Oracle FLEXCUBE UBS Application Setup
Oracle FLEXCUBE Universal Banking
Release 11.3.0
[May] [2011]

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1. Setting up Application in Centralized Mode

1.1 Introduction

You can setup Oracle FLEXCUBE in three different modes:

- Centralized
- Decentralized
- Hybrid

In centralized mode, Oracle FLEXCUBE Host and Branch components are bundled together to generate a single Enterprise Application (EAR).This single EAR file is then deployed to an Enterprise Application Server.

This manual gives systematic instructions for setting up Oracle FCUBS Application in centralized mode.

1.2 Prerequisites

Following are the prerequisites for setting up the Application in centralized mode:

Queue and Connection Factories: If you wish to include the scheduler plug-in, you need to have the respective queue and connection factories in the Application Server.

For details on JMS Queue and JMS Connection Factory, refer to the chapter Resource Administration of this installation manual.

Oracle SOA: Oracle SOA is required for the application server 'WebLogic' with BPEL. Oracle SOA comes with a BPEL environment, which is mandatory for the BPEL process flow.

If you need to include report plug-in in the application, BIP Reports Server needs to be setup for generation of reports.

1.3 Preparing Source Folders

In order to create Oracle FCUBS Application with Reports, Scheduler, DMS and ELCM as plug-ins, you need to copy the following folders to the Source Directory.

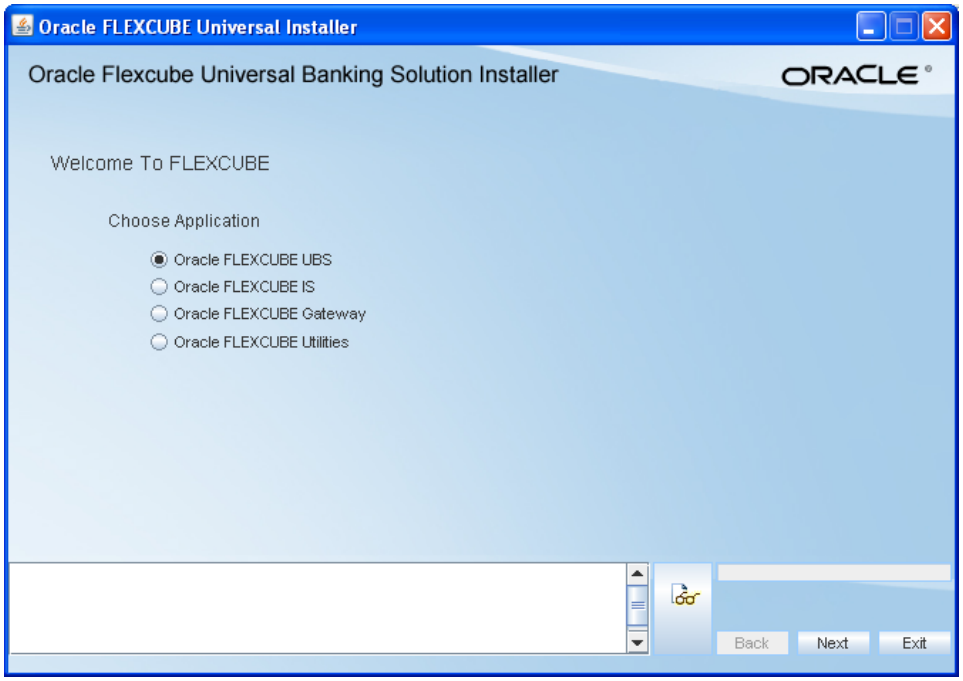
Folder	Destination Folder	Action
INFRA	Source_Dir/INFRA	Copy the INFRA folder from Shipment media to the Source Directory.
MAIN	Source_Dir/MAIN	Copy the entire MAIN folder from Shipment media into the Source Directory. This is optional. The purpose of copying entire MAIN folder into source directory is that,

		Installer can copy all JS and UIXML files at the time of EAR creation itself. Otherwise,after building the EAR and deploying it in the Application Server, all the JS and UIXML units can be copied manually to Application folder.
ELCM	Source_Dir/ ELCM	Copy the ELCM folder from Shipment media to the Source Directory.
ADAPTERS	Source_Dir/ ADAPTERS	Copy the ADAPTERS folder from Shipment media to the Source Directory.
BPEL	Source_Dir/BPEL	Copy the BPEL folder from Shipment media to the Source Directory.

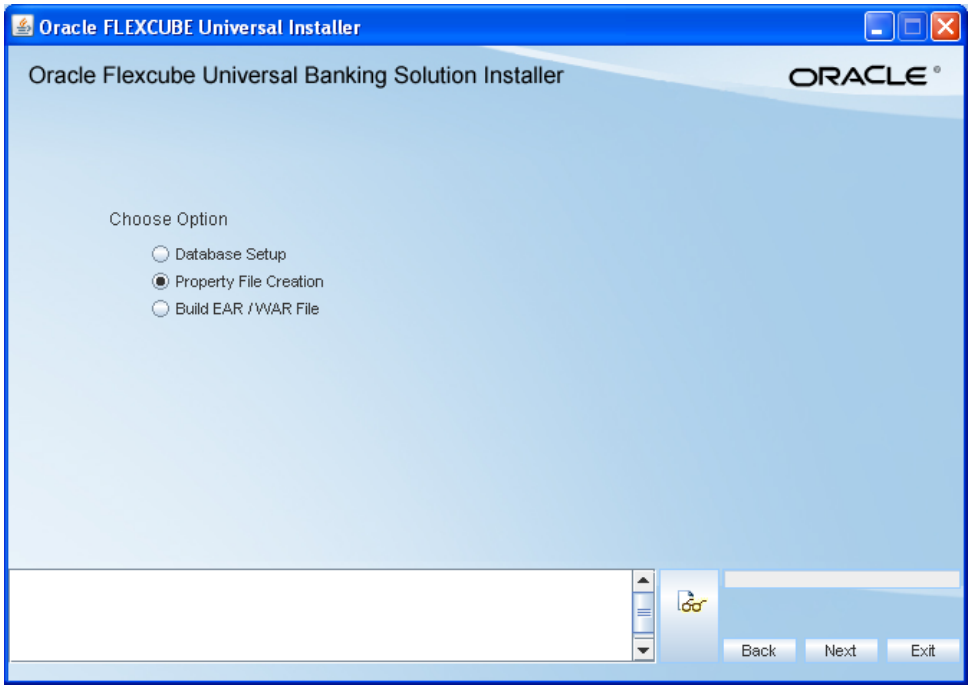
1.4 Building Application for Setup

To build the application for setup using the installer, follow the steps given below.

1. Double-click 'FCUBSInstaller.bat' batch file to launch Oracle FLEXCUBE Universal Installer. The following screen is displayed.



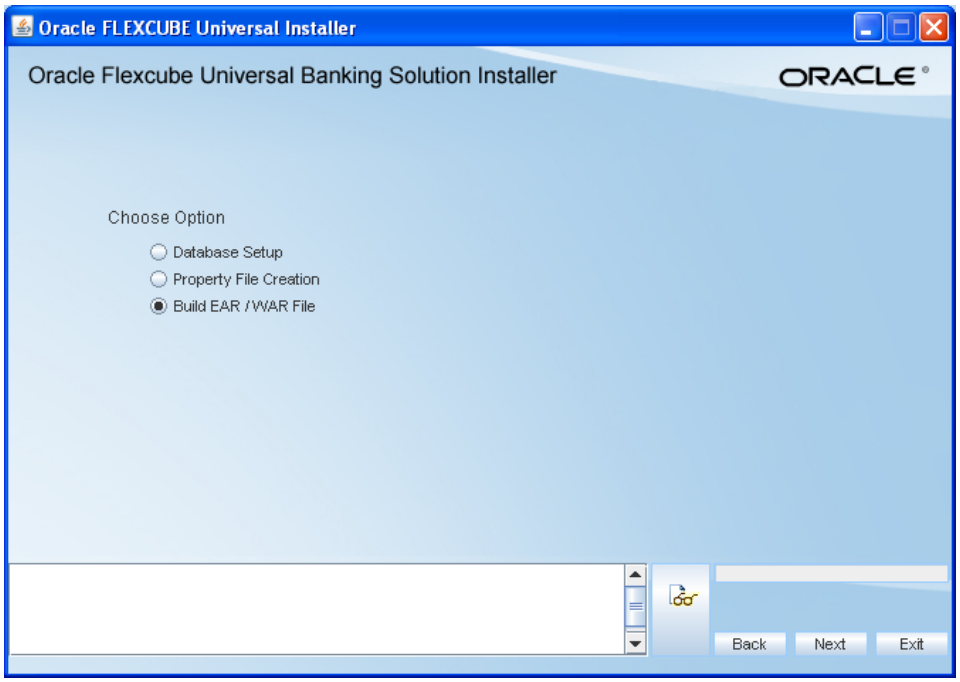
2. You need to select the application to be installed. Choose 'Oracle FLEXCUBE UBS' and click 'Next' to proceed. The screen in displayed.



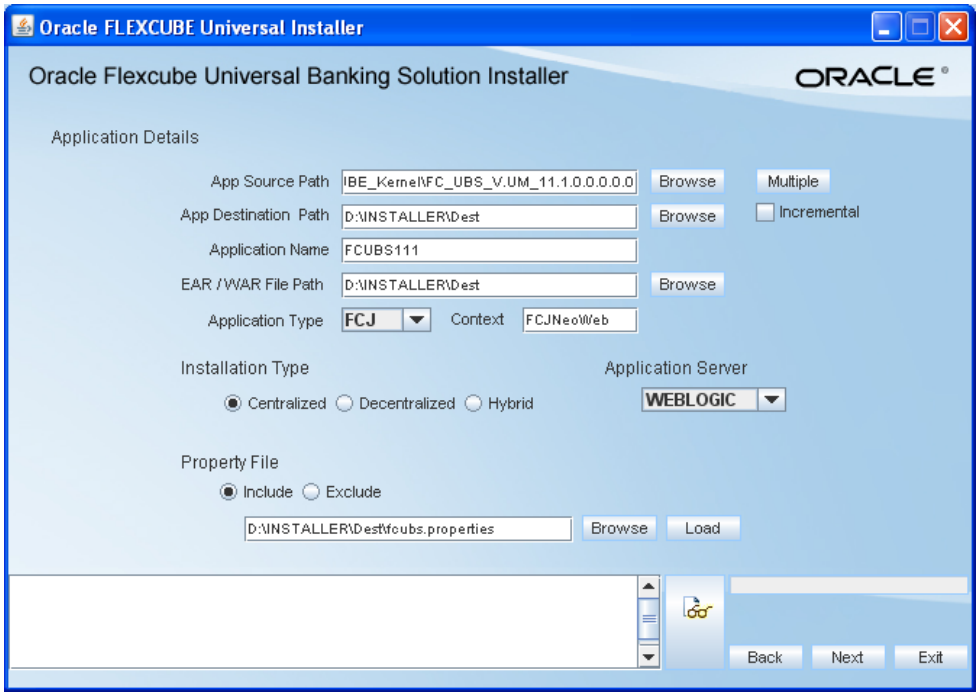
3. Choose the option ‘Property File Creation’ and click ‘Next’ to proceed.

   Refer to the chapter ‘Creating Property File for FCJ Application’ for details on the method of setting up and modifying property files.

4. The following screen is displayed.



5. Choose the option ‘Build EAR/WAR File’ and click ‘Next’ to continue. You will be prompted to specify the application details in the following screen.



6. Specify the Application Details as given below:

App Source Path

Specify the location of the application source directory. The source directory will have the following folders:

- INFRA (Copied from Shipment media)
- MAIN (Copied from Shipment media) (optional)
- Other Folders (Based on the plug-ins selected)

Use the ‘Browse’ button to browse and select the source directory.

Use the ‘Multiple’ button to use multiple source directories.

Refer to the section ‘Using Multiple Source Directories’ for details on using multiple source directories. This is not required for creating EAR for FCUBS11.0.

App Destination Path

Specify the location where the application should be setup. The installer will copy the source files from the App Source Path to the App Destination Path.

Use the ‘Browse’ button to browse and select the destination directory.

Incremental

If you are already using one version of FCUBS application and wants to upgrade to the next supported version, you may go for an incremental installation.

Refer to the section ‘Installing Incremental Source Files’ for details on incremental installation.

Application Name

Specify a name for the Application to be deployed.

You cannot use special characters such as '.' (dot), ',' (comma), '$' etc. However, you may use '_' (underscore).

EAR/WAR File Path

You can set a different location for saving the EAR files. Specify the path to the location at which the EAR files should be generated.

Eg: D:\Installer\Dest\EAR

Use the 'Browse' button to browse and select the EAR/WAR directory.

Application Type

Choose the application type for EAR. Choose the value FCJ.

Context

Based on the Application type selected, the Installer displays the application context. However, you may modify the default value.

This information will be updated in 'application.xml'. In case of a WebLogic server, this will be updated in 'weblogic.xml'.

Installation Type

Specify the installation type. You can choose one of the following options:

- **Centralized**: Choose this if you require centralized installation.
- **Decentralized**: Choose this if you require decentralized installation. In this case, Installer generates the following files at the end of the build process:
  - {Application_name}.ear – This can be deployed as Decentralized Host Application
  - {Application_name}.war – This can be deployed as Decentralized Branch Application
- **Hybrid**: Choose this if you require Hybrid Installation. In this case, the Installer generates the following files at the end of the build process:
  - {Application_name}.ear - This can be deployed as Decentralized Host Application
  - {Application_name}.war This can be deployed as Decentralized Branch Application

Application Server

Choose the application server for EAR. The drop-down list displays the following options:

- WebLogic
- WebSphere

Property File

You may include a property file into the EAR file. Select 'Include' and specify the location of the property file. The installer will include the property file in the EAR.

You can also exclude a property file being used in EAR. Select 'Exclude' and specify the location of the property file. The installer will exclude the property file from the EAR.

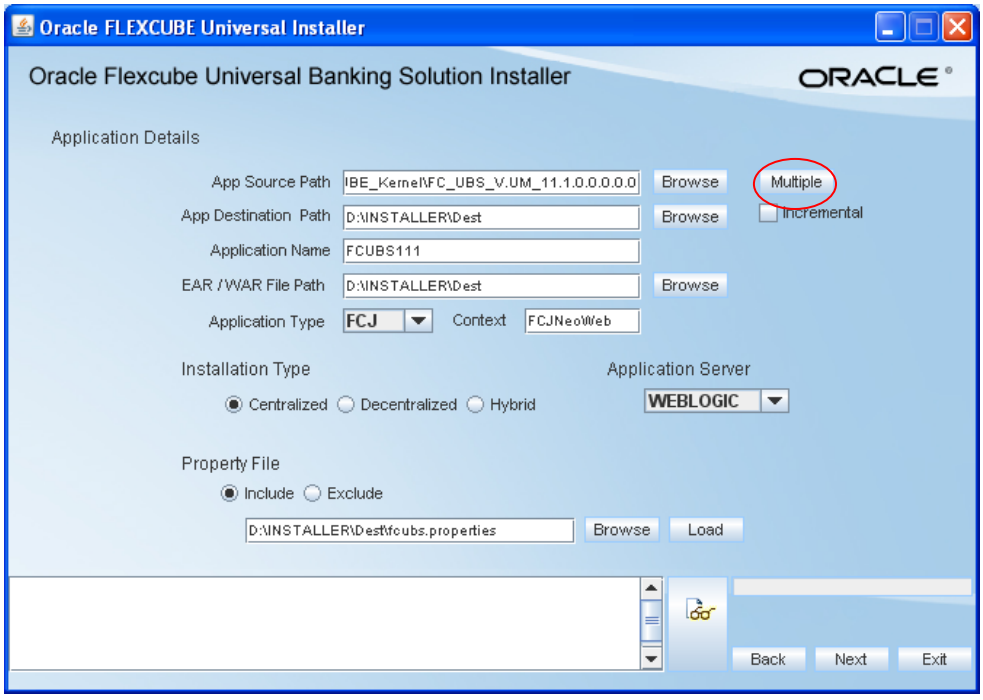
Use the 'Browse' button to browse and select the property file.

Use the 'Load' button to load the property file for inclusion/exclusion.

Decentralized/Hybrid Setup: The Installer creates 'HOST' and 'BRANCH' folders while creating property file. Select 'Include' and specify the location of the parent directory of HOST and BRANCH folders. The host properties file under the folder 'HOST' will be included in {Application_name}.ear file. The branch properties file under the folder 'BRANCH' will be included in {Application_Name}.war file.

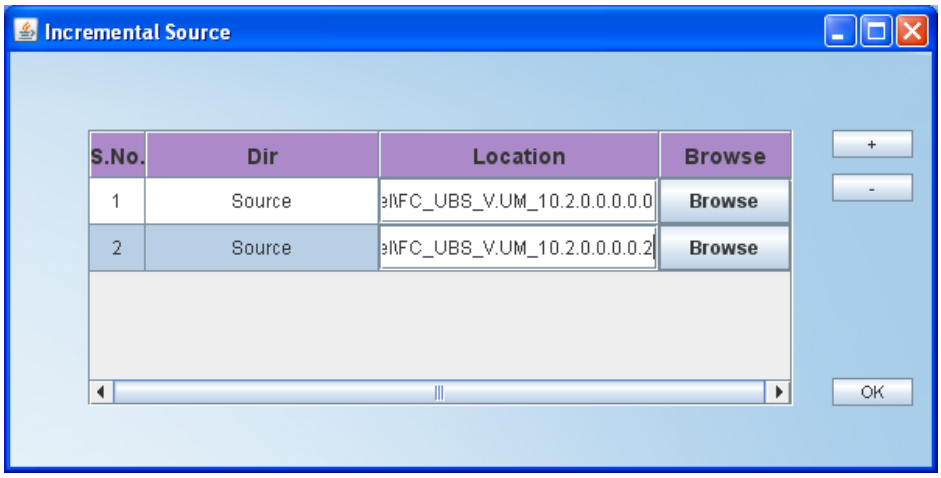
1.4.1 Using Multiple Source Directories

1. You can specify multiple source directories using 'Multiple' button.Invoke Oracle FLEXCUBE Installer and follow the steps from 1 to 4 as explained under Building 'Application for Setup'.



2. Specify the locations of the source and the destination directories.
3. Click 'Multiple' button.

4. The ‘Incremental Source’ screen is displayed.



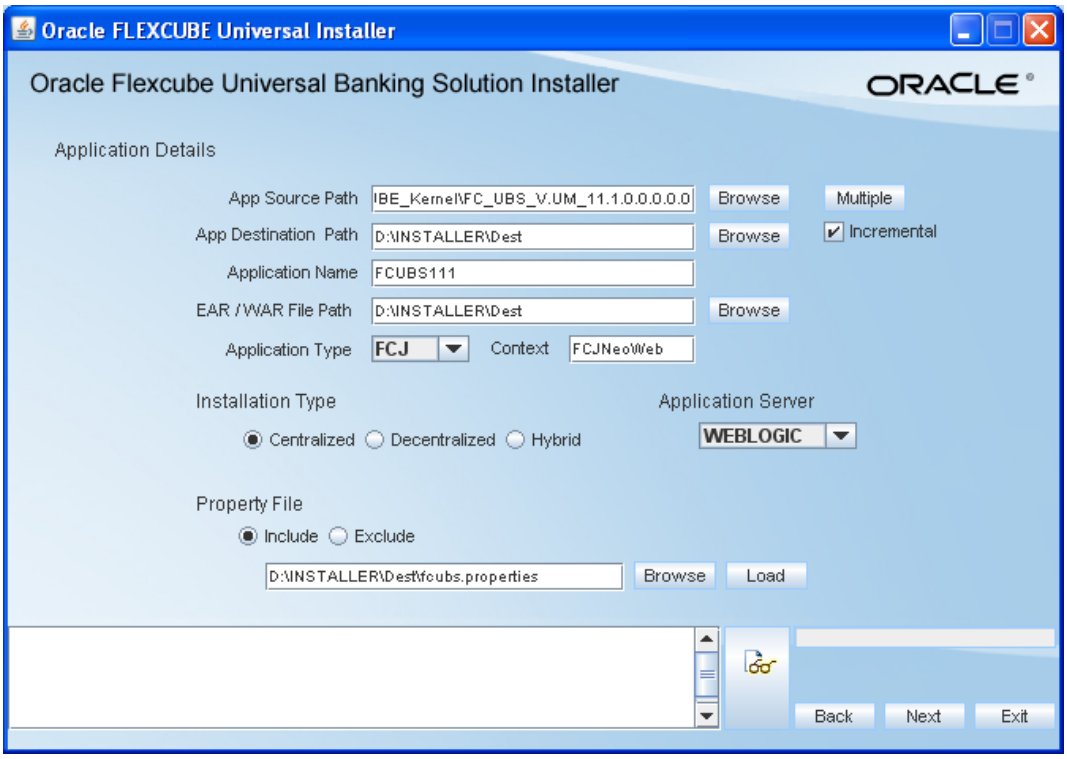
5. You can add multiple source directories using ‘+’ button. You may also delete a row from the list using ‘-‘ button.
6. Use ‘Browse’ button to browse the source directory.
7. Click ‘OK’ button. The Installer will copy the sources from the multiple locations into the destination directory. You can have consolidated sources in the destination directory.

1.4.2 Installing Incremental Source Files

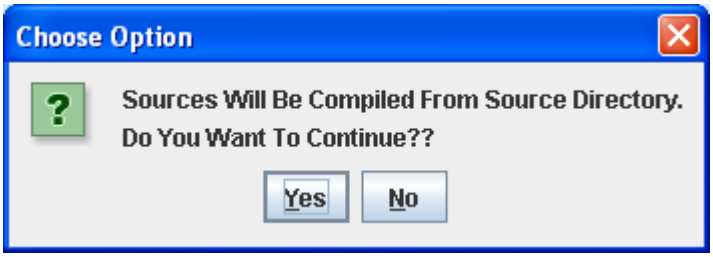
If you are already using one version of FCUBS application and wants to upgrade to the next supported version, you may go for an incremental installation. This can be used in the following situations:

- Upgrade from FCUBS 10.2.0.0.0.0.0 to FCUBS 10.2.0.0.0.0.2
- Complete the list

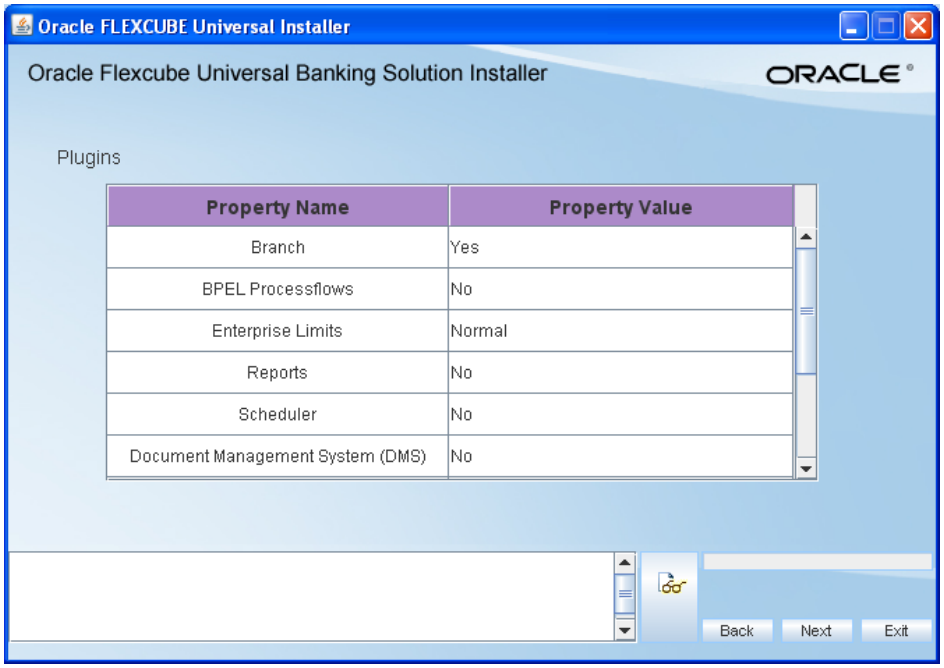
1. Invoke Oracle FLEXCUBE Installer and follow the steps from 1 to 4 as explained under Building ‘Application for Setup’.



2. Specify the locations of the source directory.
3. Against ‘App Destination Path’, specify the location where you have the older version of FCUBS installed.
4. Check the box ‘Incremental’ and click ‘Next’. The following screen will be displayed.



5. Click ‘Yes’. You will be navigated back to ‘Oracle FLEXCUBE Universal Installer’ screen. Click ‘Next’. The following screen is displayed:

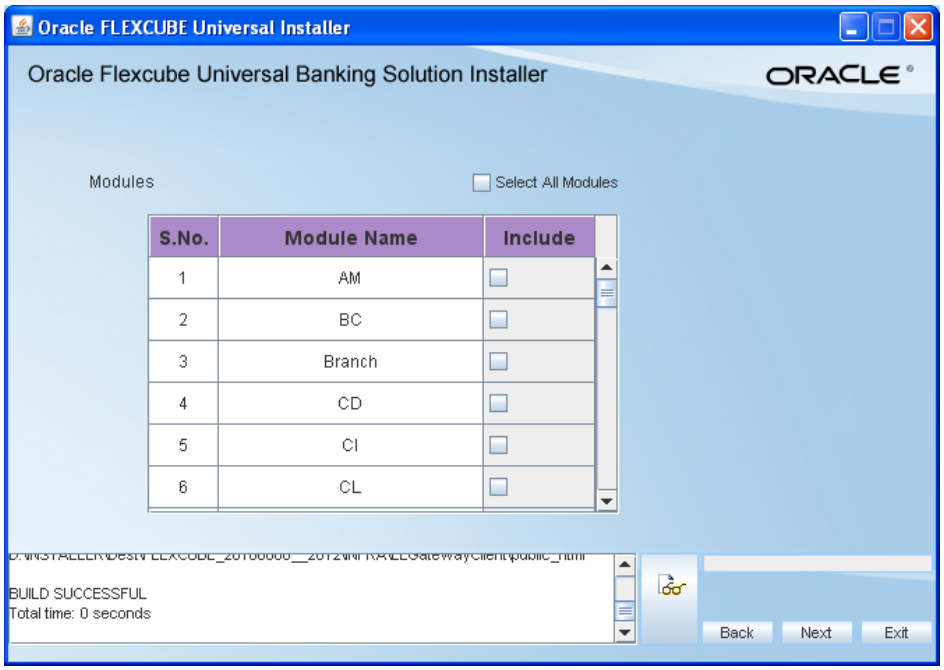


This screen displays the plug-in details.

You cannot modify the plug-in details from this screen. In order to modify the plug-in details, you need to create a new property file and load it.

Make sure that the source folder pertaining to the selected plug-in exists in the source directory.

6. Click ‘Next’. The system displays the module selection screen.



7. Select the modules to be included.
   On including the modules, the Installer copies the following files from source folder to the destination folder if the module is available in the MAIN folder of the Source Directory.

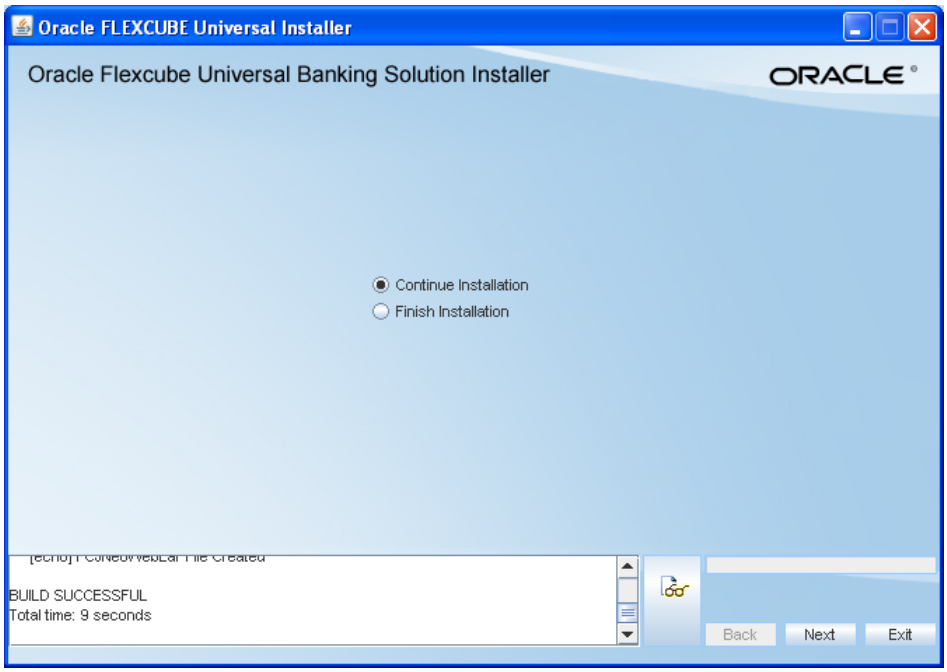
   - All the JS files from MAIN/<Module>/JS to the folder INFRA/FCJNeoWeb/WebContent/Script/JS in the destination directory
   - All the XML files from MAIN/<Module>/ UIXML/ENG/ to the folder INFRA/FCJNeoWeb/WebContent/UIXML/ENG in the destination directory
   - All the files from MAIN/<Module>/ Advice to the folder INFRA/FCJNeoWeb/WebContent/Advice in the destination directory

   If the Main folder is not copied to the Source Directory, then, after deployment of EAR file, you need to manually copy these files into the deployed location.

   Note: For **decentralized setup**, you need to select the **BRANCH module** only. The Branch related units will be copied to the .war file.

8. Click 'Next'. The Oracle FLEXCUBE Installer builds the EAR file.

9. Click 'Next'. The following screen is displayed.



10. You need to choose one of the following actions:

    - Continue Installation: Select this option to continue the FCUBS installation activities.
    - Finish Installation: Select this option to terminate the Installer Application.

The EAR file will be available in selected EAR file location. If you have opted for BPEL, then FCBPELCIS.jar file will also be available in the EAR file locationwhich is present in the destination location.

In case of decentralized or hybrid setup, EAR files for the Host and WAR file for the Branch will be available in EAR file location.

2. Pre-Deployment Tasks

2.1 Introduction

You need to carry out certain tasks manually before Oracle FLEXCUBE deployment. This chapter details out the pre-deployment tasks based on the on the selected plug-ins.

2.2 Integrating Oracle FLEXCUBE UBS and BPEL

If you have created the EAR file with BPEL as a plug-in, then along with the Oracle FLEXCUBE UBS EAR file, the Installer creates 'FCBPELCIS.jar' file. You need to complete the following tasks before deploying Oracle FLEXCUBE UBS EAR file.

2.2.1 Configuring JPS

For configuring JPS, you need to follow the steps given below:

1. Go to the location – '<ORACLE_HOME>\Middleware\user_projects\domains\<Domain_created>\config\fmwconfig'

   Open 'jps-config.xml' file. Search for '<serviceProviders>' tag and add the following code between '<serviceProviders>' and '</serviceProviders>' tags.

   ```
   <serviceProvider
   class="com.ofss.fcc.bpel.security.jps.service.FCIdentityServiceProvider"
   name="idstore.db.provider" type="IDENTITY_STORE">

   <description>DB IdentityStore Provider</description>

   </serviceProvider>
   ```

   Similarly, Search for '<serviceInstances>' tag and add the following code between '<serviceInstances>' and '</serviceInstances>' tags.

   ```
   <serviceInstance provider="idstore.db.provider" name="idstore.db">

       <property value="flexcube" name="subscriber.name"/>

       <property value="jdbc/fcjdevDS" name="datasource"/>

   </serviceInstance>
   ```

   Note : Make sure that the JNDI (jdbc/fcjdevDS) matches the value given during property file creation.

   Search for '<jpsContexts default="default">' tag and add the following code between '<jpsContexts default="default">' and '</jpsContexts>', preferably after the default 'jpsContext'.

   ```
   <jpsContext name="flex">

               <serviceInstanceRef ref="credstore"/>
   ```

<serviceInstanceRef ref="keystore"/>

<serviceInstanceRef ref="policystore.xml"/>

<serviceInstanceRef ref="audit"/>

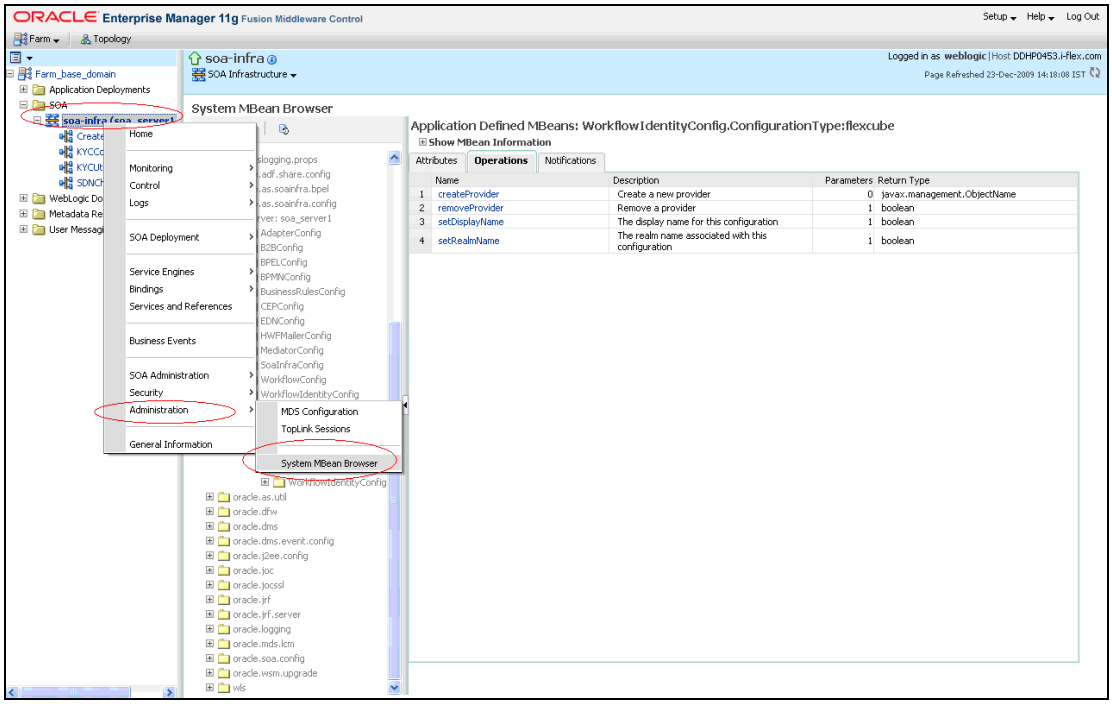
<serviceInstanceRef ref="idstore.db"/>

</jpsContext>

2.2.2 Configuring Work Flow Identity

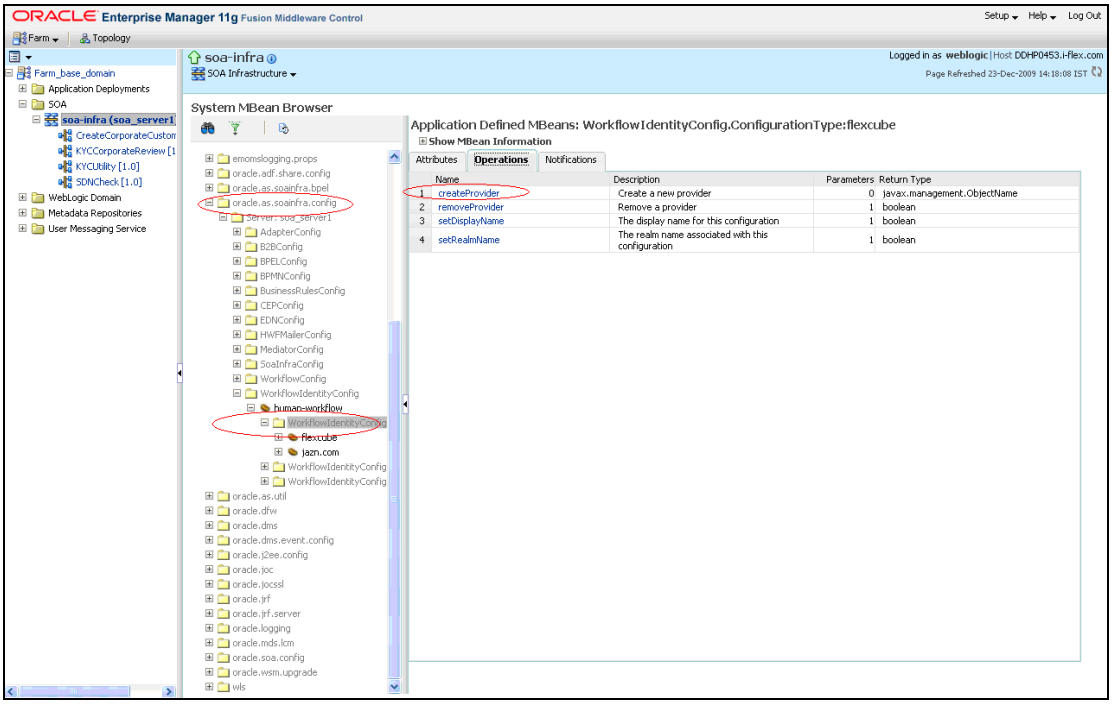
You need to configure the workflow identity details from Enterprise Manager Console of the SOA. To configure workflow identity details, follow the steps given below.

1. Login to EM Console. Expand the SOA.

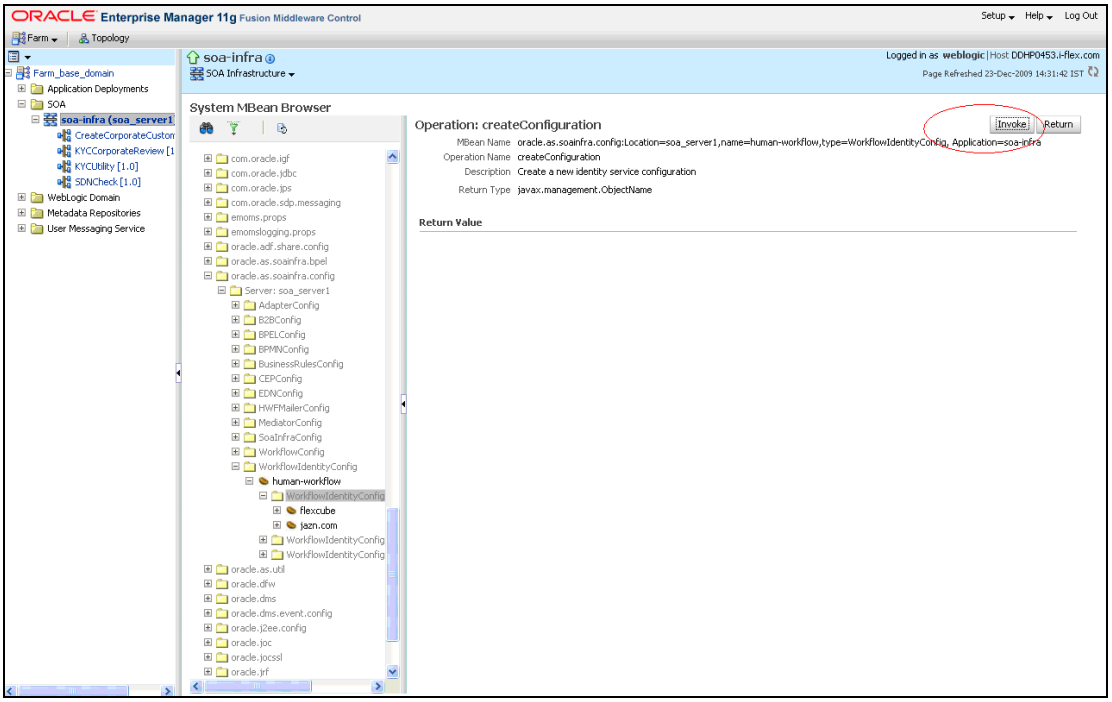


Right click ‘soa-infra(soa-server1)’, choose ‘Administration’ and click ‘System MBean Browser’ under it.

2. Further, under System MBean Browser, go to ‘oracle.as.soainfra.config > Server: soa_server1 > WorkflowIdentityConfig > human-workflow’.

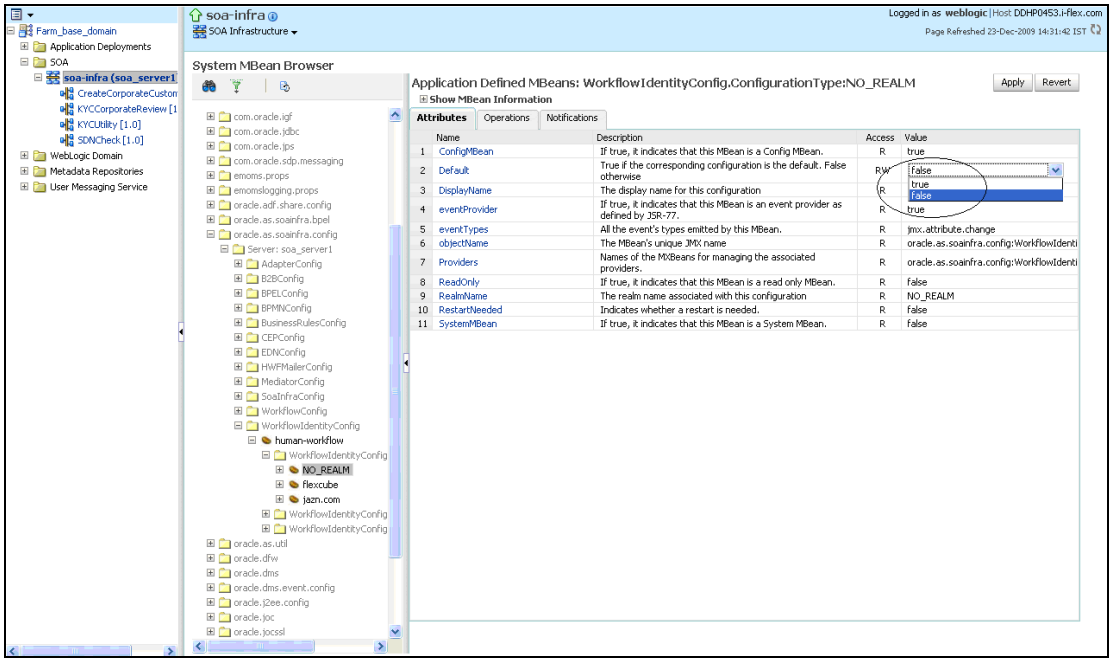


3. Under the ‘Operations’ tab, choose ‘createProvider’ option. The following screen is displayed.



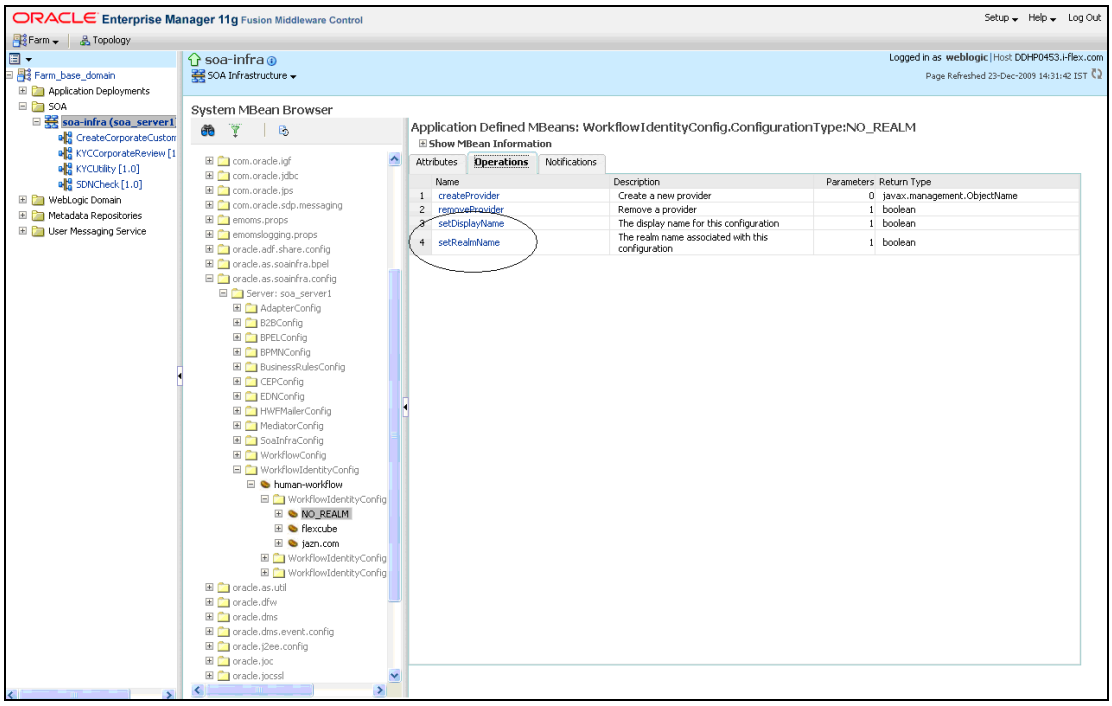
4. Click ‘Invoke’ button. The SOA displays the following confirmation message.
Confirmation
Operation executed successfully.

5. Refresh ‘MBean’ browser. Go to ‘WorkflowIdentityConfig.ConfigurationType’ under ‘human-workflow’.

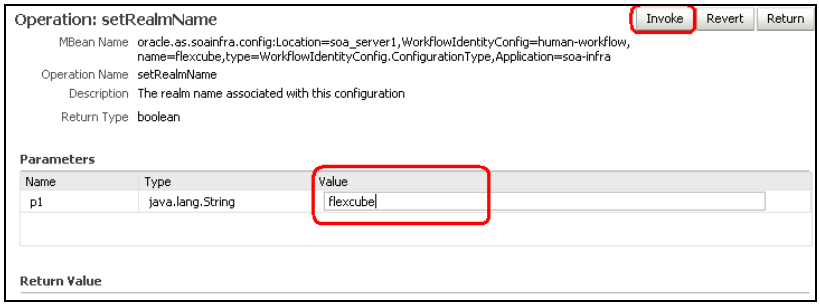


6. Click ‘NO_REALM’. On the right side, select ‘Attributes’ tab and change the value of ‘Default’ from NO_REALM to ‘true’.

7. Further, under the ‘Operations’ tab, click ‘setRealmName’.



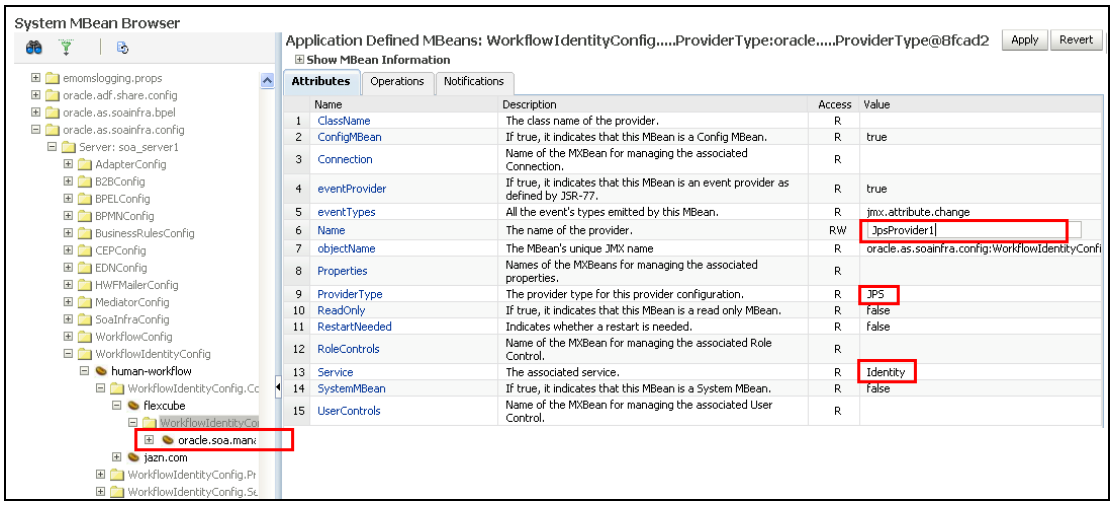
The following screen is displayed:



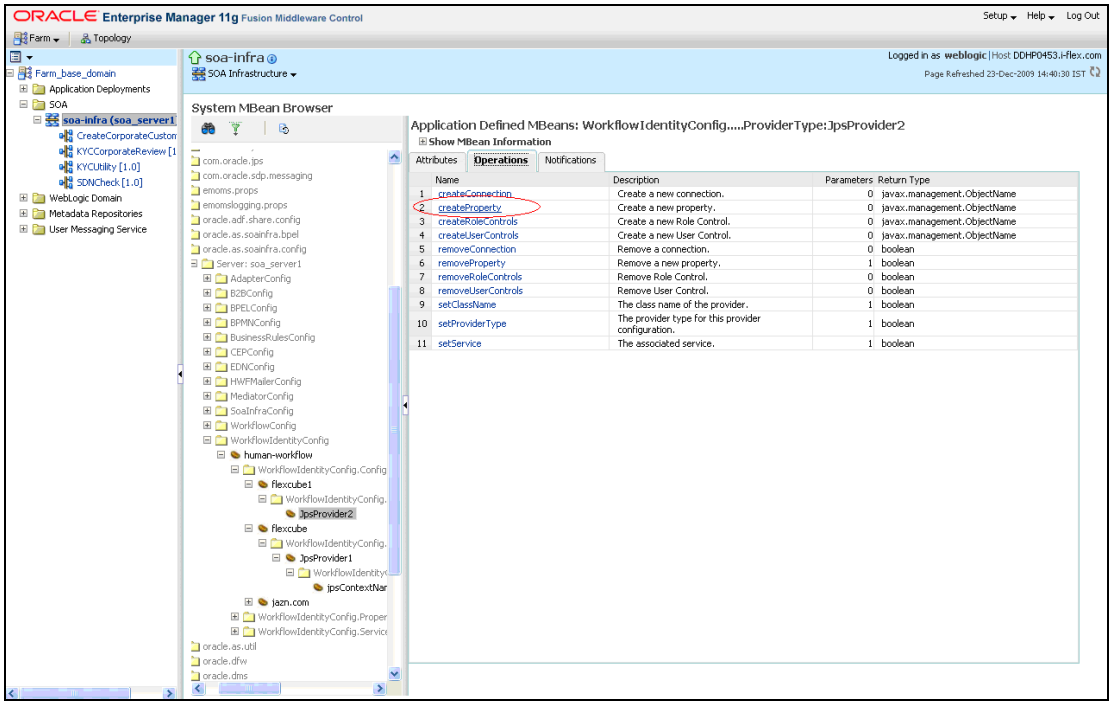
8. Specify the value of the parameter as ‘flexcube’ and click ‘Invoke’ button.

9. Refresh the ‘MBean’ browser. Go to flexcube > WorkflowIdentityConfig.ConfigurationType.ProviderType > oracle.soa.management.config.identity.ProviderType@.... Under the ‘Attributes’ tab, you need to make sure that the values of the following attributes are as per the table below:

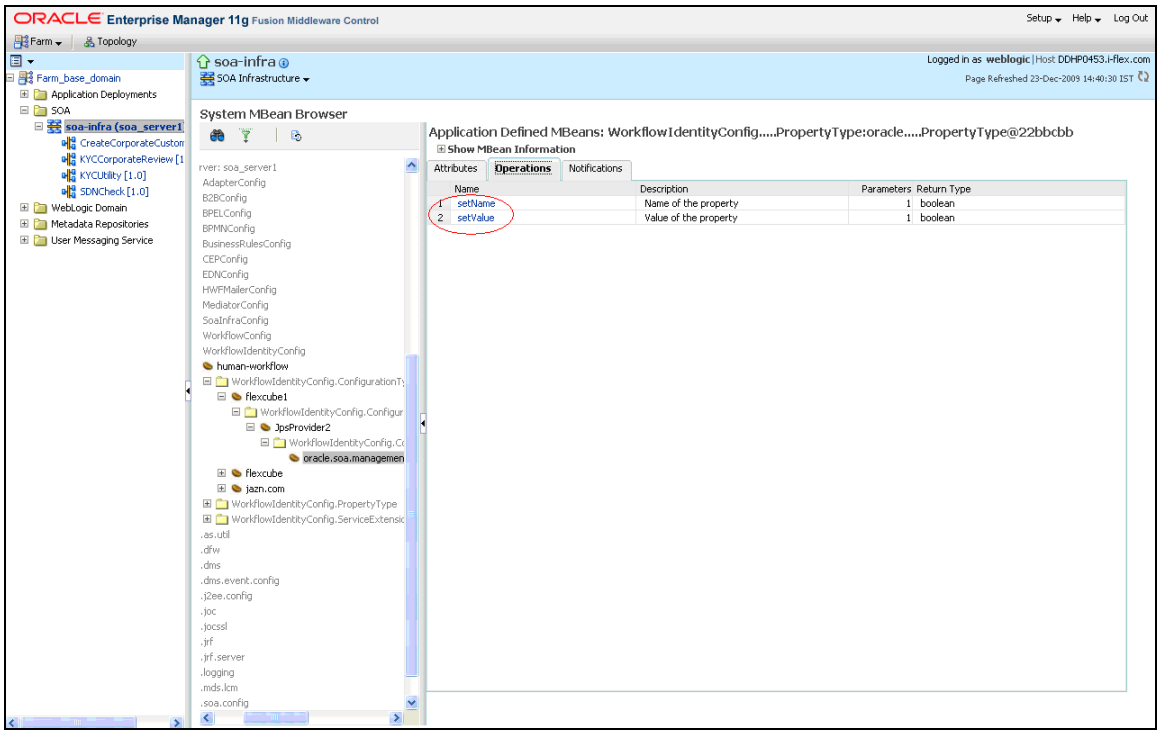
Attribute	**Value**
Name	JpsProvider1
PropertyType	JPS
Service	Identity



10. Under ‘Operations’ tab, select the operation ‘CreateProperty’ and click ‘Invoke’ button. A new Property is created under ‘JpsProvider1’.



11. Select the new property and change its Name and Value.

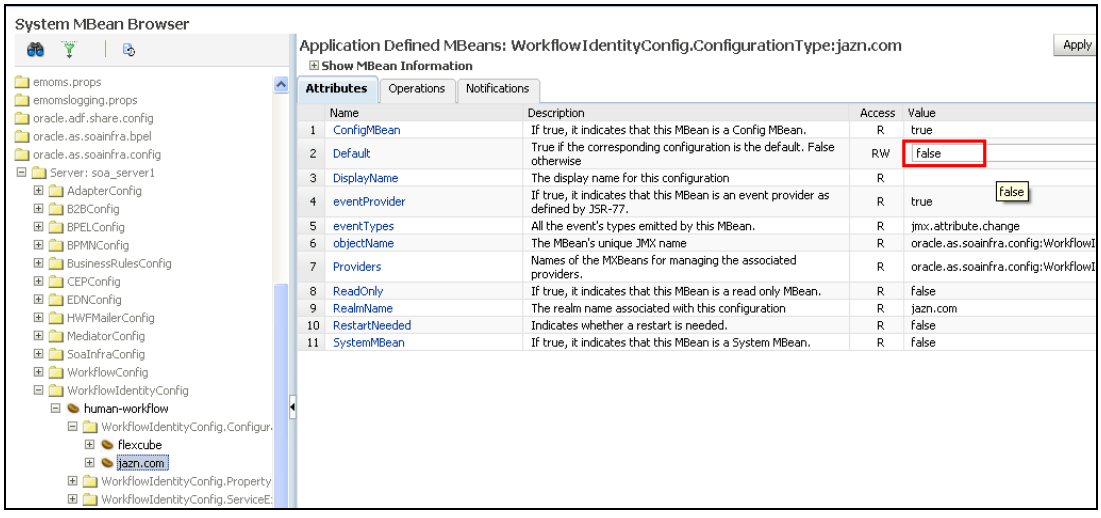


You can use the options ‘setName’ and ‘setValue’ to update the name and value. Change the name and value as per the following table.

Name	**Value**
jpsContextName	flex

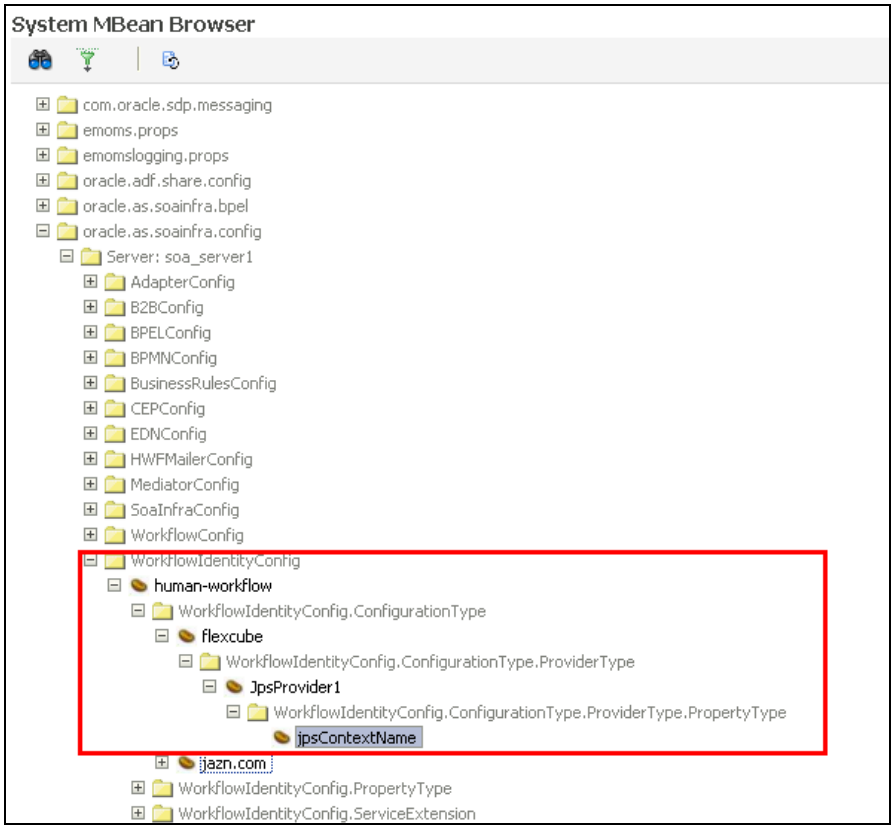
Note: the value ‘flex’ should match the value given for ‘jpsContext’ during JPS configuration.

12. From the ‘System MBean Browser’ select ‘jazn.com’.

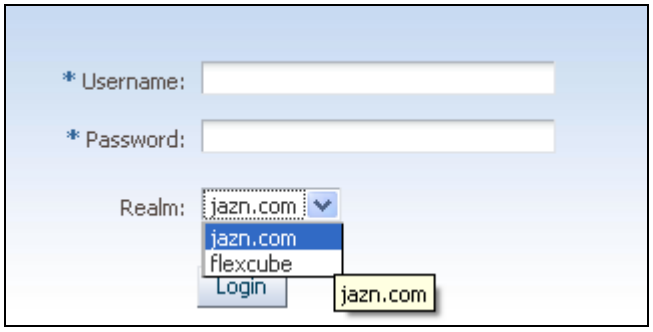


13. Under ‘Attributes’ tab, change the value of the attribute ‘Default’ to ‘false’.

14. Now, restart the Weblogic and SOA servers. After restarting the servers, make sure the structure is as follows.



15. Launch the 'SOA Worklist App' using the following URL:
http://(IP_Address):(soa_server-port_no)/integration/worklistapp
You will get the login page.



16. Under Realm, the drop-down list should show the options 'flexcube' and 'jazn.com'. Verify the details.

2.2.3 Configuring CIS

You need to configure the CIS details. Follow the steps given below:

1. Along with the Oracle FLEXCUBE UBS EAR file, the Installer creates 'BPELCIS.jar' file.

2. Open ‘BPELCIS.jar’ file. Further, open ‘CIS.Properties’ file available under the folder ‘com\ofss\fcc\bpel\cac’.
3. Set the value ‘JNDI.name’ to the JNDI name given during Property file creation.
4. The ‘BPELCIS.jar’ file will be placed in the server at ‘<MIDDLEWARE_HOME>Oracle_SOA1\soa\modules\oracle.soa.ext_11.1.x’.
5. Run the command ‘ant’ from ‘<MIDDLEWARE_HOME>Oracle_SOA1\soa\modules\oracle.soa.ext_11.1.1’. This command uploads the entry of ‘FCBPELCIS.jar’ in ‘oracle.soa.ext.jar’.
6. Once the above steps are completed, restart the server.

2.3 Integrating Oracle FLEXCUBE UBS and Scheduler

Before deploying the Oracle FLEXCUBE UBS EAR file, you need to carry out the following tasks.

2.3.1 Running Backend Scripts

You need to compile certain tables pertaining to Scheduler in the schema to which the Application points. The version of Quartz to be used depends on the Managed Server. If the Application is being deployed on a Managed Server which is SOA, then you need to use Quartz 1.6.0. In other cases, you may compile Quartz 1.4.4 scripts.

Follow the steps given below:

1. Download Quartz1.6.6.zip file from the following URL: http://www.quartz-scheduler.org/download/download-catalog.html
2. Extract the zip file.
3. Open the folder ‘Quartz-1.6.6\docs\dbTables’ folder and run ‘tables_oracle.sql’ (this is specific to Oracle Database) in the schema.

2.4 Integrating Oracle FLEXCUBE UBS and BIP Reports

You can integrate Oracle FLEXCUBE UBS and BIP reports. The details are available in the chapter 09-BIP_Webservices_Reports_Setup.doc.

2.4.1 Deploying Application Through Application Server’s Admin Console

Deployment from WebLogic Administration Console

You can find the details pertaining to the deployment of Application using WebLogic Administration Console in the chapter FCUBS_Application_WL.doc.

2.5 Integrating Oracle FLEXCUBE UBS and MBean

In order to integrate Oracle FLEXCUBE UBS and MBean, you need to follow the below steps before deploying the Oracle FLEXCUBE UBS EAR file created with MBean as a Plugin.

2.5.1 Startup Script Modification

By default, the TopLink used in MBean uses Oracle xml parser internally. However, WebLogic Server has to use JAXPlatform.

To change the system property, follow the steps given below:

1. Go to the WebLogic domain home folder.
2. Based on the operating system used, open 'startWebLogic.cmd' or 'startWebLogic.sh' from the folder 'bin'.
3. Search for 'WLS_REDIRECT_LOG'. After '%JAVA_OPTIONS%' add the following code under 'if' and 'else' conditions.

   "-Dtoplink.xml.platform=oracle.toplink.platform.xml.jaxp.JAXPPlatform"

   Now, the details will look like this:

```
if "%WLS_REDIRECT_LOG%"=="" (

   echo Starting WLS with line:

   echo %JAVA_HOME%\bin\java %JAVA_VM% %MEM_ARGS% -
Dweblogic.Name=%SERVER_NAME% -
Djava.security.policy=%WL_HOME%\server\lib\weblogic.policy
%JAVA_OPTIONS% %PROXY_SETTINGS% %SERVER_CLASS%

   %JAVA_HOME%\bin\java %JAVA_VM% %MEM_ARGS% -
Dweblogic.Name=%SERVER_NAME% -
Djava.security.policy=%WL_HOME%\server\lib\weblogic.policy
%JAVA_OPTIONS% -
Dtoplink.xml.platform=oracle.toplink.platform.xml.jaxp.JAXPPla
tform %PROXY_SETTINGS% %SERVER_CLASS%

) else (

   echo Redirecting output from WLS window to
%WLS_REDIRECT_LOG%

   %JAVA_HOME%\bin\java %JAVA_VM% %MEM_ARGS% -
Dweblogic.Name=%SERVER_NAME% -
Djava.security.policy=%WL_HOME%\server\lib\weblogic.policy
%JAVA_OPTIONS% -
Dtoplink.xml.platform=oracle.toplink.platform.xml.jaxp.JAXPPla
tform %PROXY_SETTINGS% %SERVER_CLASS%  >"%WLS_REDIRECT_LOG%"
2>&1

)
```

7. Restart the WebLogic server.

Oracle FLEXCUBE UBS Application Setup
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Version 11.3.0

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