

Setting up Plug-Ins
Oracle FLEXCUBE Investor Servicing
Release 12.0.3.0.0
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1. Setting up Plug-Ins

1.1 Introduction

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

1.2 Integrating Oracle FLEXCUBE IS and BPEL

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

1.2.1 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.FCIIdentityServiceProvider"
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="sIScriber.name"/>
```

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

```
</serviceInstance>
```



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

2. 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"/>

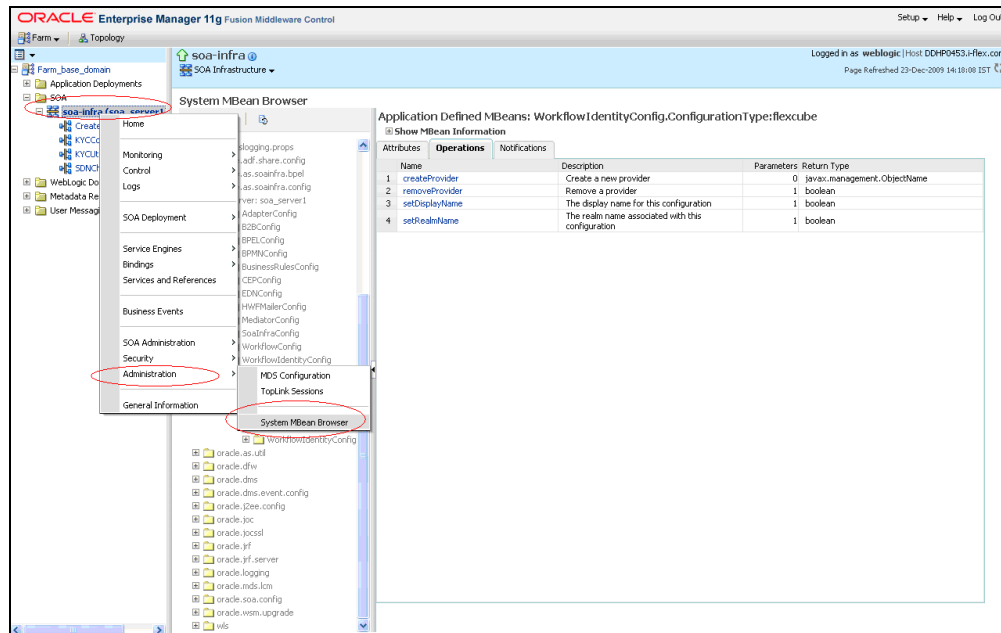
</jpsContext>

```

1.2.2 Configuring Work Flow Identity

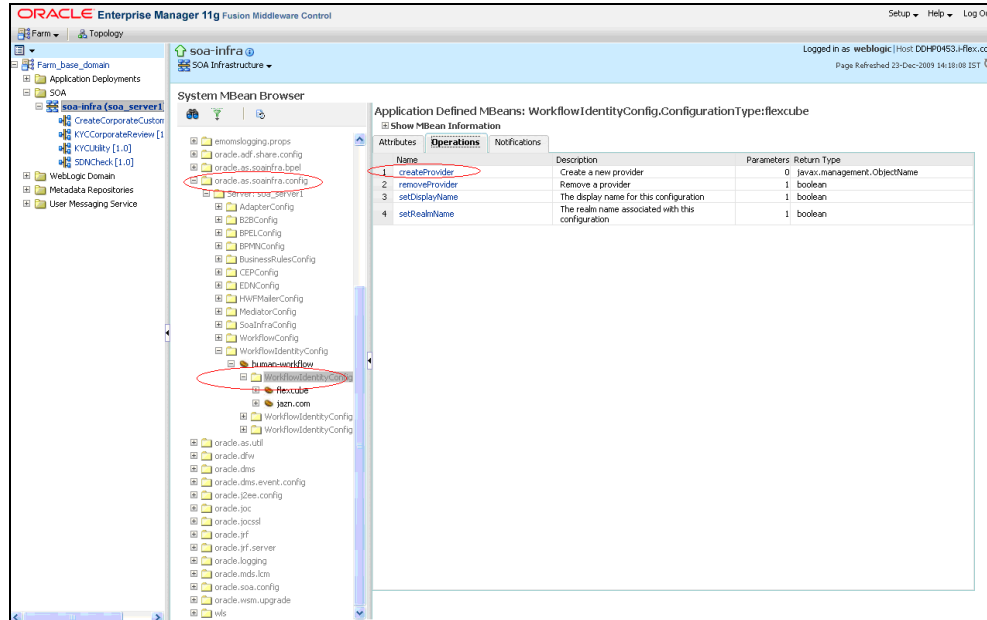
You need to configure the workflow identity details from Enterprise Manager Console of the SOA. To configure workflow identity details, follow the steps given below.

1. Login to EM Console. Expand the SOA.

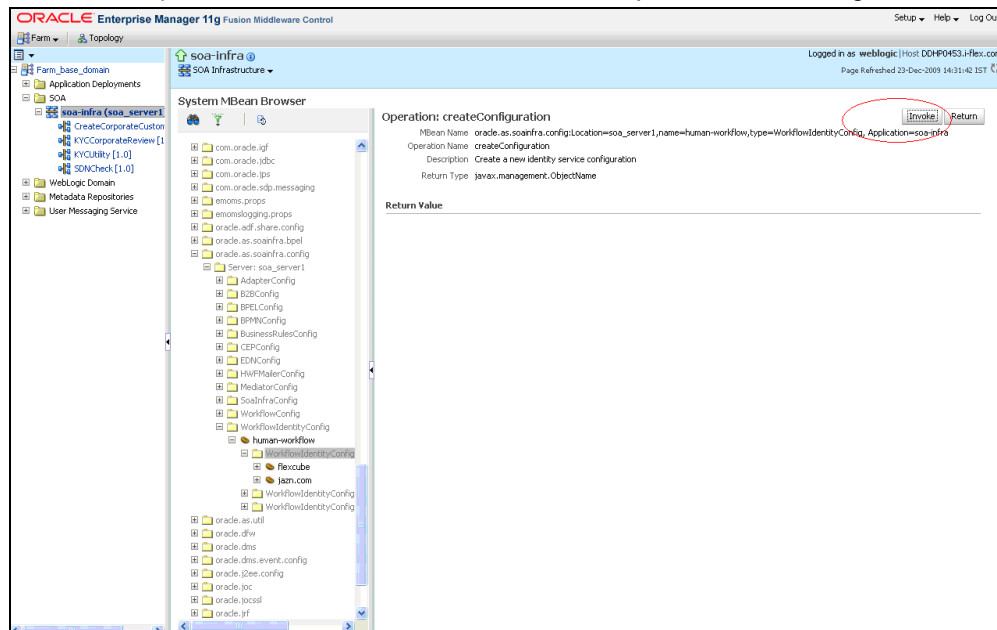


2. Right click 'soa-infra(soa-server1)', choose 'Administration' and click 'System MBean Browser' under it.

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



- Under the 'Operations' tab, choose 'createProvider' option. The following screen is displayed.



- Click 'Invoke' button. The SOA displays the following confirmation message.

Confirmation
Operation executed successfully.

- Refresh 'MBean' browser. Go to 'WorkflowIdentityConfig.ConfigurationType' under 'human-workflow'.

System MBean Browser

Application Defined MBeans: WorkflowIdentityConfig.ConfigurationType:NO_REALM

Name	Operations	Notifications	Access	Value
1. ConfigMBean			R	true
2. Default			R	true
3. DisplayName			R	true
4. eventProvider			R	true
5. eventTypes			R	java.attribute.change
6. objectName			R	oracle.as.soainfra.config.WorkflowIdentityConfig
7. Providers			R	oracle.as.soainfra.config.WorkflowIdentityConfig
8. ReadOnly			R	false
9. RealmName			R	NO_REALM
10. RestartNeeded			R	false
11. SystemMBean			R	false

- Click 'NO_REALM'. On the right side, select 'Attributes' tab and change the value of 'Default' from NO_REALM to 'true'.
- Further, under the 'Operations' tab, click 'setRealmName'.

System MBean Browser

Application Defined MBeans: WorkflowIdentityConfig.ConfigurationType:NO_REALM

Name	Description	Parameters	Return Type
1. createProvider	Create a new provider	0 java.management.ObjectName	
2. removeProvider	Remove a provider	1 boolean	
3. setDisplayName	The display name for this configuration	1 boolean	
4. setRealmName	The realm name associated with this configuration	1 boolean	

9. The following screen is displayed:

Operation: setRealmName

MBean Name: oracle.as.soainfra.config:Location=soa_server1,WorkflowIdentityConfig=human-workflow,name=flexcube,type=WorkflowIdentityConfig.ConfigurationType,Application=soa-infra

Operation Name: setRealmName

Description: The realm name associated with this configuration

Return Type: boolean

Name	Type	Value
p1	java.lang.String	flexcube

Return Value

10. Specify the value of the parameter as 'flexcube' and click 'Invoke' button.

11. 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

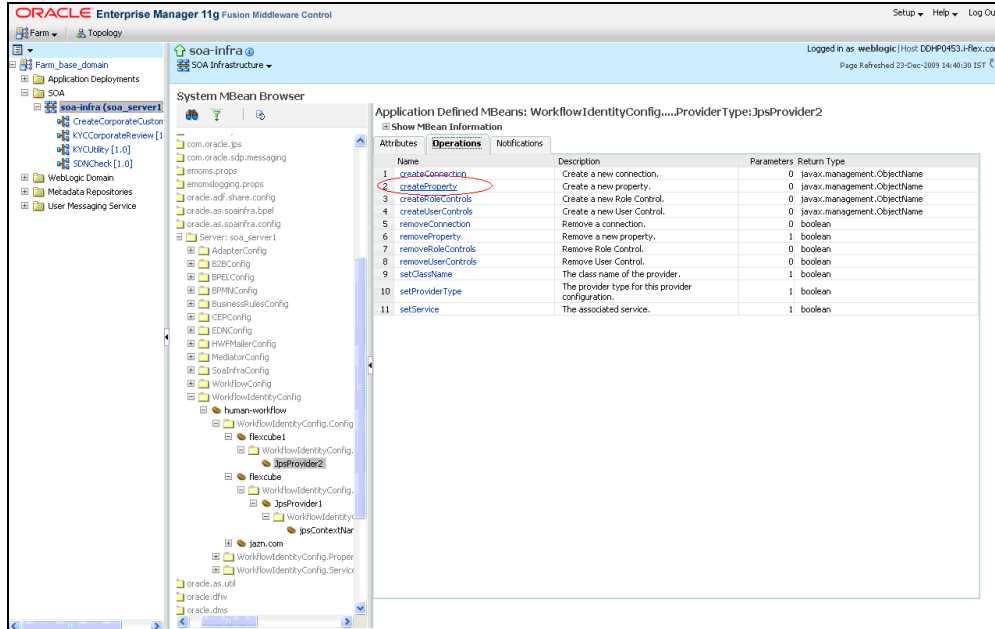
System MBean Browser

Application Defined MBeans: WorkflowIdentityConfig.....ProviderType:oracle.....ProviderType@Bfcad2

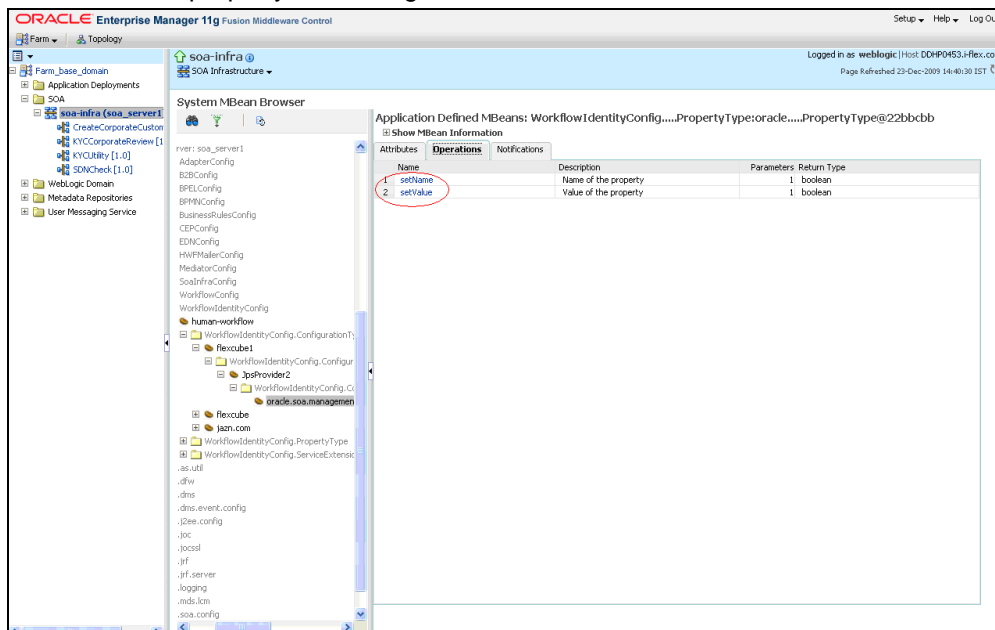
Show MBean Information

Name	Description	Access	Value
1 ClassName	The class name of the provider.	R	
2 ConfigMBean	If true, it indicates that this MBean is a Config MBean.	R	true
3 Connection	Name of the MBean for managing the associated Connection.	R	
4 eventProvider	If true, it indicates that this MBean is an event provider as defined by JSR-77.	R	true
5 eventTypes	All the event's types emitted by this MBean.	R	jmx.attribute.change
6 Name	The name of the provider.	RW	JpsProvider1
7 objectName	The MBean's unique JMX name	R	oracle.as.soainfra.config:WorkflowIdentityConfig=human-workflow,name=flexcube,type=WorkflowIdentityConfig.ConfigurationType,Application=soa-infra
8 Properties	Names of the MBeans for managing the associated properties.	R	
9 ProviderType	The provider type for this provider configuration.	R	JPS
10 ReadOnly	If true, it indicates that this MBean is a read only MBean.	R	false
11 RestartNeeded	Indicates whether a restart is needed.	R	false
12 RoleControls	Name of the MBean for managing the associated Role Control.	R	
13 Service	The associated service.	R	Identity
14 SystemMBean	If true, it indicates that this MBean is a System MBean.	R	false
15 UserControls	Name of the MBean for managing the associated User Control.	R	

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



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



14. 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



The value 'flex' should match the value given for 'jpsContext' during JPS configuration.

15. From the 'System MBean Browser' select 'jazzn.com'.

System MBean Browser

Application Defined MBeans: WorkflowIdentityConfig.ConfigurationType:jazzn.com

Show MBean Information

Name	Description	Access	Value
1 ConfigMBean	If true, it indicates that this MBean is a Config MBean.	R	true
2 Default	True if the corresponding configuration is the default. False otherwise	RW	false
3 DisplayName	The display name for this configuration	R	
4 eventProvider	If true, it indicates that this MBean is an event provider as defined by JSR-77.	R	true
5 eventTypes	All the event's types emitted by this MBean.	R	jmx.attribute.change
6 objectName	The MBean's unique JMX name	R	oracle.as.soainfra.config:WorkflowI
7 Providers	Names of the MBeans for managing the associated providers.	R	oracle.as.soainfra.config:WorkflowI
8 ReadOnly	If true, it indicates that this MBean is a read only MBean.	R	false
9 RealmName	The realm name associated with this configuration	R	jazzn.com
10 RestartNeeded	Indicates whether a restart is needed.	R	false
11 SystemMBean	If true, it indicates that this MBean is a System MBean.	R	false

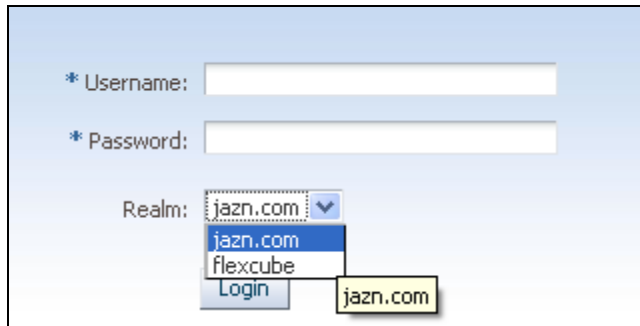
16. Under 'Attributes' tab, change the value of the attribute 'Default' to 'false'.

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

System MBean Browser

- com.oracle.sdp.messaging
- emoms.props
- emomslogging.props
- oracle.adf.share.config
- oracle.as.soainfra.bpel
- oracle.as.soainfra.config
 - Server: soa_server1
 - AdapterConfig
 - B2BConfig
 - BPCLConfig
 - BPMNConfig
 - BusinessRulesConfig
 - CEPConfig
 - EDNConfig
 - HWFMailConfig
 - MediatorConfig
 - SoaInfraConfig
 - WorkflowConfig
 - WorkflowIdentityConfig
 - human-workflow
 - WorkflowIdentityConfig.ConfigurationType
 - flexcube
 - WorkflowIdentityConfig.ConfigurationType.ProviderType
 - JpsProvider1
 - WorkflowIdentityConfig.ConfigurationType.ProviderType.PropertyType
 - jpsContextName
- jazzn.com
- WorkflowIdentityConfig.PropertyType
- WorkflowIdentityConfig.ServiceExtension

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



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

1.2.3 **Configuring CIS**

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

1. Along with the Oracle FLEXCUBE IS EAR file, the Installer creates 'FCBPCLCIS.jar' file.
2. Create a folder by name 'classes' at the location
'<MIDDLEWARE_HOME>Oracle_SOA1\soa\modules\oracle.soa.ext_11.1.x'.
3. Extract the file 'FCBPCLCIS.jar' and copy the content of the folder 'com' to:
'<MIDDLEWARE_HOME>Oracle_SOA1\soa\modules\oracle.soa.ext_11.1.x\classes'.
4. Now, navigate to the location
'<MIDDLEWARE_HOME>Oracle_SOA1\soa\modules\oracle.soa.ext_11.1.x\classes\com\ofs\sfcc\bpel' and delete the folders 'dao' and 'security'.
5. Navigate to the location
'<MIDDLEWARE_HOME>Oracle_SOA1\soa\modules\oracle.soa.ext_11.1.x\classes\com\ofs\sfcc\bpel\cac'. Edit the properties file 'CISProperties.properties' and update 'JNDI.name' with the JNDI name defined in the properties file 'fcubs.properties'.
6. Copy 'FCBPCLCIS.jar' to
'<MIDDLEWARE_HOME>/user_projects/domains/<domain_name>/lib
7. Once the above steps are completed, restart the server.

1.2.4 **Configuring DBAdapter**

In order to configure DBAdapter, follow the steps given below.

1. Log in to 'Weblogic Console' and click 'Deployment' under 'Domain Structure'.

Summary of Deployments

This page displays a list of Java EE applications and stand-alone application modules that have been installed to this domain. Installed applications and modules can be started, stopped, updated (redeployed), or deleted from the domain by first selecting the application name and using the controls on this page.

To install a new application or module for deployment to targets in this domain, click the Install button.

Customize this table

Deployments

| Name | State | Health | Type | Deployment Order |
|---|----------|---------|------------------------|------------------|
| adf.oracle.domain(1.0, 11.1.1.2.0) | Active | | Library | 100 |
| adf.oracle.domain.webapp(1.0, 11.1.1.2.0) | Active | | Library | 100 |
| AqAdapter | Active | OK | Resource Adapter | 324 |
| b2bui | Active | OK | Enterprise Application | 313 |
| bktfj | Prepared | OK | Enterprise Application | 100 |
| composer | Active | OK | Enterprise Application | 315 |
| DbAdapter | Active | OK | Resource Adapter | 322 |
| DefaultToDoTaskFlow | Active | OK | Enterprise Application | 314 |
| DMS Application (11.1.1.1.0) | Active | OK | Web Application | 5 |
| elfj | Active | Warning | Enterprise Application | 100 |
| em | Active | OK | Enterprise Application | 400 |
| email | Active | | Library | 100 |
| emas | Active | | Library | 100 |


2. In the Deployments table, select 'DbAdapter'. You will be navigated to 'Settings for DbAdapter'.

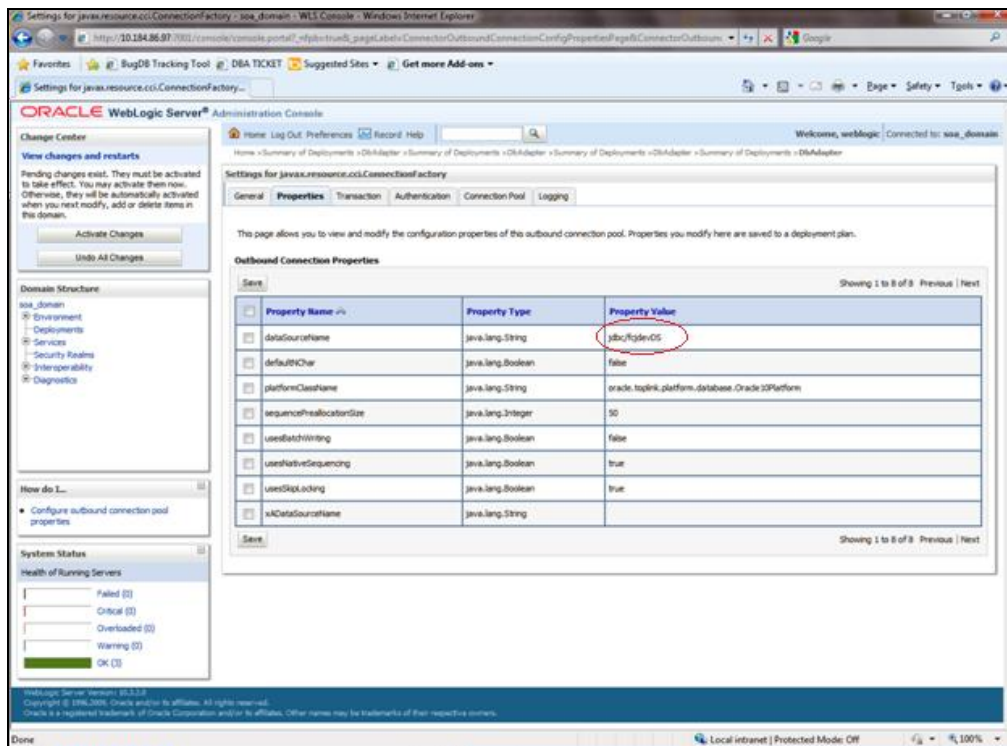
Settings for DbAdapter

This page displays a table of Outbound Connection Pool groups and instances for this resource adapter. The top level entries in the table represent Outbound Connection Pool groups. Groups are listed by connection factory interface and the instances are listed by their JNDI names. Expand a group to obtain configuration information for a Connection Pool instance within an Outbound Connection Pool group. Click the name of a group or instance to configure it. Automatically generated Connection Pools are not displayed in the table below.

Outbound Connection Pool Configuration Table

| Groups and Instances | Connection Factory Interface |
|---|---|
| java.resource.connector.ConnectionFactory | java.resource.connector.ConnectionFactory |

3. Click 'Configuration' tab and select 'Outbound Connection Pools' under it.
 4. Under 'Groups and Instances', click and expand 'javax.resource.cci.ConnectionFactory'.
 5. Click 'New' and select 'javax.resource.cci.ConnectionFactory' in Outbound Connection Group.
 6. Define 'JNDI Name' as 'eis/DB/FCCDEV' and click on 'Finish'.
-  The 'jndi name' should be the same as the one in 'Dbutility sub-process'.
7. Click 'DbAdapter' again. The new JNDI name is listed.
 8. Click on the hyperlink 'eis/DB/FCCDEV'.



9. Click the 'Property Value' field for the 'DataSourceName' and update the application JNDI reference (given in 'fcubs.properties' file) and then press 'Enter' key.
10. Save and restart the Adminserver.

1.3 Integrating Oracle FLEXCUBE IS and Scheduler

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

1.3.1 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 is Latest Qualified Version.

Follow the steps given below:

1. Download Quartz Latest Qualified Version.gz file from the following URL:
<http://www.quartz-scheduler.org/download/download-catalog.html>
1. Extract the gz file.
2. Open the folder 'Quartz-Latest Qualified Version \docs\dbTables' folder and run 'tables_oracle.sql' (this is specific to Oracle Database) in the schema.



For details on latest version of the software qualified with Oracle FLEXCUBE, refer to the release certificate.

1.4 **Integrating Oracle FLEXCUBE IS and BIP Reports**

You can integrate Oracle FLEXCUBE IS and BIP reports. The details are available in the chapter 'BIP Web Service Reports'.

1.4.1 **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 'Deploying Oracle FLEXCUBE Application on Weblogic'.

1.5 **Integrating Oracle FLEXCUBE IS and MBean**

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

1.5.1 **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.JAXPPlatform
%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.JAXPPlatform
%PROXY_SETTINGS% %SERVER_CLASS% >"%WLS_REDIRECT_LOG%" 2>&1

)

```

4. Restart the Weblogic server.



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