Practice 5-1: Managing Service Bus Sessions

Overview

In this practice, you will start to become comfortable with session management in Service Bus. Sessions are used when modifying properties in the administration console, so you will be creating a session, modifying properties of Service Bus resources, and then activating those changes. Before activating your changes, the console notifies you of any conflicts your changes might have caused. You will practice resolving those conflicts for a clean activation.

You use two different browser instances to log in to two different Service Bus consoles. You also use different user credentials to log in to simulate a conflicting scenario in modifying Service Bus resources. For simplicity, let's define:

Service Bus Console 1: Mozilla Firefox Web browser instance 1

Service Bus Console 2: Mozilla Firefox Web browser instance 2

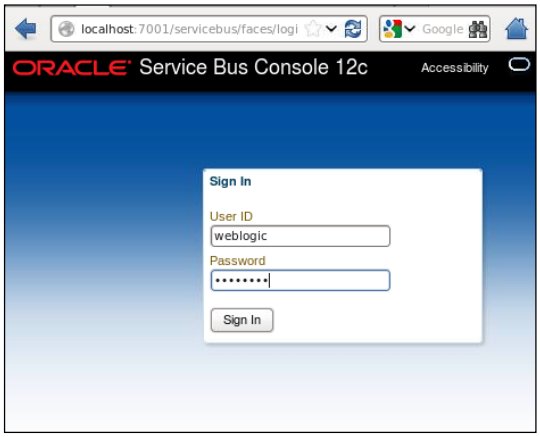
Tasks

1. Set up the practice environment.
   a. In a Terminal window, navigate to **`/home/oracle/labs_SA/Practice_05/create_user`**.
   b. Execute the **`create_user.sh`** script to add a new administrative user ("`jdoe`") to `osb_domain`. Make sure you see the following message after executing the script:

      ```
      Creating new user: jdoe
      Users created successfully.
      ```

      Note: You can ignore any errors or warnings as long as the script indicates that "jdoe" was created successfully.
   c. Close all of your open web browsers.
2. Log in to the Service Bus Console as the `weblogic` user to create a new session. For this practice, call this **console 1**.
   a. Open a Firefox web browser and navigate to the Service Bus Console at **http://localhost:7001/servicebus**.

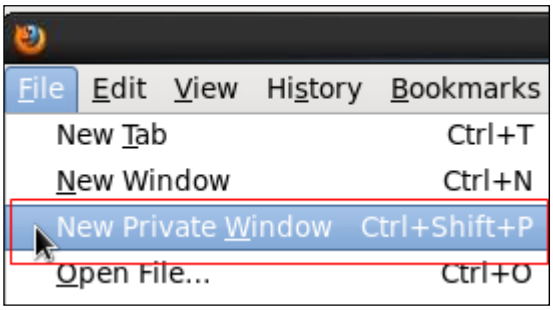
b. Log in with the **weblogic/** `See` **OracleServiceBus12cPassword** `File` credentials.



c. In the top-right corner, click **Create** to create a new session.

3. Using a different web browser, log in to the Service Bus console as user `jdoe` to create a new session. For this practice, call this **console 2**. To simulate two different web browser instances, you can open a private session in Firefox using the **New Private Window** option.

a. In the Firefox browser, click **File** > **New Private Window**.



b. In the Private Window, navigate to the Service Bus Console at **http://localhost:7001/servicebus**.

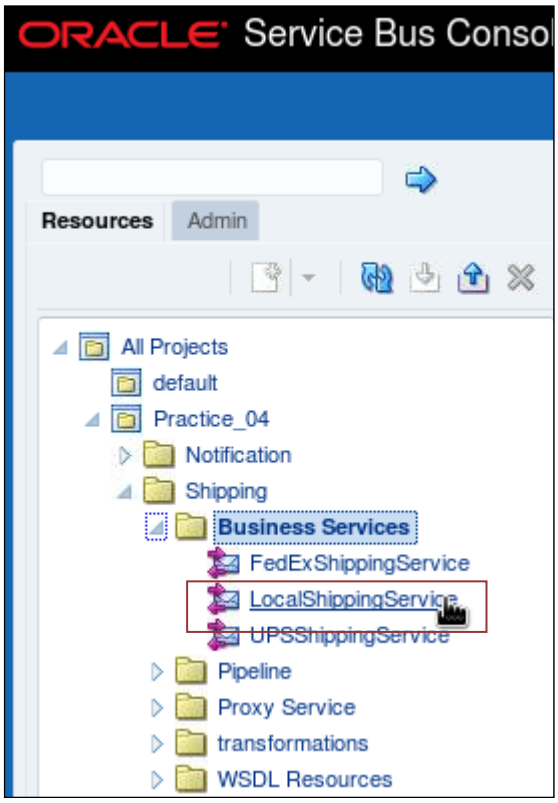
c. Log in to the console with the **jdoe**/ See **OracleServiceBus12cPassword** File credentials.

d. In the top-right corner, click **Create** to create a new session.

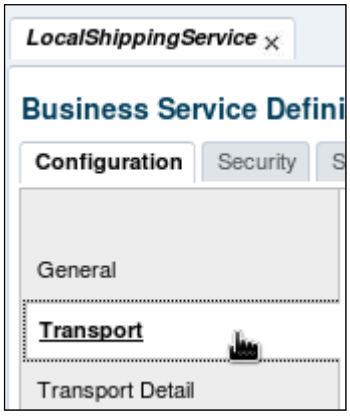
4. Create a concurrency conflict scenario.

a. In console 1, click **Resources** in the left pane.

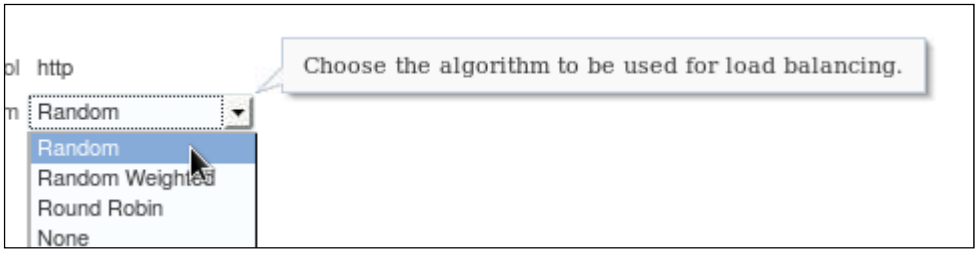
b. You will use the same set of SB services that was available for Practice 04. Therefore, in the Target Navigation section, navigate to **Practice_04** > **Shipping** > **Business Services**, and click **LocalShippingService**.



c. Navigate to the **Configuration** > **Transport** tab.



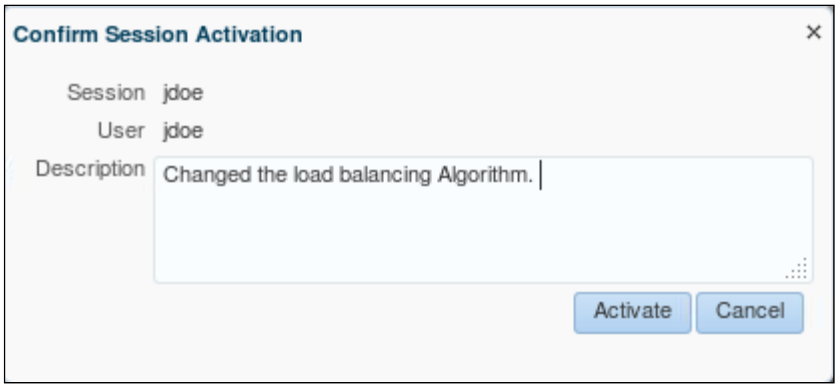
d. Use the drop-down to change the Load Balancing Algorithm to **Random**.



e. Click **Save**.

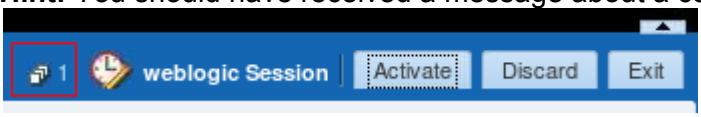
f. Navigate to the same location in console 2 (Private Window). Select **Random** for the **Load Balancing Algorithm**, and then click **Save**.

g. In console 2, click **Activate**. Enter a description and click **Activate**.

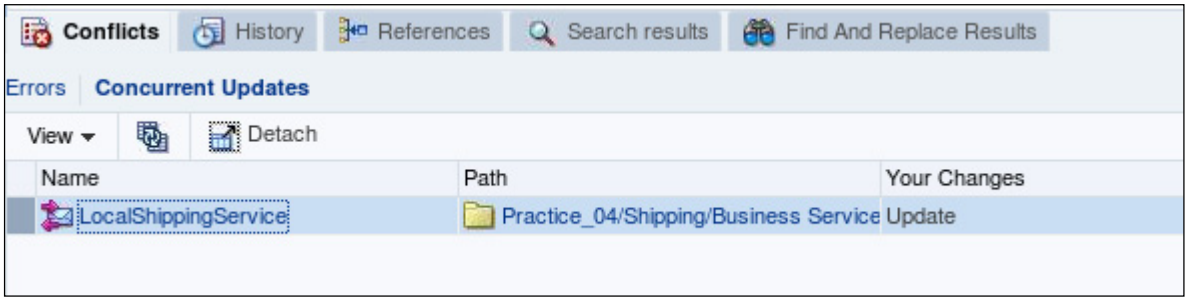


h. Return to console 1 and activate the session. Were you able to activate the session? If not, what message did you get?

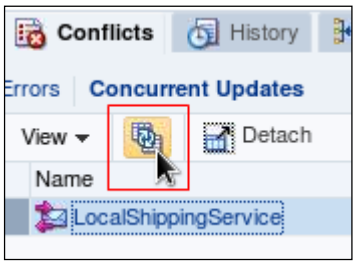
Hint: You should have received a message about a concurrency conflict.



i. In the Conflicts tab, select LocalShippingService.



j. To resolve the concurrency conflict, select the LocalShippingService, and click the **Synchronize** icon.



k. Activate the session. Do not forget to add a description. Descriptions help if you need to roll back, and when you are viewing sessions created by other users.

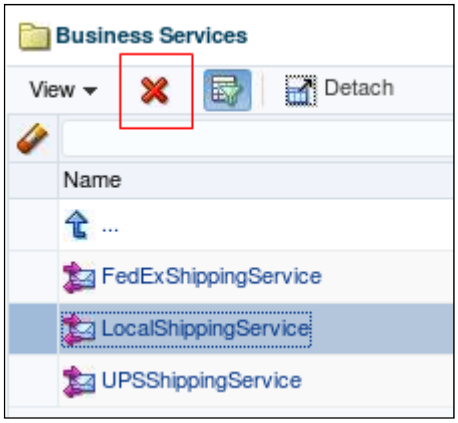
l. Log out and close console 2 (Private Window).

5. Resolve a conflict.

a. Create a new session in console 1.

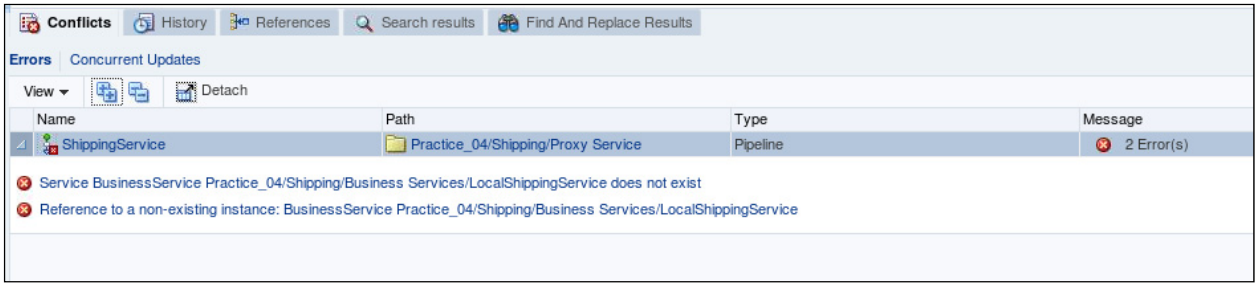
b. In Project Explorer, navigate to **Practice_04** >**Shipping** > **Business Services**.

c. Select the check box next to `LocalShippingService` and click the **Delete** button.



d. Click **Yes** when prompted about the delete.

e. Notice that there is now a major conflict in the Conflict section. Click **View Conflicts** and expand ShippingService to see what is causing the problem.



Because `LocalShippingService` is being used by a pipeline service, you do not want to go ahead with the delete.

f. Click **Discard** to remove the changes, and then click **Discard** when prompted.

Practice 5-2: Customizing a Service Bus Configuration

Overview

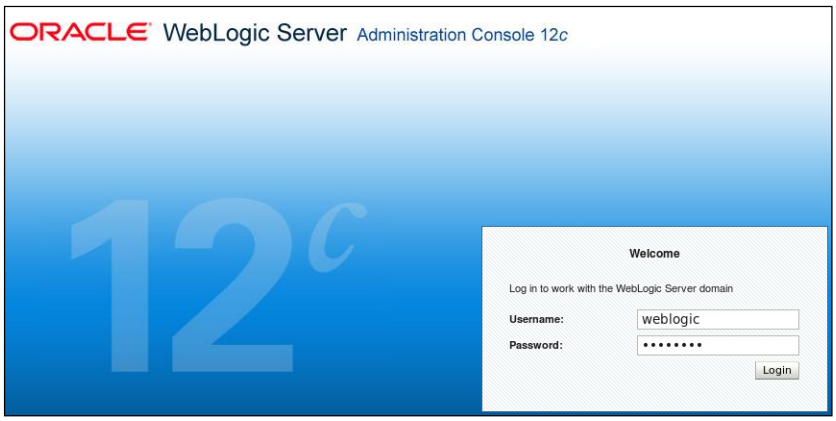
In this practice, you use the find-and-replace functionality of the Service Bus Console to locate all the environment variables in the Service Bus configuration that match a certain value. This is useful when migrating Service Bus configurations to an environment that might be set up differently with different names, port numbers, and so on. You also create a customization file that can be repeatedly used to automatically do the find and replace on environment variables. This is particularly useful when frequently moving a configuration from a development to a testing environment.

In this practice, you:

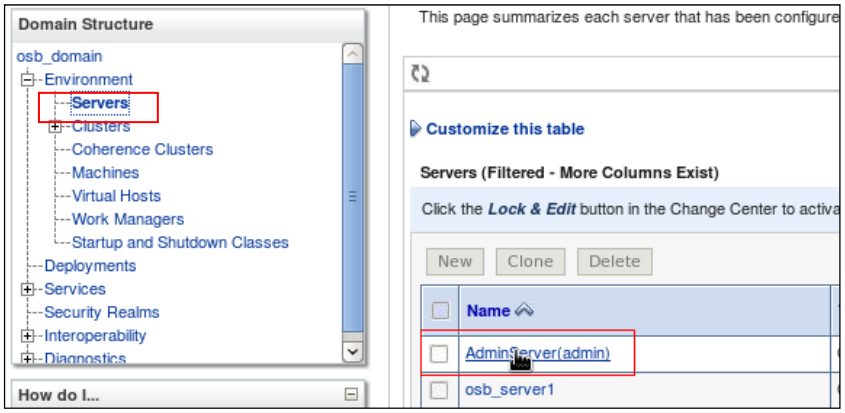
- Find and replace environmental values in a Service Bus configuration
- Create a customization file to automatically find and replace specific values
- Execute a customization file

Tasks

1. Change the port number of the WebLogic server in `osb_domain` to `7101`.
   a. Log in to the WebLogic Server Administration Console of `osb_domain` (**http://localhost:7001/console**) using the **`weblogic`**/ `See` **`OracleServiceBus12cPassword`** `File` credentials.

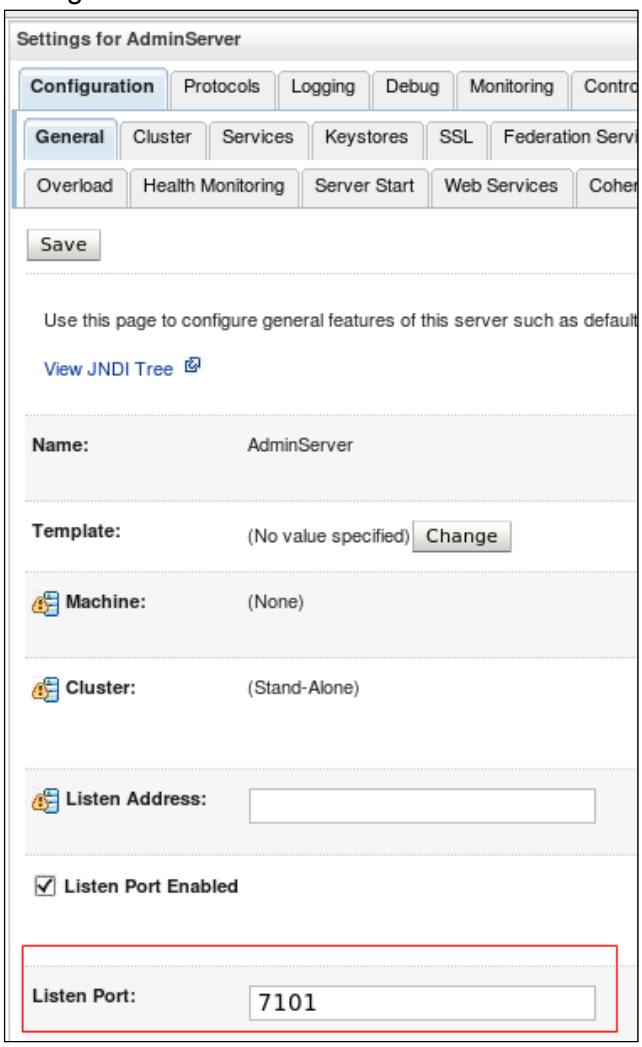


   b. Navigate to **osb_domain** > **Environment** > **Servers**, and click **AdminServer(admin)** in the Summary of Servers section.



   c. In the Change Center, click **Lock & Edit**.

d. Change Listen Port to `7101`.



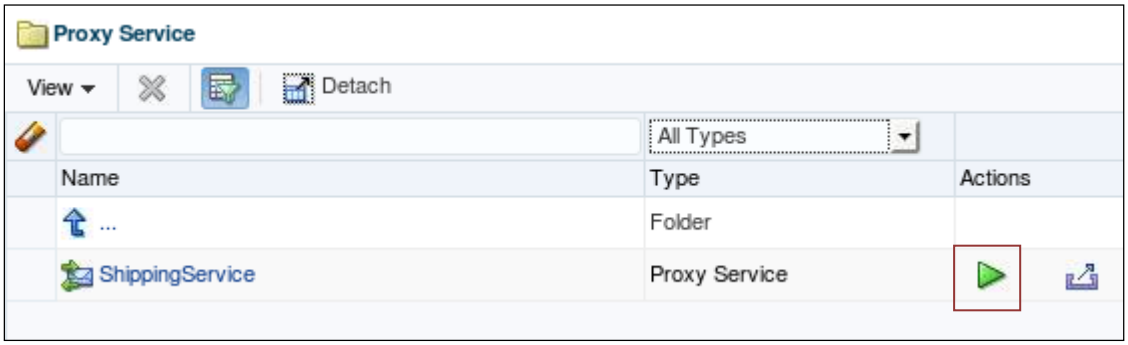
e. Save your changes, and then in Resources, click **Activate Changes**. You might be logged out automatically. If not, log out of the console.

f. Log in again to the WebLogic Administration Console at the new listen port to verify the change.

2. In the Service Bus Console, find and replace values for the Service Bus projects to reflect the new port number.

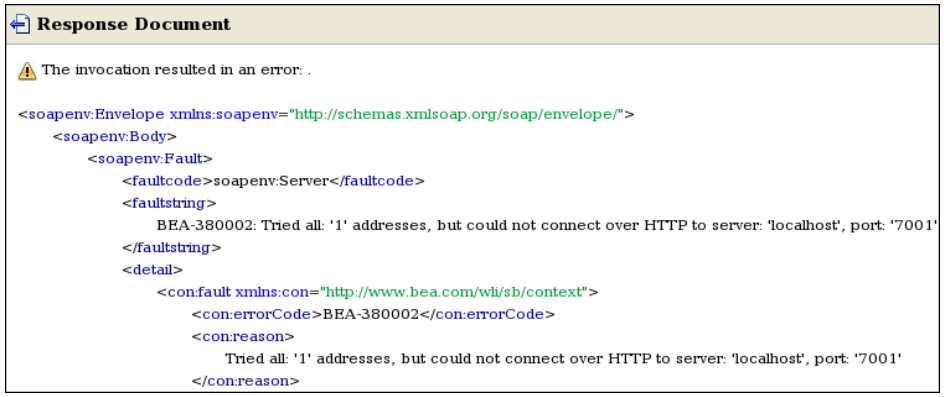
   a. Log in to the Service Bus Console for `osb_domain` by specifying the new port number in the URL (**http://localhost:7101/servicebus**) and using **`weblogic`**/ `See` **`OracleServiceBus12cPassword`** `File`.

b. In Resources, navigate to **Practice_04** > **Shipping** > **Proxy Service** and test the **`ShippingService`** proxy service.



c. What happens when you test the service?

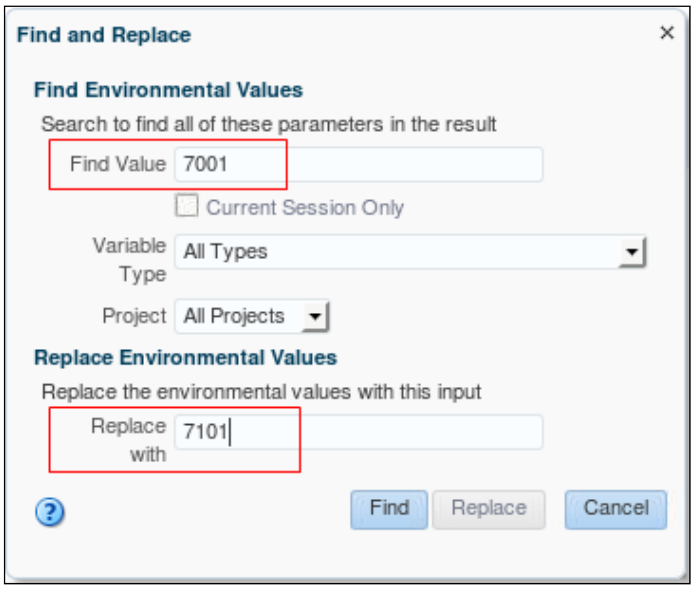
Answer: You receive a connection error.



d. Create a new session.

e. To rectify the error that you received in the previous step, you need to change the port number of the Service Bus services. Navigate to **Admin** > **Configuration** and select **Find and Replace**.

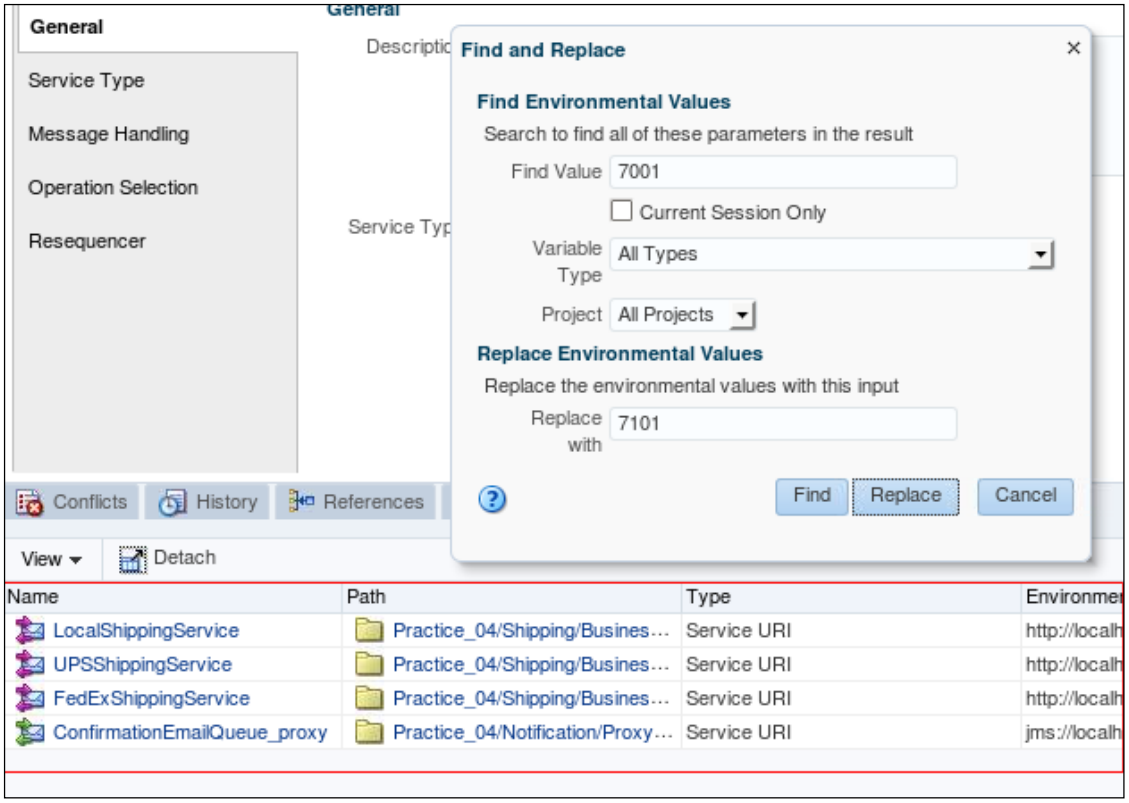
f. Find the value `7001` and replace it with `7101`. Click **Replace**.



g. Close the dialog box.

h. How many environment variables were changed?

Answer: 4

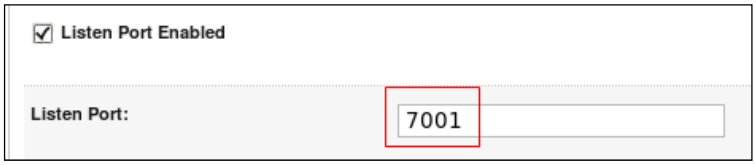


i. Activate your session. Do not forget to add a description.

j. Retest the **`ShippingService`** proxy service. What happened this time?

Answer: It executed without any errors.

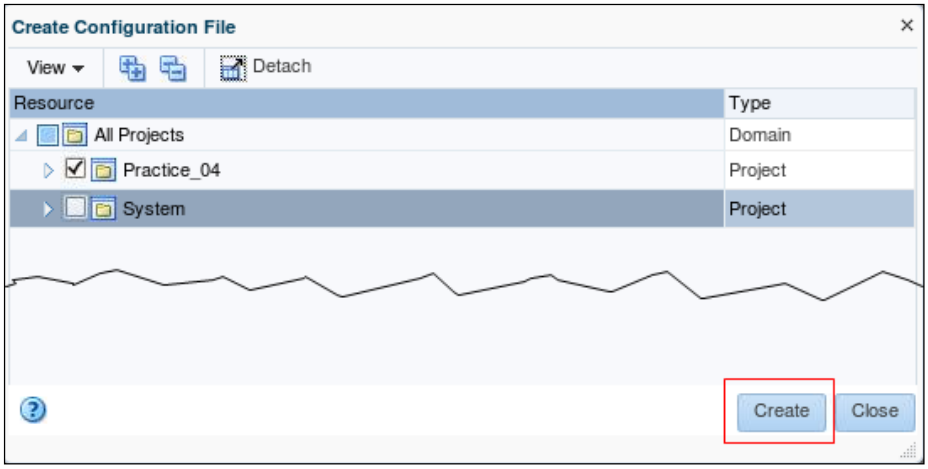
3. Create a configuration file to automate the find and replace capabilities.
   a. Return to the WebLogic Server Administration Console for `osb_domain`. (**http://localhost:7101/console**).
   b. Change the `AdminServer` Listen Port back to **`7001`**, and then save and activate the changes.



   c. Return to the `osb_domain` Service Bus Console. Log in again using **http://localhost:7001/servicebus**.

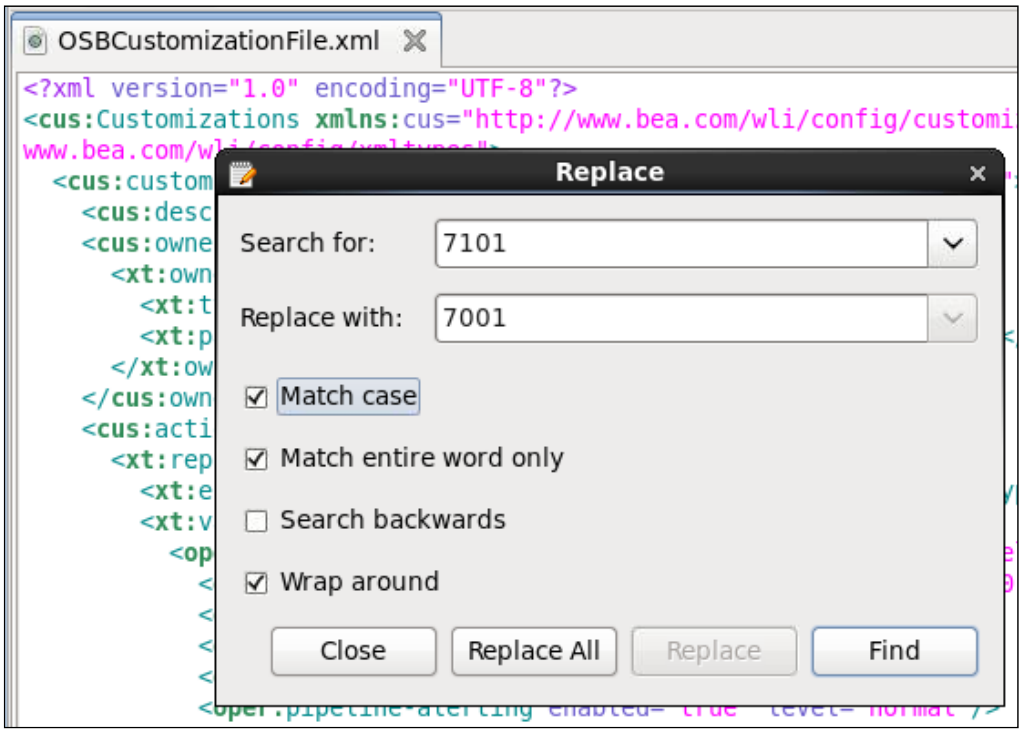
      Note: You may need to log out of the Service Bus Console and completely close and reopen your Firefox browser to reset your login. This issue can occur because you have dynamically changed the port of the server.
   d. Create a new session.
   e. Navigate to **Admin** > **Configuration** and select **Create Configuration File**.

f. On the Create Configuration File page, ensure that **Practice_04** is selected and **System** is deselected, and then click **Create**.



g. Save the customization file by selecting **Save File** and clicking **OK**. The file is saved as **`OSBCutomizationFile.xml`** in the `Downloads` folder. Close the Configuration window.

h. Edit **`OSBCutomizationFile.xml`** in a text editor such as gedit or Emacs (right-click the file and select Open With > *editor name*), and replace *all* the instances of **`7101`** with **`7001`**. Save and close the file after making the changes.



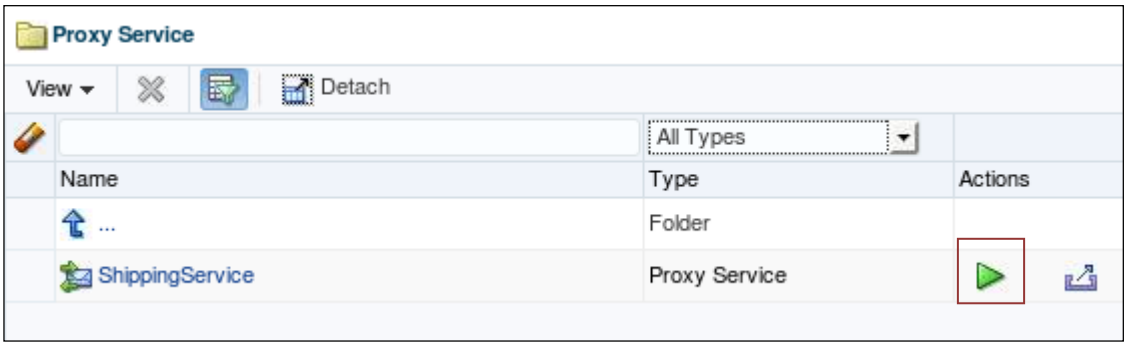
i. Return to the Service Bus Console and navigate to **Admin** > **Configuration** and select **Execute Configuration File**.

j. Browse to `/home/oracle/Downloads` and open the previously saved configuration file. Click **Next**.

k. Click **Finish.** Verify successful execution of the file.

l. Activate your session, and add the description.

m. Navigate to **Resources** > **Practice_04** > **Shipping** > **Proxy Service** > and test the ShippingService proxy service.



n. Verify that the test runs successfully.