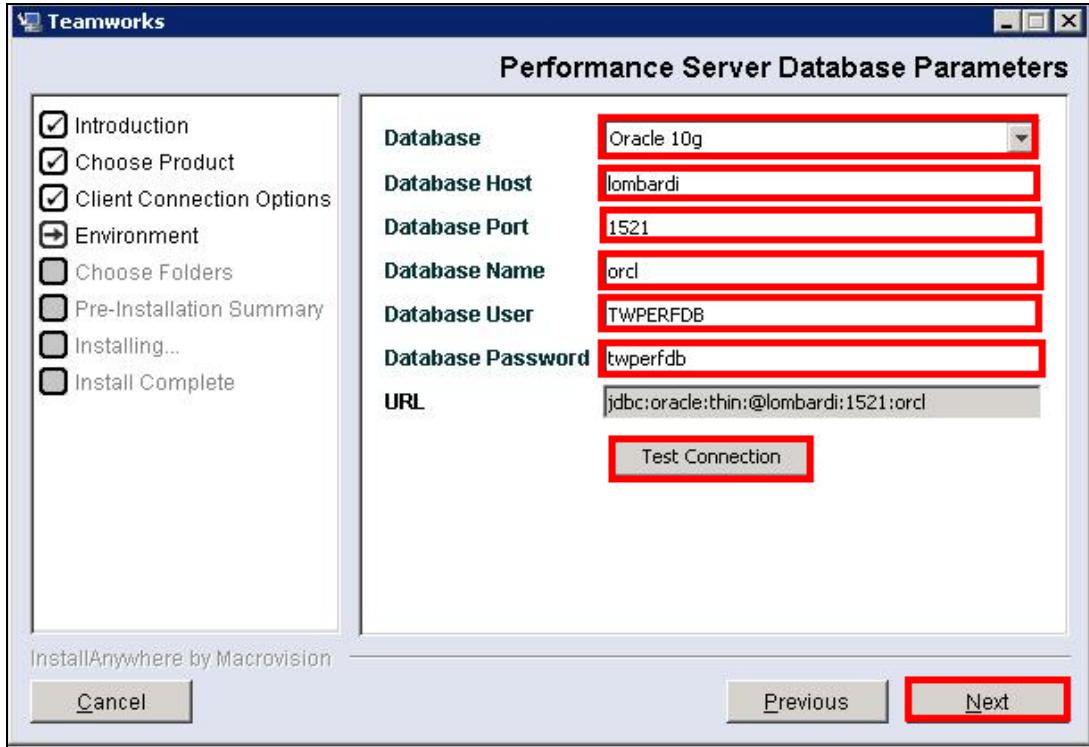
The Lombardi Teamworks Enterprise Express Installer enables the Lombardi Teamworks Process Server, Performance Server, and Authoring Environment to install on a single machine (Host or Local PC). Optionally, the Authoring Environment and Lombardi Teamworks servers (Process and Performance) can be installed on separate machines. Lombardi Software does not support running Lombardi Teamworks in a production environment that was installed with Lombardi Teamworks Enterprise Express Installer. Lombardi Teamworks Enterprise Installer must be used to set up Lombardi Teamworks in a production environment.

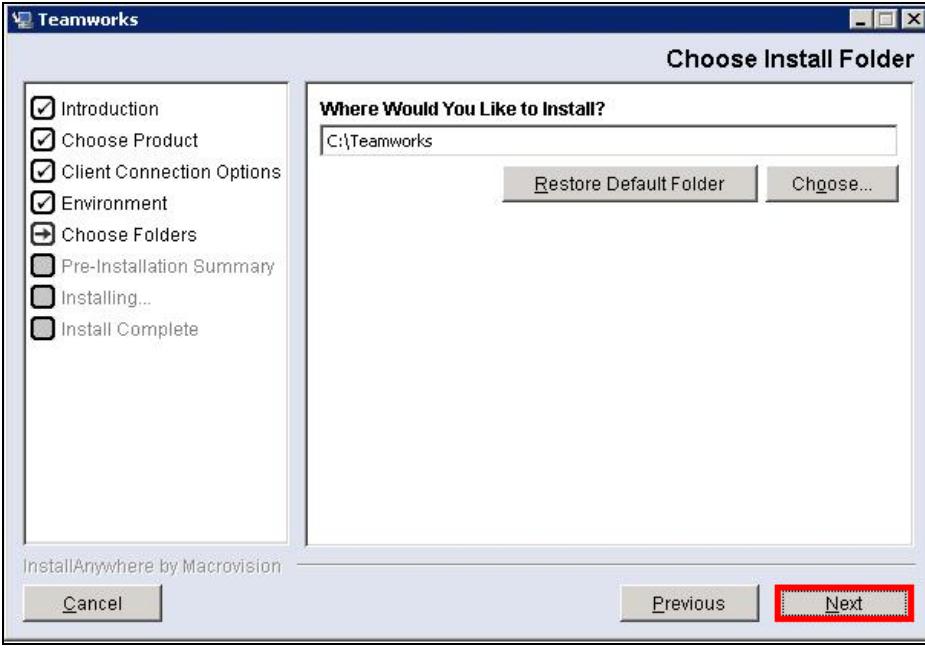
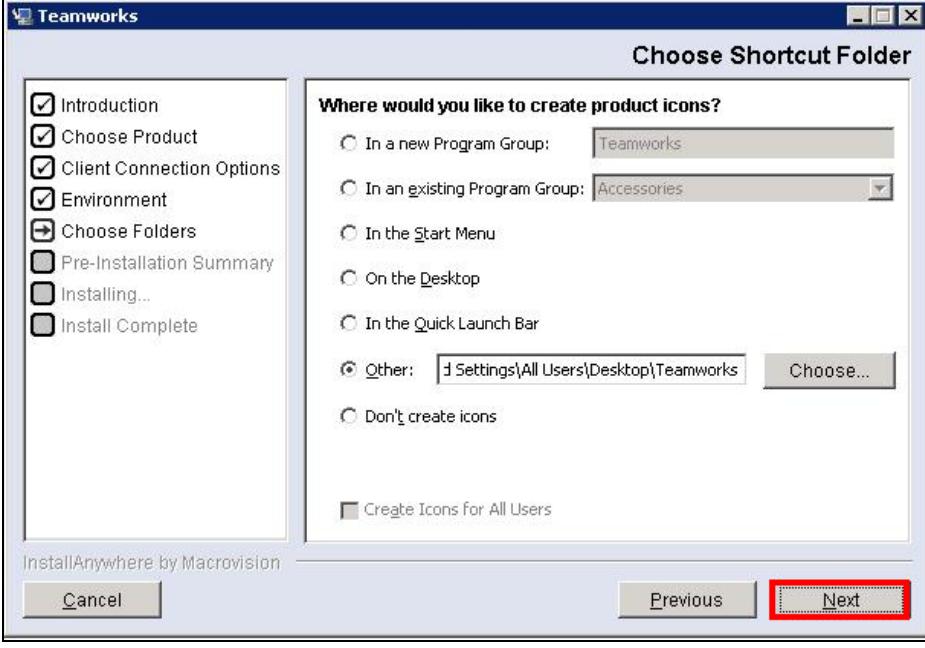
Step	Description
B1.1	<p>Start the Lombardi Teamworks Enterprise Express Installer as follows:</p> <ul style="list-style-type: none"><li>• <i>[Not Shown] Double click on the <b>Teamworks-6-Enterprise-SP1-Express-Installer.exe</b> file.</i></li><li>• Click <b>Next</b>.</li></ul> 

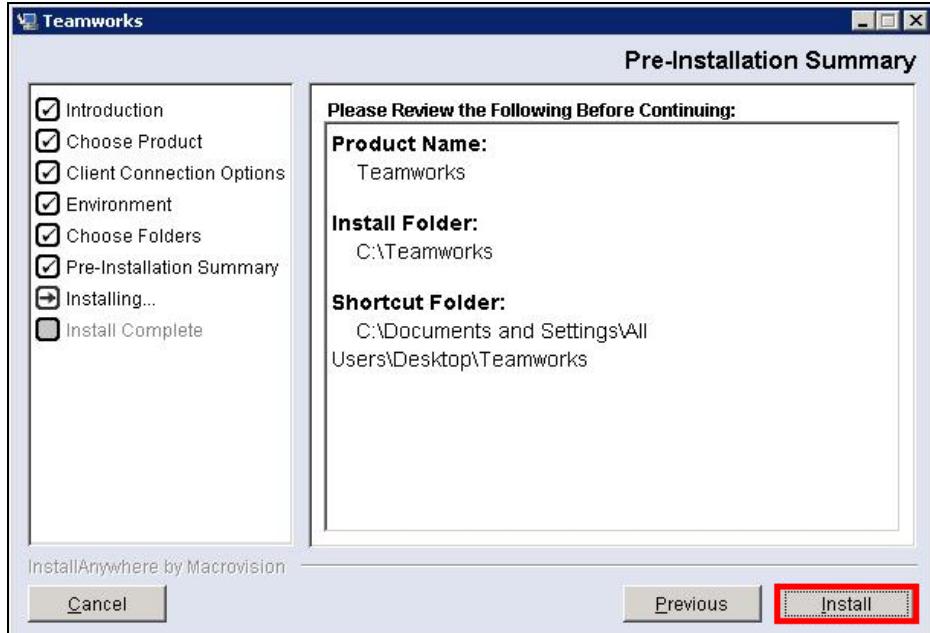
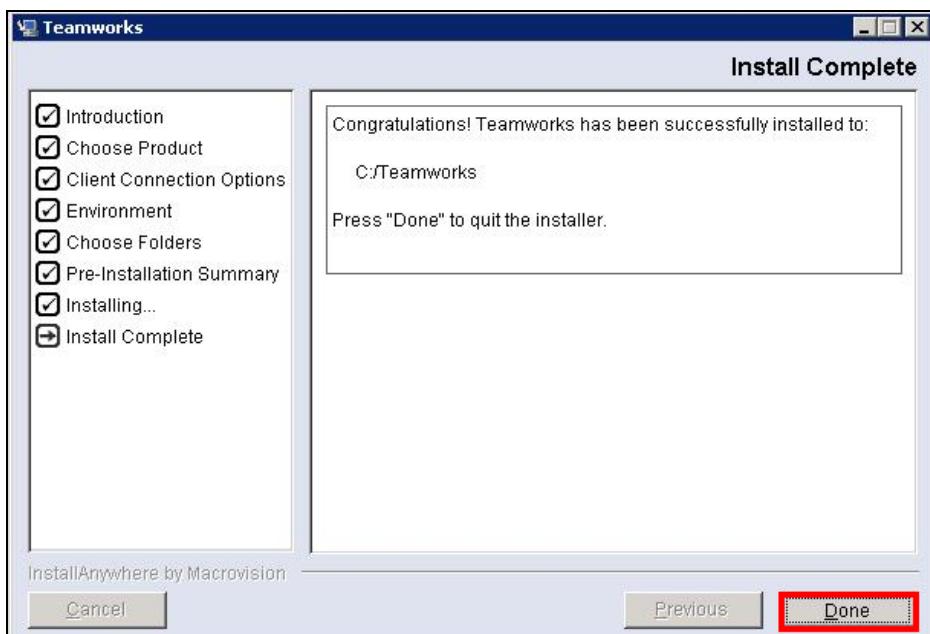
Step	Description
<b>B1.2</b>	<p>From the <b>Choose Product</b> screen, select <b>Client/Server</b> and click <b>Next</b>.</p> <p><i>Note: For this sample configuration, the client and server applications were installed on the Local PC hosting Lombardi Teamworks. It is also acceptable to install the client application on a PC other than the one hosting Lombardi Teamworks.</i></p>  <p>The screenshot shows the 'Choose Product' window for Teamworks. On the left, a navigation pane lists steps: Introduction (checked), Choose Product (selected), Client Connection Options, Environment, Choose Folders, Pre-Installation Summary, Installing..., and Install Complete. On the right, three options are shown: 'Client' (Installs Teamworks Client (Authoring Environment) on the local machine), 'Server' (Installs Teamworks Server on the local machine), and 'Client/Server' (Installs a Client and a Server on the local machine). The 'Client/Server' option is highlighted with a red box. At the bottom, there are 'Cancel', 'Previous', and 'Next' buttons, with 'Next' being the one highlighted by a red box.</p>

Step	Description
B1.3	<p>From the <b>Organization Management Product Key</b> screen, enter the <b>Product Key</b> and click <b>Next</b>.</p>  <p>The screenshot shows the 'Organization Management Product Key' window. On the left, a vertical list of steps is displayed with 'Introduction' checked and other steps like 'Choose Product' and 'Client Connection Options' being selected. On the right, there's a checkbox for 'Install Teamworks 6 for Organization Management' which is unchecked. Below it, instructions say 'In the boxes below, type your 25-character Organization Management Product Key.' A 'Product Key:' label is followed by a series of five input fields separated by hyphens. At the bottom, there are 'Cancel', 'Previous', and 'Next' buttons, with 'Next' being the one highlighted with a red box.</p>

Step	Description
B1.4	<p>From the <b>Process Server Database Parameters</b> screen, configure as follows:</p> <ul style="list-style-type: none"> <li>Select the appropriate setting from the drop-down list for the <b>Database</b> field.</li> <li>Enter the name of the Host PC in the <b>Database Host</b> field.</li> <li>Enter the port that the database listens on in the <b>Database Port</b> field. For Oracle, the database default listener port is <b>1521</b>.</li> <li>Enter the name of the database that Lombardi Teamworks uses for its Process Server repository in the <b>Database Name</b> field (see <b>Database Instance</b> in <b>Step A1</b>).</li> <li>Enter the username and password for the Tablespace created for the Process Server in the <b>Database User</b> and <b>Database Password</b> fields respectively (see <b>Step A1</b>).</li> <li>To verify the provisioning in this step, click <b>Test Connection</b>. If the connection to the database is successful, a pop-up window will provide confirmation. Click <b>OK</b>.</li> </ul>  <ul style="list-style-type: none"> <li>Click <b>Next</b>.</li> </ul> 

Step	Description
B1.5	<p>From the <b>Performance Server Database Parameters</b> screen, configure as follows:</p> <ul style="list-style-type: none"> <li>Select the appropriate setting from the drop-down list for the <b>Database</b> field.</li> <li>Enter the name of the Host PC in the <b>Database Host</b> field.</li> <li>Enter the port that the database listens on in the <b>Database Port</b> field. For Oracle, the database default listener port is <b>1521</b>.</li> <li>Enter the name of the database that Lombardi Teamworks uses for its Performance Server repository in the <b>Database Name</b> field (see <b>Database Instance</b> in <b>Step A1</b>).</li> <li>Enter the username and password for the Tablespace created for the Performance Server in the <b>Database Name</b> and <b>Database Password</b> fields respectively (see <b>Step A1</b>).</li> <li>To verify the provisioning in this step, click <b>Test Connection</b>. If the connection to the database is successful, a pop-up window will provide confirmation. Click <b>OK</b>.</li> </ul>  <ul style="list-style-type: none"> <li>Click <b>Next</b>.</li> </ul> 

Step	Description
B1.6	<p>From the <b>Choose Install Folder</b> screen, accept default settings and click <b>Next</b>.</p> 
B1.7	<p>From the <b>Choose Shortcut Folder</b> screen, accept default settings and click <b>Next</b>.</p> 

Step	Description
B1.8	<p>From the <b>Pre-Installation Summary</b> screen, accept default settings and click <b>Install</b>.</p>  <p>The screenshot shows the 'Pre-Installation Summary' window. On the left, a list of steps is shown with checkboxes: Introduction (checked), Choose Product (checked), Client Connection Options (checked), Environment (checked), Choose Folders (checked), Pre-Installation Summary (checked), Installing... (unchecked), and Install Complete (unchecked). On the right, it says 'Please Review the Following Before Continuing:' followed by 'Product Name: Teamworks', 'Install Folder: C:\Teamworks', and 'Shortcut Folder: C:\Documents and Settings\All Users\Desktop\Teamworks'. At the bottom, there are 'Cancel', 'Previous', and 'Install' buttons, with 'Install' being highlighted.</p>
B1.9	<p>From the <b>Install Complete</b> screen, click <b>Done</b>.</p>  <p>The screenshot shows the 'Install Complete' window. It displays a message: 'Congratulations! Teamworks has been successfully installed to: C:\Teamworks' and 'Press "Done" to quit the installer.' On the left, a list of steps is shown with checkboxes: Introduction (checked), Choose Product (checked), Client Connection Options (checked), Environment (checked), Choose Folders (checked), Pre-Installation Summary (checked), Installing... (unchecked), and Install Complete (unchecked). At the bottom, there are 'Cancel', 'Previous', and 'Done' buttons, with 'Done' being highlighted.</p>

## B2 - Configure Databases

The Lombardi Teamworks Enterprise Express Installer installs scripts that are used to set up the structure, initial data, stored procedures, and indexes for Lombardi Teamworks databases. Databases for the Process Server and Performance Server should already be configured (see [Appendix A](#)).

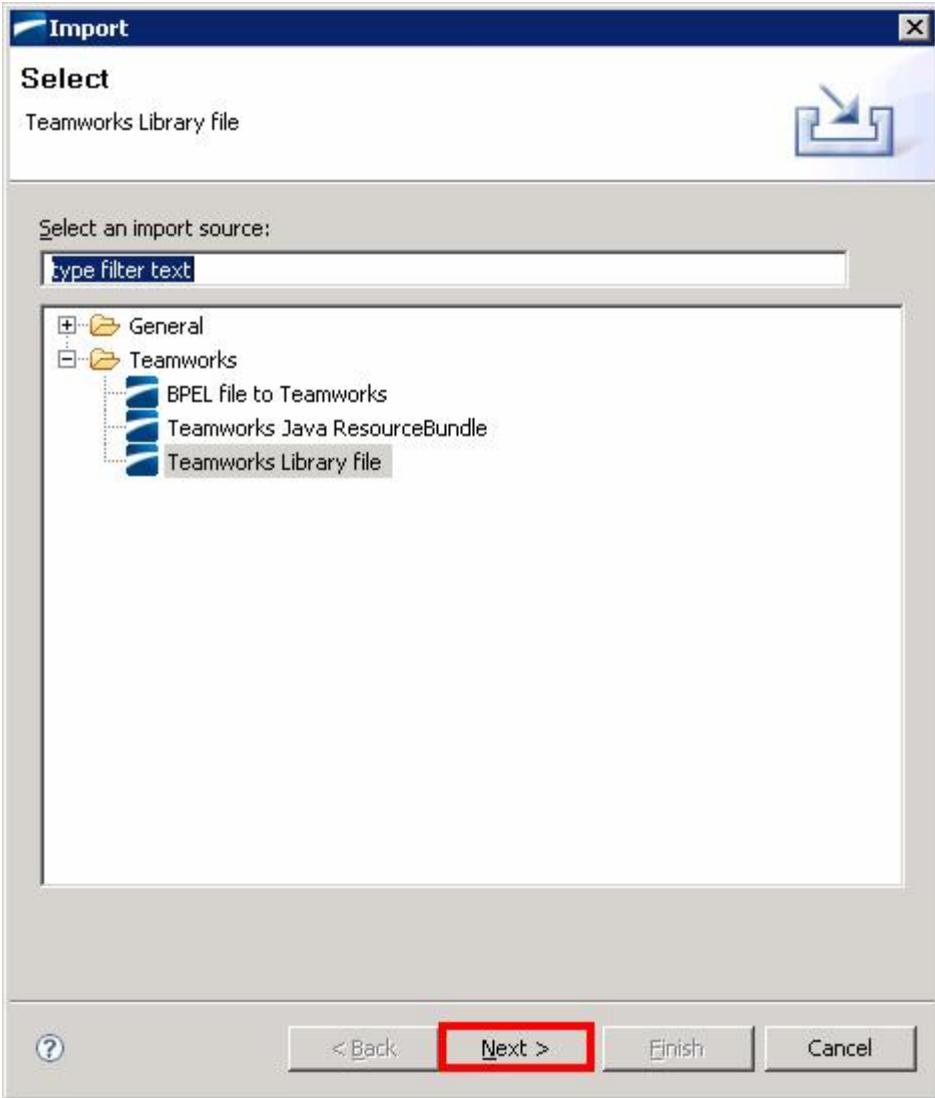
Step	Description
B2.1	<p>Configure the database for the Process Server as follows:</p> <ul style="list-style-type: none"> <li>From the command line (DOS console), navigate to the &lt;Lombardi Teamworks Install-Dir&gt;\process-server\db directory.</li> <li>Enter <b>DBSLoad.bat oracle10g</b> and verify the script was successful by noting the following line in the DOS console: <b>DBStructureLoad completed successfully</b></li> </ul> <pre>C:\Teamworks\process-server\db&gt;DBSLoad.bat oracle10g DBStructureLoad starting DBStructureLoad dbdriver : oracle.jdbc.driver.OracleDriver DBStructureLoad dburl   : jdbc:oracle:thin:@lombardi:1521:orcl DBStructureLoad dbuser   : TWPROCDB <b>DBStructureLoad completed successfully.</b></pre>
B2.2	<p>From the &lt;Lombardi Teamworks Install-Dir&gt;\process-server\db directory, enter <b>DBSpLoad.bat oracle10g</b> and verify the script was successful by noting the following line in the DOS console: <b>DBStructureLoad completed successfully</b></p> <pre>C:\Teamworks\process-server\db&gt;DBSpLoad.bat oracle10g DBStructureLoad starting DBStructureLoad dbdriver : oracle.jdbc.driver.OracleDriver DBStructureLoad dburl   : jdbc:oracle:thin:@lombardi:1521:orcl DBStructureLoad dbuser   : TWPROCDB <b>DBStructureLoad completed successfully.</b></pre>
B2.3	<p>From the &lt;Lombardi Teamworks Install-Dir&gt;\process-server\db directory, enter <b>DBLoad.bat oracle10g</b> and verify the script was successful by noting the following line in the DOS console: <b>DBLoad completed successfully</b></p> <pre>C:\Teamworks\process-server\db&gt;DBLoad.bat oracle10g DBLoad starting DBLoad dbdriver : oracle.jdbc.driver.OracleDriver DBLoad dburl   : jdbc:oracle:thin:@lombardi:1521:orcl DBLoad dbuser   : TWPROCDB <b>DBLoad completed successfully.</b></pre>

Step	Description
B2.4	<p>Configure the database for the Performance Server as follows:</p> <ul style="list-style-type: none"> <li>From the command line (DOS console), navigate to the &lt;<b>Lombardi Teamworks Install-Dir</b>&gt;\performance-server\db directory.</li> <li>Enter <b>DBSLoad.bat oracle10g</b> and verify the script was successful by noting the following line in the DOS console: <b>DBStructureLoad completed successfully</b></li> </ul> <pre>C:\Teamworks\performance-server\db&gt;DBSLoad.bat oracle10g DBStructureLoad starting DBStructureLoad dbdriver : oracle.jdbc.driver.OracleDriver DBStructureLoad dburl   : jdbc:oracle:thin:@lombardi:1521:orcl DBStructureLoad dbuser   : TWPERFDB <b>DBStructureLoad completed successfully.</b></pre>
B2.5	<p>From the &lt;<b>Lombardi Teamworks Install-Dir</b>&gt;\performance-server\db directory, enter <b>DBLoad.bat oracle10g</b> and verify the script was successful by noting the following line in the DOS console: <b>DBLoad completed successfully</b></p> <pre>C:\Teamworks\performance-server\db&gt;DBLoad.bat oracle10g DBLoad starting DBLoad dbdriver : oracle.jdbc.driver.OracleDriver DBLoad dburl   : jdbc:oracle:thin:@lombardi:1521:orcl DBLoad dbuser   : TWPERFDB <b>DBLoad completed successfully.</b></pre>

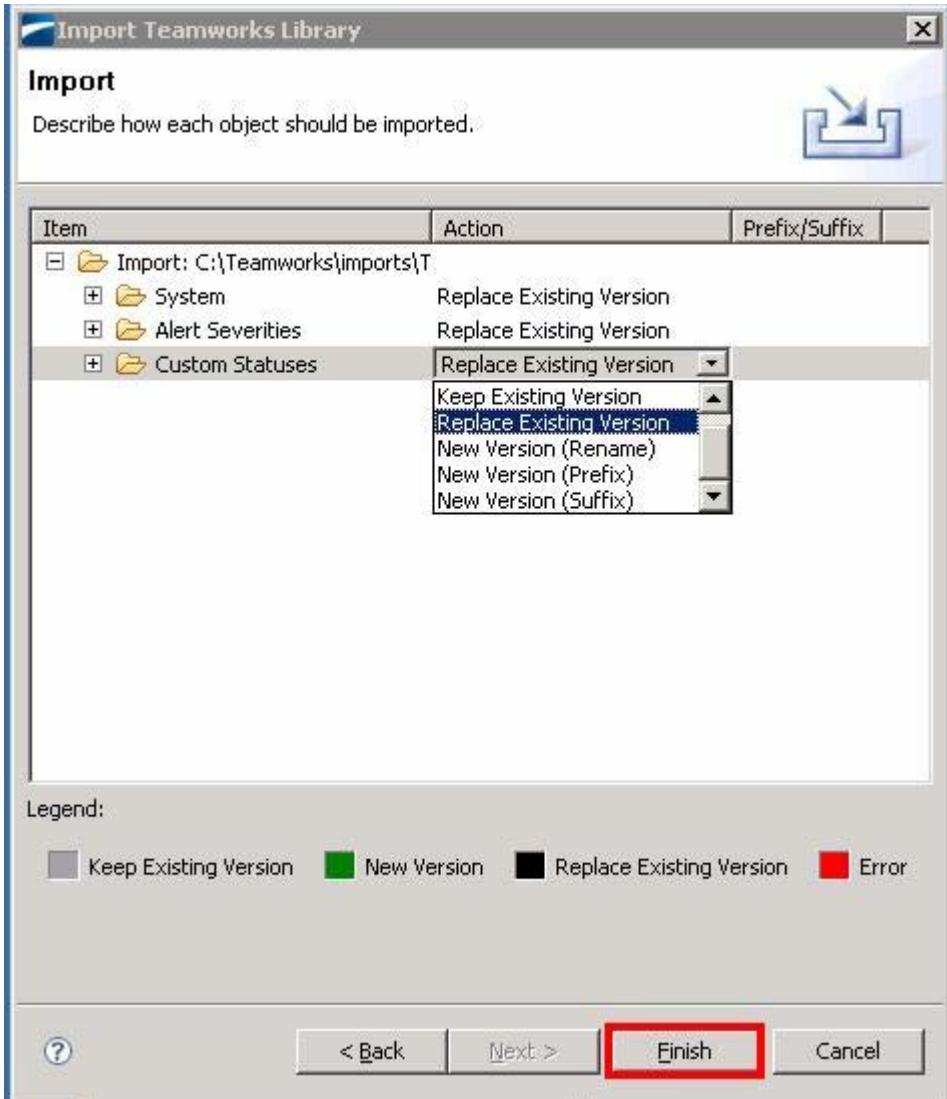
## B3 - Install System Components

There are system components that Lombardi Teamworks needs to run properly. These are default layouts, variable types, and other assets that are required to author a process successfully. This section describes the steps to import and install system components using the graphical user interface provided in the Authoring Environment.

Step	Description
<b>B3.1</b>	Install system components as follows: <ul style="list-style-type: none"><li>Start the Process Server (see <b>Appendix C</b>).</li><li>Start the Authoring Environment and then log on to Lombardi Teamworks as an administrative user [1].</li><li>[<i>Not Shown</i>] From the Authoring Environment main menu, select <b>File ➔ Import</b>.</li></ul>

Step	Description
B3.2	<p>From the <b>Import</b> dialog box select the <b>Teamworks Library file</b> option and then click <b>Next</b>.</p> 

Step	Description
B3.3	<p>From the Import dialog box, click <b>Browse</b> and navigate to the <b>TWSystemData.zip</b> file located in the &lt;Lombardi Teamworks Install-Dir&gt;\imports directory and then click <b>Next</b>.</p> 

Step	Description
B3.4	<p>From the Import dialog box, ensure that the <b>Replace Existing Version</b> option is selected for all folders. The Import facility will then overwrite all existing items with new versions, and inserts all new items. Click <b>Finish</b>.</p>  <p>The screenshot shows the 'Import Teamworks Library' dialog box. The 'Action' column for the 'Custom Statuses' folder has a dropdown menu open, with 'Replace Existing Version' highlighted. Other options in the menu include 'Keep Existing Version', 'New Version (Rename)', 'New Version (Prefix)', and 'New Version (Suffix)'. The 'Finish' button at the bottom right is highlighted with a red box.</p>

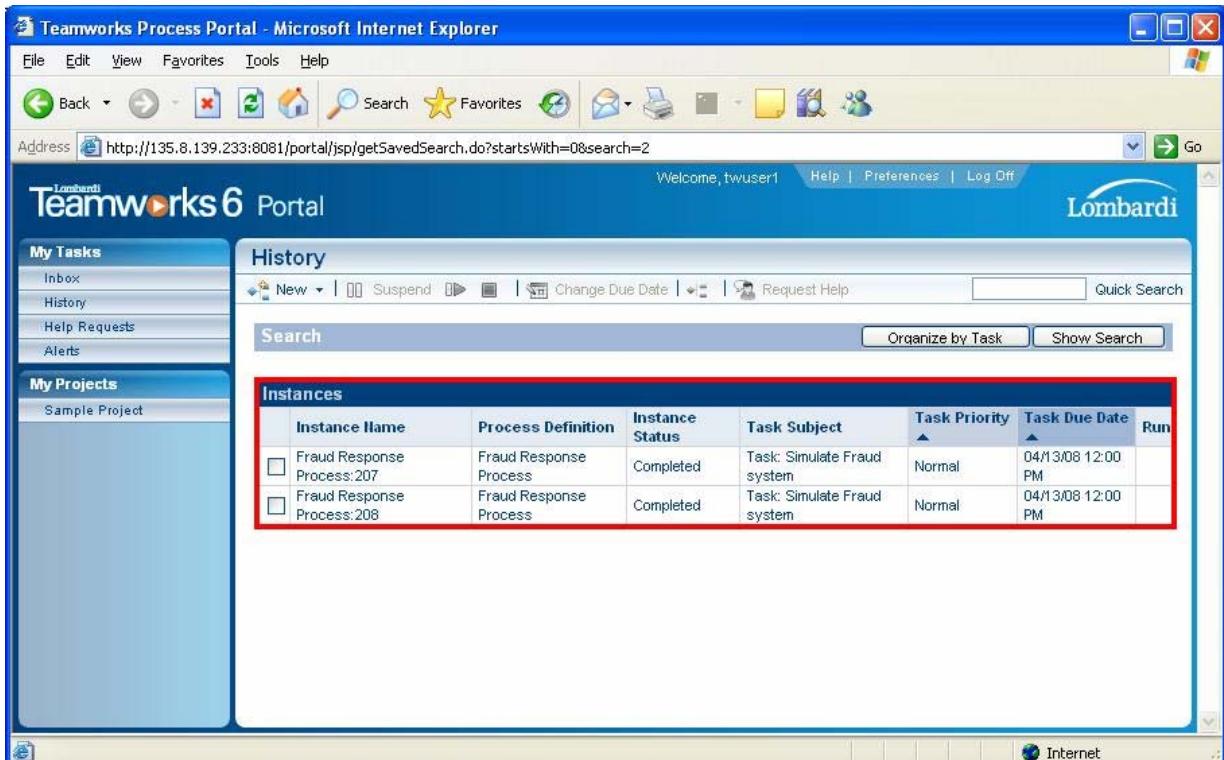
## Appendix C - Starting Lombardi Teamworks Servers

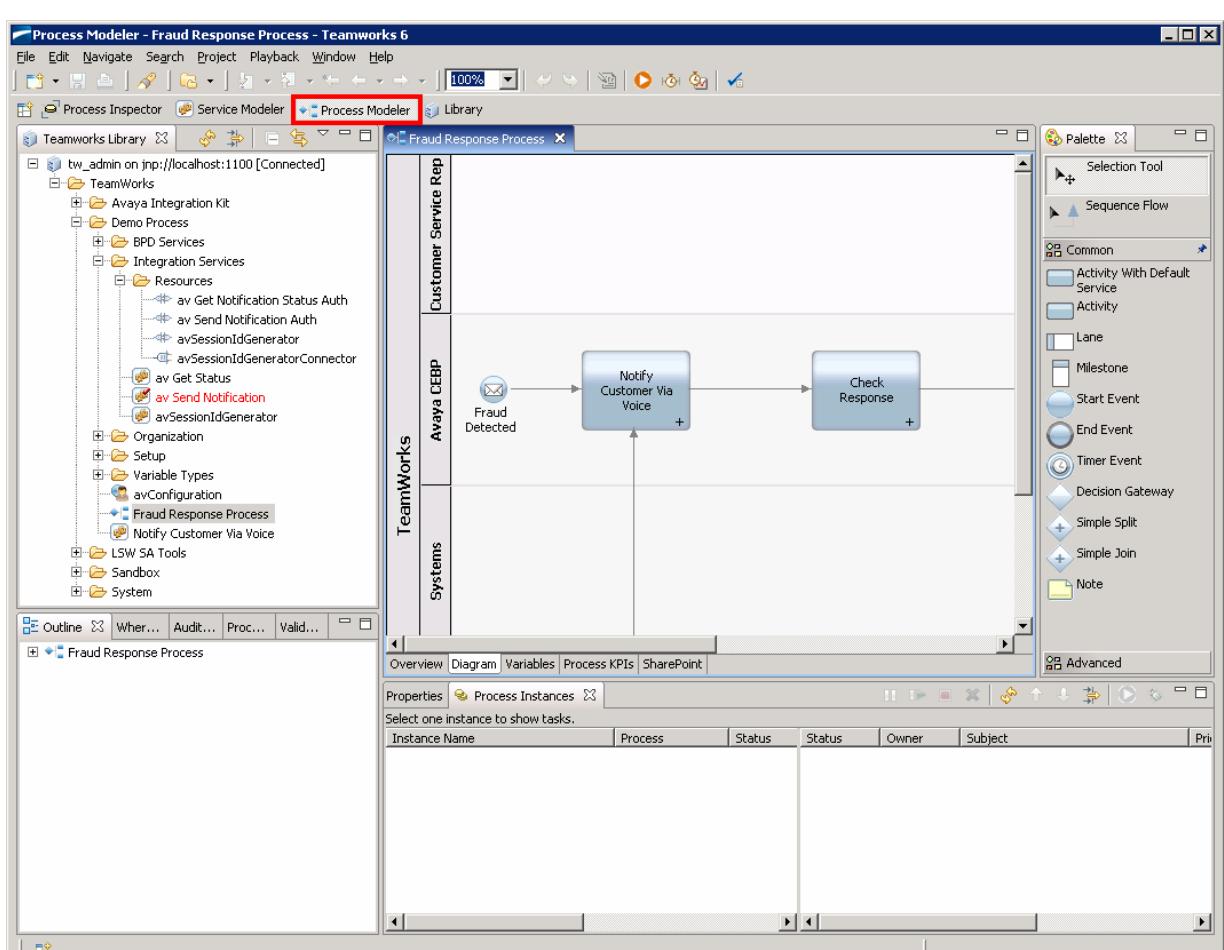
This section describes the steps to start the Lombardi Teamworks Process and Performance Servers.

Step	Description
C1	<p>Start the Process Server as follows:</p> <ul style="list-style-type: none"><li>From the command line (DOS console), navigate to the &lt;Lombardi Teamworks Install-Dir&gt;\process-server directory.</li><li>Enter <b>startProcessServer.cmd</b> and verify the Process Server is running by noting the following lines in the DOS console: <b>INFO [ChannelSocket] JK: ajp13 listening on /0.0.0.0:8009</b> <b>INFO [JkMain] Jk running ID=0 time=0/79 config=null</b></li></ul> <p><i>Note: Do not close the DOS console where the Process Server was started, as this may stop the Process Server. To stop the Process Server, enter the <b>Ctrl+C</b> command in the DOS console where the Process Server was started.</i></p> <pre>C:\Teamworks\process-server&gt;startProcessServer.cmd --&gt; Wrapper Started as Console Launching a JVM... Wrapper (Version 3.0.5) ... 10:36:29,468 INFO [ChannelSocket] JK: ajp13 listening on /0.0.0.0:8009 10:36:29,500 INFO [JkMain] Jk running ID=0 time=0/79 config=null</pre>
C2	<p>Start the Performance Server as follows:</p> <ul style="list-style-type: none"><li>From the command line (DOS console), navigate to the &lt;Lombardi Teamworks Install-Dir&gt;\performance-server directory.</li><li>Enter <b>startPerformanceServer.cmd</b> and verify the Performance Server is running by noting the following lines in the DOS console: <b>INFO [ChannelSocket] JK: ajp13 listening on /0.0.0.0:9009</b> <b>INFO [JkMain] Jk running ID=0 time=0/156 config=null</b></li></ul> <p><i>Note: Do not close the DOS console where the Performance Server was started, as this may stop the Performance Server. To stop the Performance Server, enter the <b>Ctrl+C</b> command in the DOS console where the Performance Server was started.</i></p> <pre>C:\Teamworks\performance-server&gt;startPerformanceServer.cmd --&gt; Wrapper Started as Console Launching a JVM... Wrapper (Version 3.0.5) ... 10:38:27,359 INFO [ChannelSocket] JK: ajp13 listening on /0.0.0.0:9009 10:38:27,421 INFO [JkMain] Jk running ID=0 time=0/156 config=null</pre>

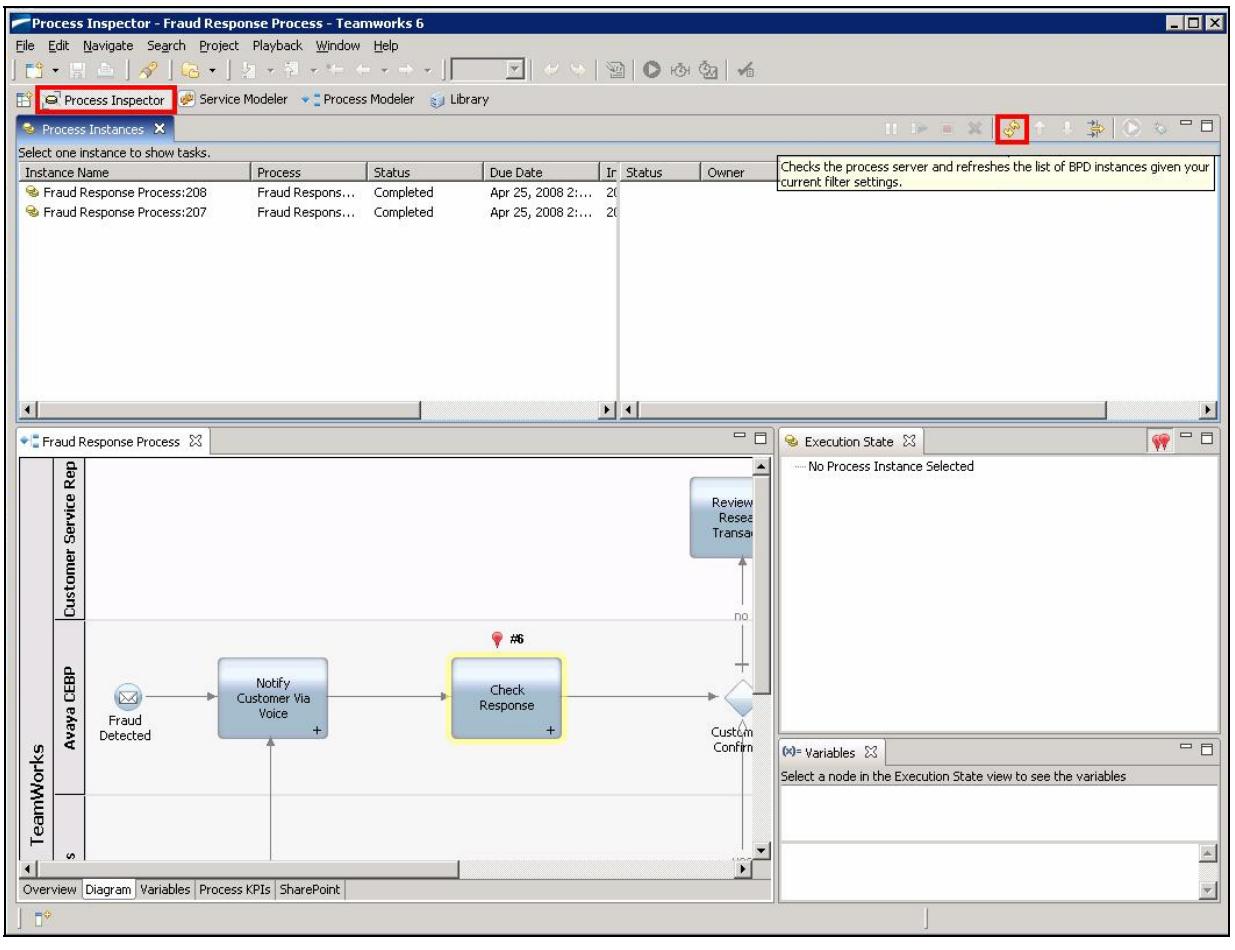
## Appendix D - Lombardi Teamworks Maintenance

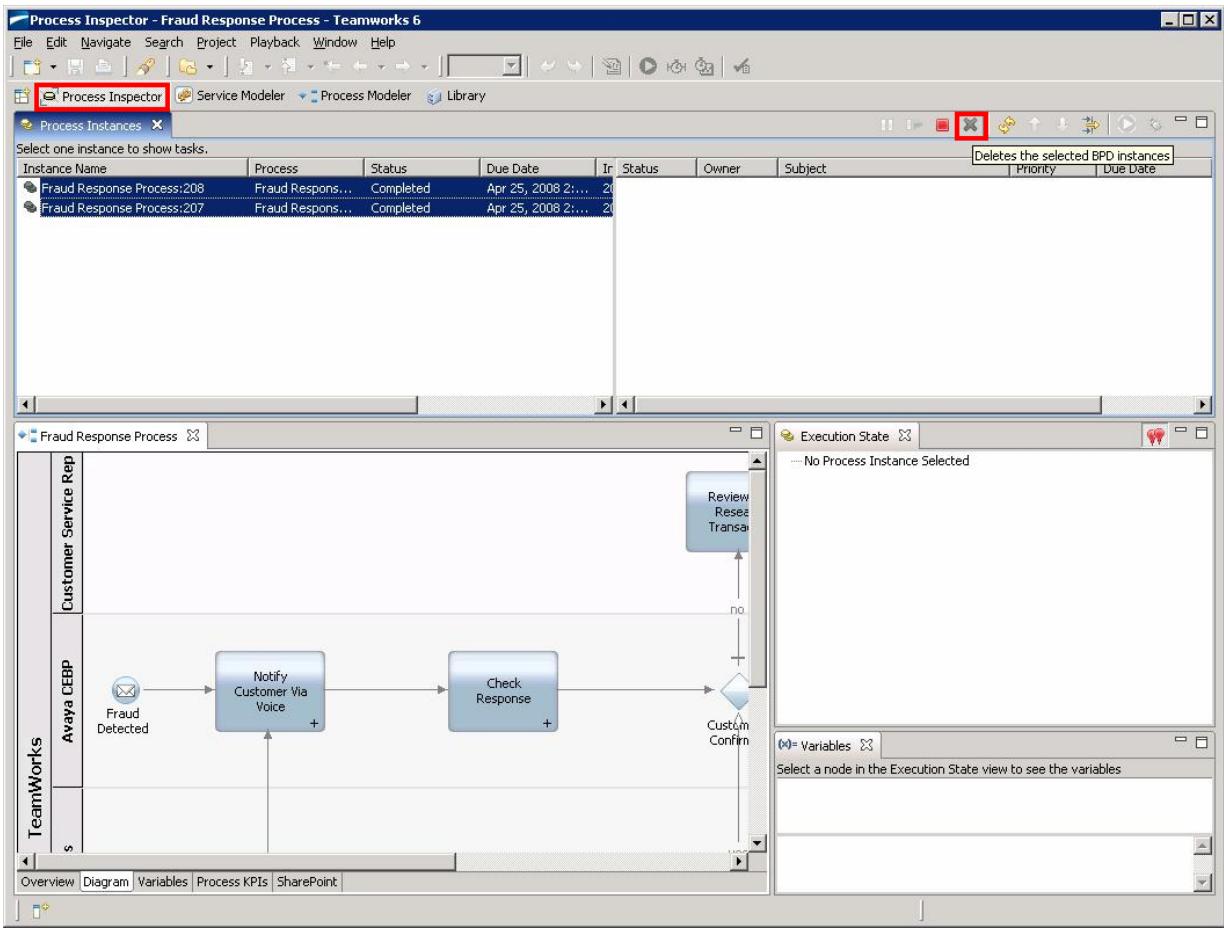
This section describes the steps to delete transactions for the **Fraud Response Process** on Lombardi Teamworks.

Step	Description																								
D1	<p>Verify the transactions for the <b>Fraud Response Process</b> that are to be deleted as follows:</p> <ul style="list-style-type: none"><li>Verify that the process and performance servers are started (see <b>Appendix C</b>).</li><li>Open a standard web browser and enter <b>http://&lt;Lombardi Teamworks IP Address or FQDN&gt;:8081/portal</b> into the web browser's URL bar.</li><li>Log in to the Process Server Console with user privileges, e.g., select a user account created in <b>Steps 4.4.9 - 4.4.10</b>.</li><li>Click <b>History</b> under <b>My Tasks</b>.</li></ul>  <table border="1"><thead><tr><th>Instances</th><th>Instance Name</th><th>Process Definition</th><th>Instance Status</th><th>Task Subject</th><th>Task Priority</th><th>Task Due Date</th><th>Run</th></tr></thead><tbody><tr><td></td><td>Fraud Response Process:207</td><td>Fraud Response Process</td><td>Completed</td><td>Task: Simulate Fraud system</td><td>Normal</td><td>04/13/08 12:00 PM</td><td></td></tr><tr><td></td><td>Fraud Response Process:208</td><td>Fraud Response Process</td><td>Completed</td><td>Task: Simulate Fraud system</td><td>Normal</td><td>04/13/08 12:00 PM</td><td></td></tr></tbody></table>	Instances	Instance Name	Process Definition	Instance Status	Task Subject	Task Priority	Task Due Date	Run		Fraud Response Process:207	Fraud Response Process	Completed	Task: Simulate Fraud system	Normal	04/13/08 12:00 PM			Fraud Response Process:208	Fraud Response Process	Completed	Task: Simulate Fraud system	Normal	04/13/08 12:00 PM	
Instances	Instance Name	Process Definition	Instance Status	Task Subject	Task Priority	Task Due Date	Run																		
	Fraud Response Process:207	Fraud Response Process	Completed	Task: Simulate Fraud system	Normal	04/13/08 12:00 PM																			
	Fraud Response Process:208	Fraud Response Process	Completed	Task: Simulate Fraud system	Normal	04/13/08 12:00 PM																			

Step	Description
<b>D2</b>	<p>From the Authoring Environment, delete transactions for <b>the Fraud Response Process</b> as follows:</p> <ul style="list-style-type: none"> <li>• If the Process Server is not initialized, start the Process Server (see <b>Appendix C</b>).</li> <li>• Start the Authoring Environment and then log on to Lombardi Teamworks as an administrative user [1].</li> <li>• From the <b>Process Modeler</b> tab, select <b>TeamWorks ➔ Demo Processes ➔ Fraud Response Process</b>.</li> </ul>  <pre> graph LR     FD((Fraud Detected)) --&gt; NCV[Notify Customer Via Voice]     NCV --&gt; CR[Check Response] </pre>

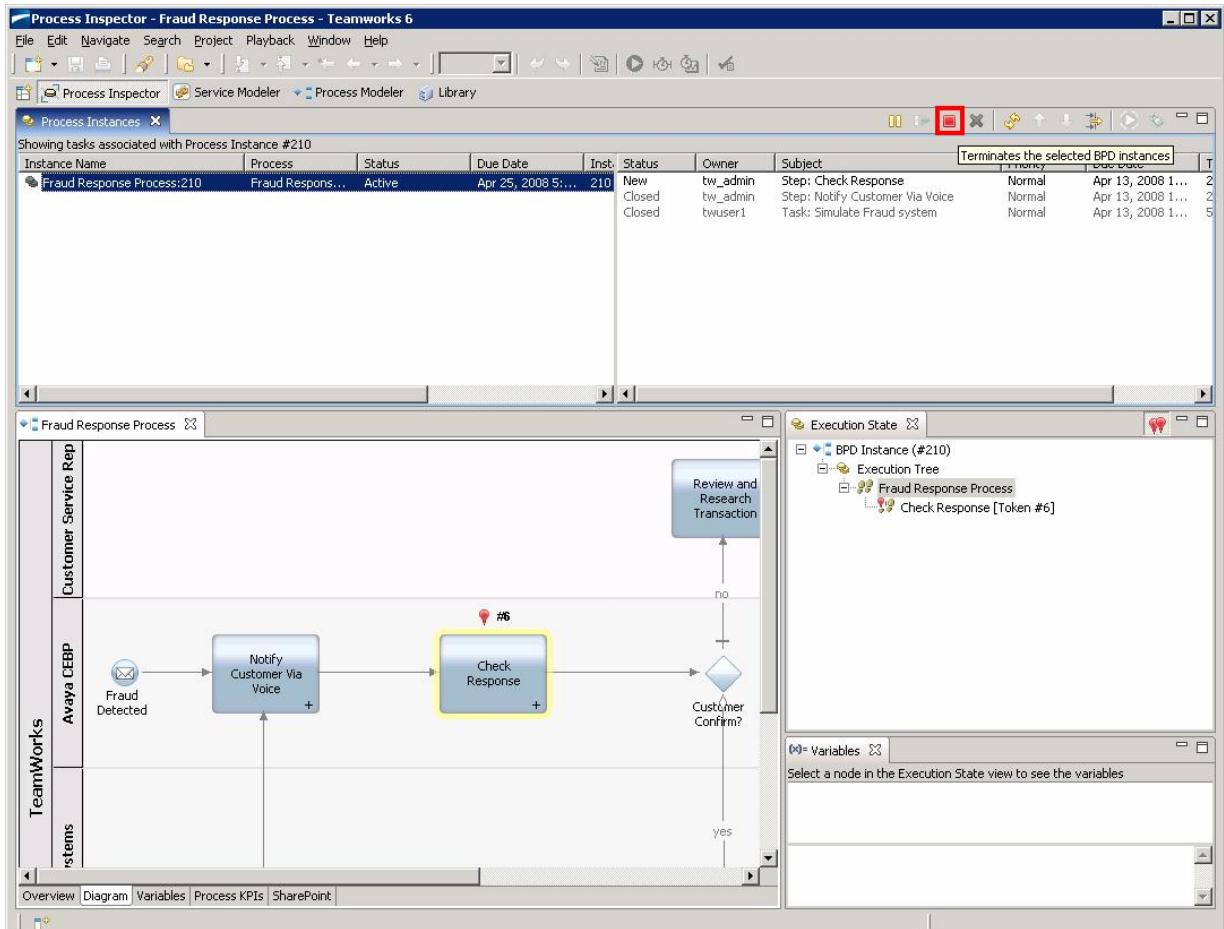
Step	Description
D3	To view the listing and status of transaction for the <b>Fraud Response Process</b> , refresh the <b>Instance Name</b> window by clicking  .



Step	Description
D4	<p>To delete transactions for the <b>Fraud Response Process</b>:</p> <ul style="list-style-type: none"> <li>Select the appropriate transactions from the <b>Instance Name</b> window.</li> <li>Click .</li> </ul> 

<b>Step</b>	<b>Description</b>
<b>D5</b>	To confirm deletion of transaction, click <b>OK</b> .

The screenshot shows the 'Process Inspector - Fraud Response Process - Teamworks 6' window. A 'Confirm Delete' dialog box is displayed in the center, asking if deleting the instances will delete all records about this instance from the Process Server. The 'OK' button is highlighted with a red box. In the background, the process diagram is visible, showing a sequence of events: 'Fraud Detected' leads to 'Notify Customer Via Voice', which then leads to 'Check Response'. There is also a feedback loop labeled 'Custom Confirm'.

Step	Description
D6	<p>If a transaction has an <b>Active</b> status, it is good practice to terminate the transaction prior to deleting them. To terminate the process, select the ones that are <b>Active</b> and click .</p>  <p>The screenshot shows the Process Inspector interface with two main windows. The top window, 'Process Instances X', lists three active instances of the 'Fraud Response Process'. The bottom window, 'Execution State X', shows the current state of a BPD instance (#210), specifically the 'Fraud Response' process. A yellow box highlights the 'Check Response' task node.</p>

Step	Description
D7	<p>The transactions are <b>Terminated</b>. To delete terminated transactions, follow <b>Steps D3 - D5</b>.</p> <p>The screenshot shows the 'Process Inspector - Fraud Response Process - Teamworks 6' window. At the top, the 'Process Instances' tab is selected, showing a table with one row for 'Fraud Response Process:210'. The status is 'Terminated' with a due date of 'Apr 25, 2008 5:15:00 PM'. The 'Status' column shows 'Closed' for all tasks. The 'Owner' column lists 'tw_admin' and 'tw_user1'. The 'Subject' column includes 'Step: Check Response', 'Step: Notify Customer Via Voice', and 'Task: Simulate Fraud system'. The last column, 'Deletes the selected BPD instances', has values 'T', '2', '2', and '5' respectively. A red box highlights the close button in the top right corner of the main window.</p> <p>The bottom half of the screen shows the 'Fraud Response Process' diagram. It starts with an 'Avaya CEBP' participant, followed by a 'Fraud Detected' event leading to a 'Notify Customer Via Voice' task. This leads to a 'Check Response' task, which then flows to a decision diamond 'Customer Confirm?'. If 'no', it goes back to 'Notify Customer Via Voice'. If 'yes', it leads to a 'Review and Research Transaction' task. The diagram is set against a background of three columns: 'TeamWorks', 'Avaya CEBP', and 'Customer Service Rep'.</p> <p>On the right side, there are two panes: 'Execution State' and 'Variables'. The 'Execution State' pane shows a tree structure with 'BPD Instance (#210)' expanded to show 'Execution Tree' and 'Fraud Response Process'. The 'Variables' pane is empty.</p>

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