Oracle Identity Manager Integration Implementation Guide
Oracle FLEXCUBE Universal Banking

Release 12.87.7.0.0
[May] [2021]

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1. Introduction

For the purpose of centralized user provisioning FLEXCUBE is qualified with Oracle Identity Manager - Oracle® Fusion Middleware 11g Release 2 (11.1.2.3.0). This feature is available in FLEXCUBE since the release FCUBS V.UM 10.1.0.0.0.0.0.

1.1 Scope

This document provides an understanding as to how centralized provisioning through OIM can be enabled for FCUBS.

In addition to providing a background to the various components of the deployment, this document provides detailed steps as to how to install the various FCUBS components required for the integration with OIM configuration in FCUBS and Oracle Identity Manager to enable centralized provisioning.

1.2 Introduction to Oracle Identity Manager

Oracle Identity Manager is an identity management product that automates user provisioning, identity administration, and password management, integrated in a comprehensive workflow engine. It enables organizations to reduce Information Technology (IT) administration costs and improve security. Oracle identity manager achieves this by providing a centralized control mechanism to manage the entire life cycle of user identities and entitlements and to control user access to across all resources in the organization.

1.3 Advantage

Integrating FCUBS with Oracle identity Manager provides capability for managing the entire life cycle of FCUBS user identities through a centralized point provided by OIM in both scenario- FCUBS without single sign on and FCUBS with single sign on.

2. Requirements / Problem Statement

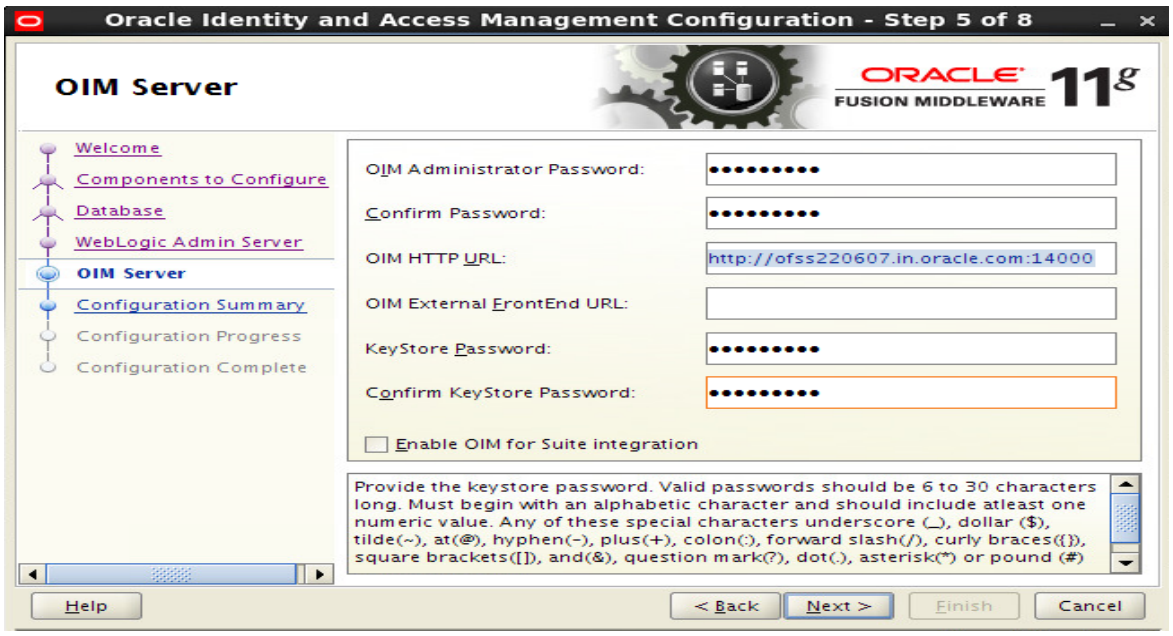
The requirement is to integrate FCUBS with Oracle Identity Manager for FCUBS user provisioning and de-provisioning services with and without FCUBS single sign on.

3. Prerequisites

3.1 Software Required

Oracle® Fusion Middleware 11g Release 2 (11.1.2.3.0)

Refer Oracle Identity Manager Document for Installation and configuration of Oracle Identity Manager.



Note *: To get the Keystore Password in the above screen while configuring OIM Console, you should have only Weblogic Admin Server, OIM Server and SOA Server in this OIM Domain. Based on that the below keystore will be created with store password

<Domain_home>/config/fmwconfig/default-keystore.

- Oracle Internet Directory Connector 11.1.1.6.0
- Refer the below sections:
  - Installation of Oracle Internet Directory Connector (Section 2.2.1.1, 2.2.1.2 & 2.3.1.1)
  - Connector by default will be available with Oracle Identity and Access Management Suite.

The path will be as follows :

<Oracle_Middleware>/<OIM_HOME>/connector/oid

For example:

Linux: /app/oracle/Middleware/Oracle_IDM1/connector/oid

Windows: C:\apps\oracle\Middleware\Oracle_IDM1\connector\oid

The above directory <oid> has to be copied into

<Oracle_Middleware>/<OIM_HOME>/server/ConnectorDefaultDirectory

- Configuring Oracle Identity Manager Design Console

3.2 FLEXCUBE Component Required

FLEXCUBE Gateway EJB

4. System Description

4.1 About Oracle Identity Manager

Oracle Identity Manager is an identity management product that automates user provisioning, identity administration, and password management, integrated in a comprehensive workflow engine. Key features of Oracle Identity Manager include password management, workflow and policy management, identity reconciliation, reporting and auditing, and extensibility through adapters.

4.1.1 Oracle Identity Manager System Components

Oracle Identity Manager is built on an enterprise-class, modular architecture that is both open and scalable. Each module plays a critical role in the overall functionality of the system:

Identity Administration

Identity administration includes creation and management of identities in Oracle Identity Manager. Identities include users, organizations, and roles. Identity administration also enables password management and user Oracle Identity Manager Self Service operations. Identity administration is performed by using Oracle Identity Manager Administration and Oracle Identity Manager Self Service Web clients, and the SPML Web service.

Provisioning

The provisioning transactions are assembled and modified in the provisioning module. This module maintains the "who" and "what" of provisioning. User profiles, access policies, and resources are defined in the provisioning module, as are business process workflows and business rules.

The Provisioning Server is the run-time engine for Oracle Identity Manager. It runs the provisioning process transactions as defined through Oracle Identity Manager Administration and Oracle Identity Manager Design Console and maintained within the provisioning module.

Audit and Reports

The audit and compliance functions include evaluating a person, organization, system, process, project, or product. This occurs by capturing data generated by the suite's workflow, policy, and reconciliation engines. By combining this data with identity data, an enterprise has all the information it requires to address any identity and to access a related audit inquiry. Audits are performed to ascertain the validity and reliability of information, and also provide an assessment of a system's internal control.

Reporting is the process of generating a formal document, which is created as a result of an audit. The report is subsequently provided to a user, such as an individual, a group of persons, a company, a government, or even the general public, as an assurance service so that the user can make decisions, based on the results of the audit. An enterprise can create reports on both the history and the current state of its provisioning environment. Some captured identity data includes user identity profile history, role membership history, user resource access, and fine-grained entitlement history.

Reconciliation and Bulk Load

The reconciliation engine ensures consistency between the provisioning environment of Oracle Identity Manager and Oracle Identity Manager managed resources within the organization. The reconciliation engine discovers illegal accounts created outside Oracle Identity Manager. The reconciliation engine also synchronizes business roles located inside and outside the provisioning system to ensure consistency.

If you want to load a large amount of data from other repositories in your organization into Oracle Identity Manager, then you can use the Bulk Load utility. The Bulk Load utility reduces the downtime in loading the data. In addition, Bulk Load utility import Oracle Identity Manager users, roles, role memberships, and accounts provisioned to users.

Common Services

Various services are grouped together that are shared and used by other Oracle Identity Manager components. These services are:

Form Designer: A form that allows you to create process and resource object forms that do not come packaged with Oracle Identity Manager.

Scheduler: A service that provides the capability to run specific jobs at specific schedules. This service can be used by users, application developers, connector developer, and administrators to create and configure a Job to be run at specified intervals. In addition, this service provides administrative capabilities to manage the functionality of jobs and their schedules.

Notification Templates: A common notification service is used by other functional components to send notifications to interested parties about events occurring in Oracle Identity Manager. In addition, this service provides the administrative capabilities for notification template management. A notification template is used for sending the outgoing notifications. These templates typically contain the variables that refer to the available data to provide more contextual content.

System Properties: A system property is an entity that controls the configuration aspect of an application. In addition, to the default system properties, you can create and manage system properties in Oracle Identity Manager.

Deployment Manager: The Deployment Manager is a tool for exporting and importing Oracle Identity Manager configurations. The Deployment Manager enables you to export the objects that make up your Oracle Identity Manager configuration.

Workflow and Request Management

Various operations in Oracle Identity Manager cannot be performed directly. Instead, the operations must be requested. The request management service provides a mechanism to create, approve, and manage requests. A request is an entity created by the users or administrators who want to perform a specific action, which requires a discretionary permission to be obtained from someone or some process before the action can be performed. For example, a user can create a request to gain access to a laptop computer, a manager can approve the request and create an open requisition, and an IT resource administrator can approve the request.

The primary goal of a provisioning solution is to manage requests and provision resources. Request service provides an abstraction layer on the Business Process Execution Language (BPEL) 11g workflow engine. Functional components such as request, provisioning, and attestation interacts with the workflow engine for human approvals. Request service caters to the various functional components in Oracle Identity Manager by managing workflow instances and categories, and provides an abstraction layer on BPEL.

Infrastructure and Middleware Integration

The Adapter Factory, Kernel Orchestration mechanism, Context Manager, and Plug-in Framework are designed to eliminate the need for hard-coding integrations with these systems.

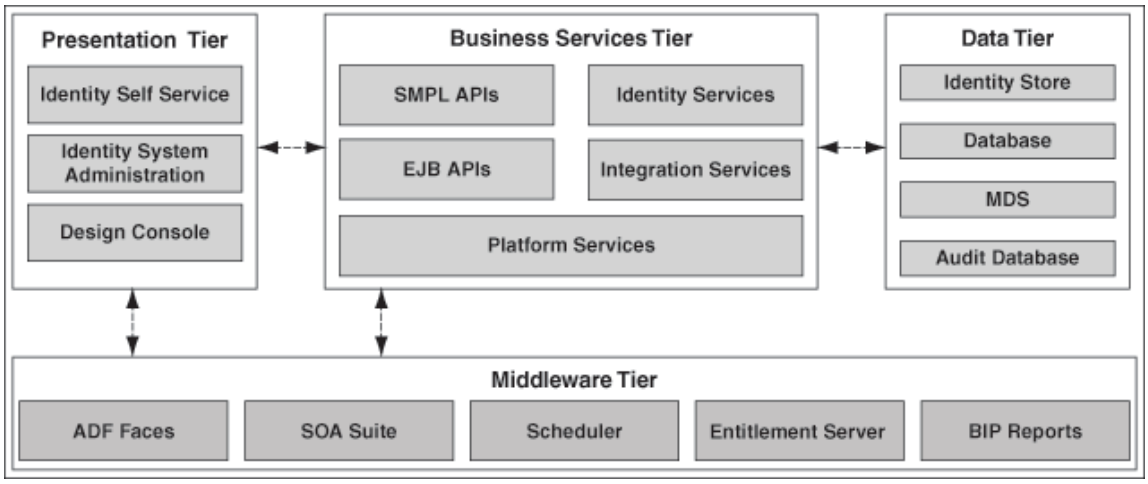
Connector Framework

The integration solution strategy of Oracle Identity Manager provides connectors to various heterogeneous identity-aware IT systems. This strategy is designed to minimize custom development, maximize the reuse of code, and reduce deployment time. The tiers of the integration solution are:

- Out-of-the box integration using predefined connectors and predefined generic technology connector providers

- Identity connectors that are designed to separate the implementation of an application from the dependencies of the system that the application is attempting to connect to
- Connectors based on custom generic technology connector providers
- Custom connectors using the Adapter Factory

Following figure illustrates the system components of Oracle Identity Manager.



4.2 Integration / Design Architecture

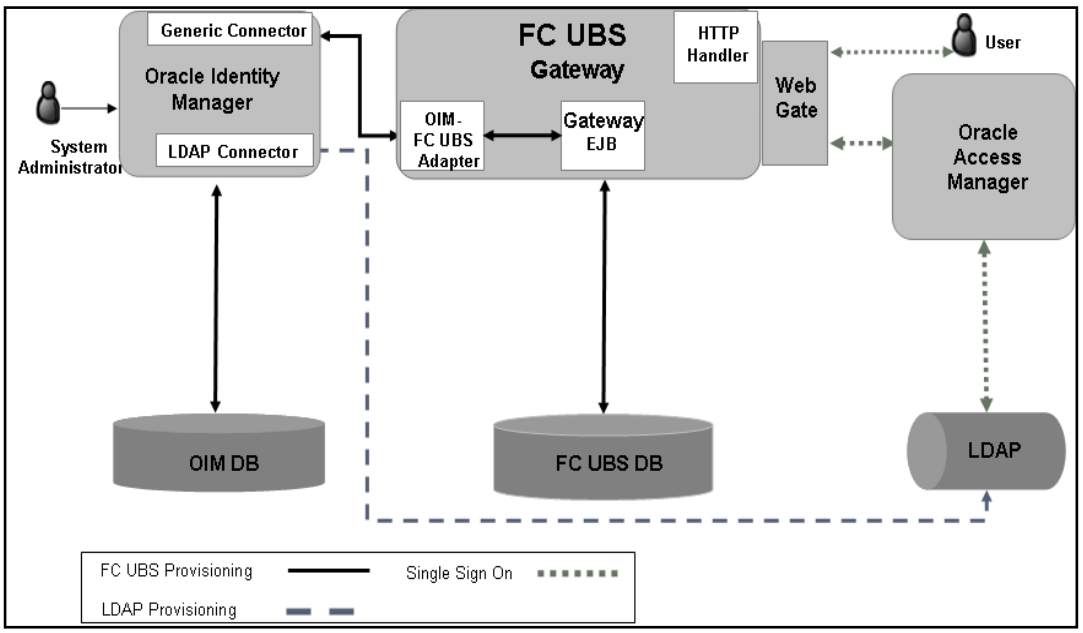
With the integration of FCUBS and Oracle Identity Manager, a user can be created, modified, closed, and reopened in FCUBS. Oracle Identity Manager acts as the front-end entry point for managing mandatory fields of FCUBS user. After users are provisioned, the users can access the FCUBS without any interaction with Oracle Identity Manager. This integration also ensures that any change that has been made for corresponding user in FCUBS should be reflected in OIM using reconciliation feature of OIM.

Design

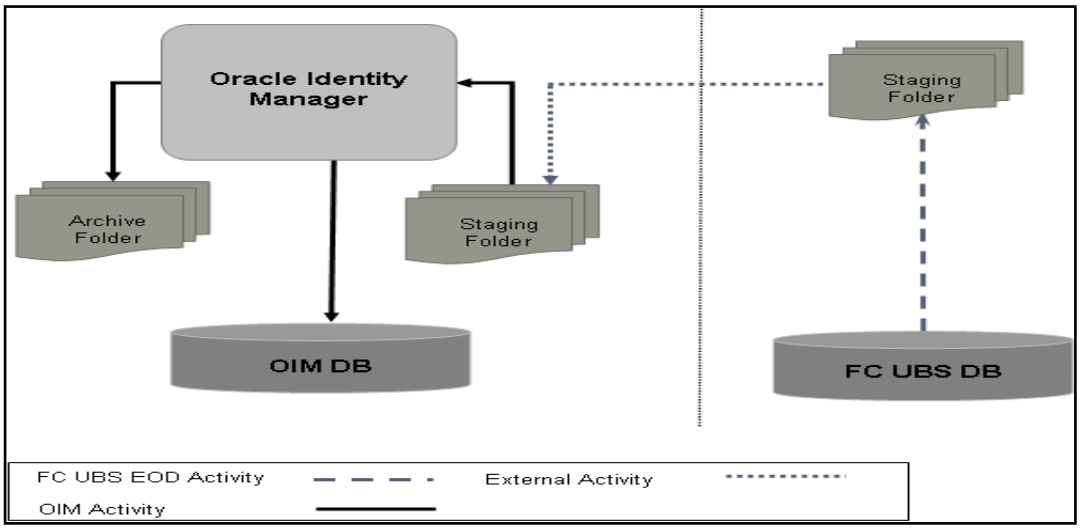
For the purpose of integration of Oracle Identity manager and FCUBS “Generic technology connector” (GTC) has been used. GTC provides out of box providers for provisioning and reconciliation.

Following two figures illustrate the design aspect of the provisioning and reconciliation process:

4.2.1 Provisioning Design Architecture



4.2.2 Reconciliation Design Architecture



4.2.3 Design Constraints

The followings are the design constraints for this integration:

- This integration is based upon sample configuration containing only mandatory fields of FCUBS user while defining the GTC. Other fields can be defined in the GTC using the same configurations.
- Due to specific data requirement for FCUBS user creation, only manual provisioning method can be used for FCUBS provisioning.
- User role is not taken up in this integration and the FCUBS user will not be associated with any role at the time of user creation.
- A common FCUBS maker id will be used for user creation that is maintained as property in a property file.

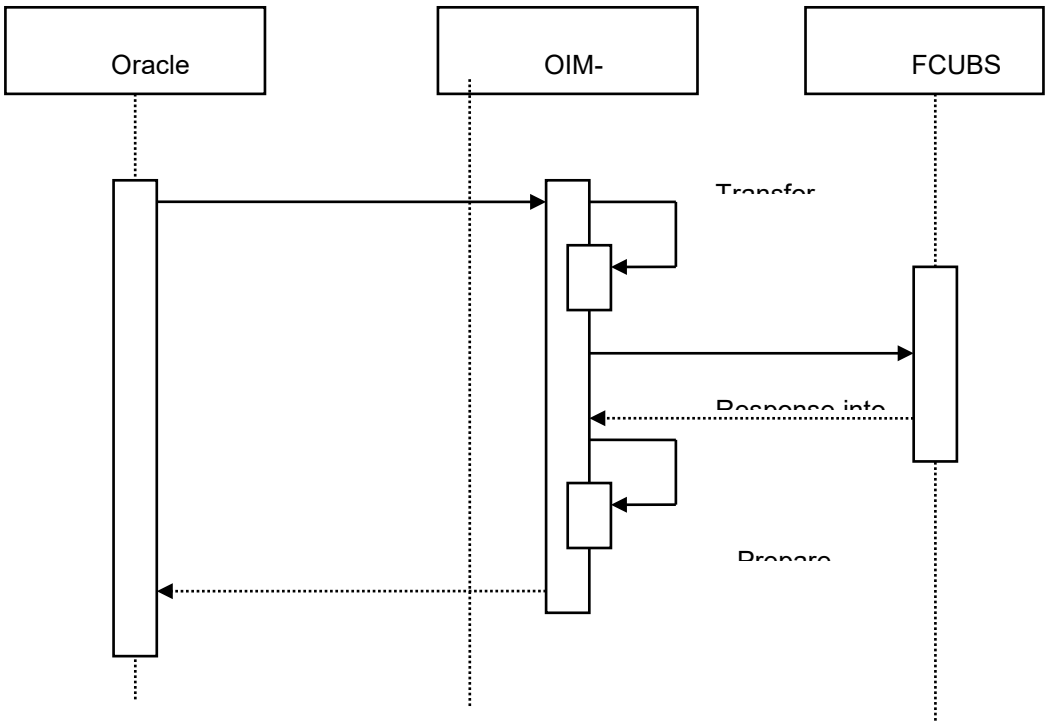
- OIM does not allow ASCII special characters e.g. ampersand, colon, braces etc. Apart from this, OIM also does not allow multiple consecutive occurrences of some of special ASCII character like underscore etc.

4.2.4 Message Flow

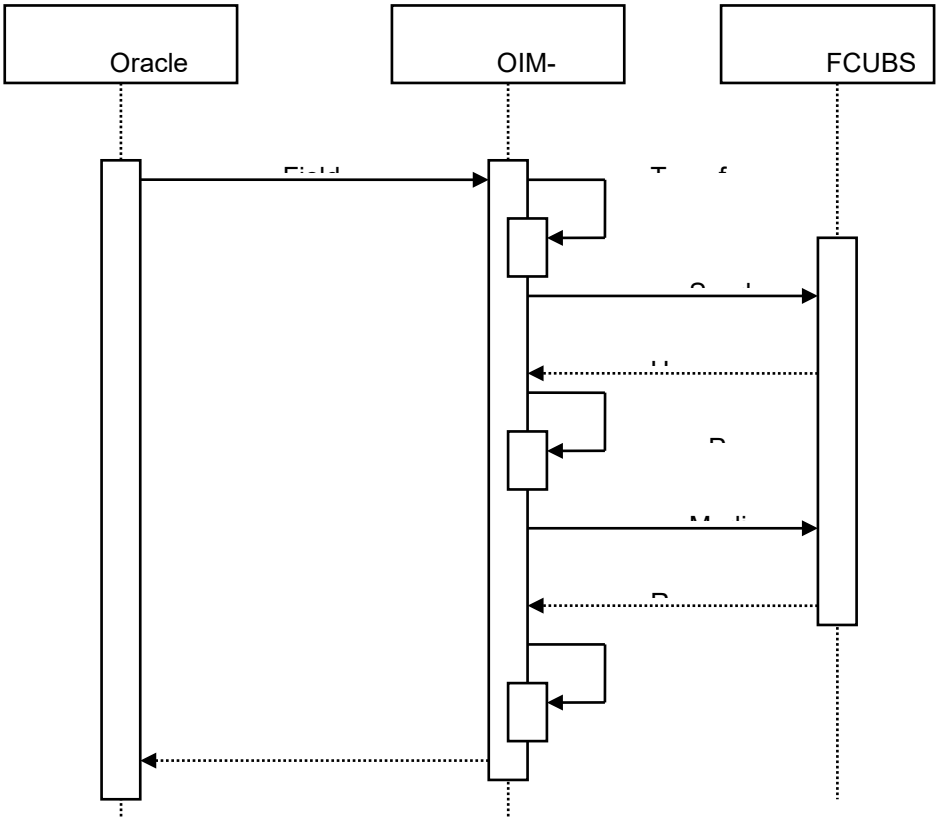
OIM-FCUBS adapter would transform the request from the OIM SPML/DSML to FCUBS Gateway request using Extensible Style sheet Language Transformation (XSLT). Transformed XML request will be sent to the FCUBS Gateway EJB for further processing based on the type of the request. Based on the FCUBS Gateway EJB response OIM-FCUBS adapter will prepare the response in SPML/DSML format and will send to the OIM.

Following gives the sequence of the message exchanges between the adapter and FCUBS Gateway EJB for user provisioning that are initiated from OIM.

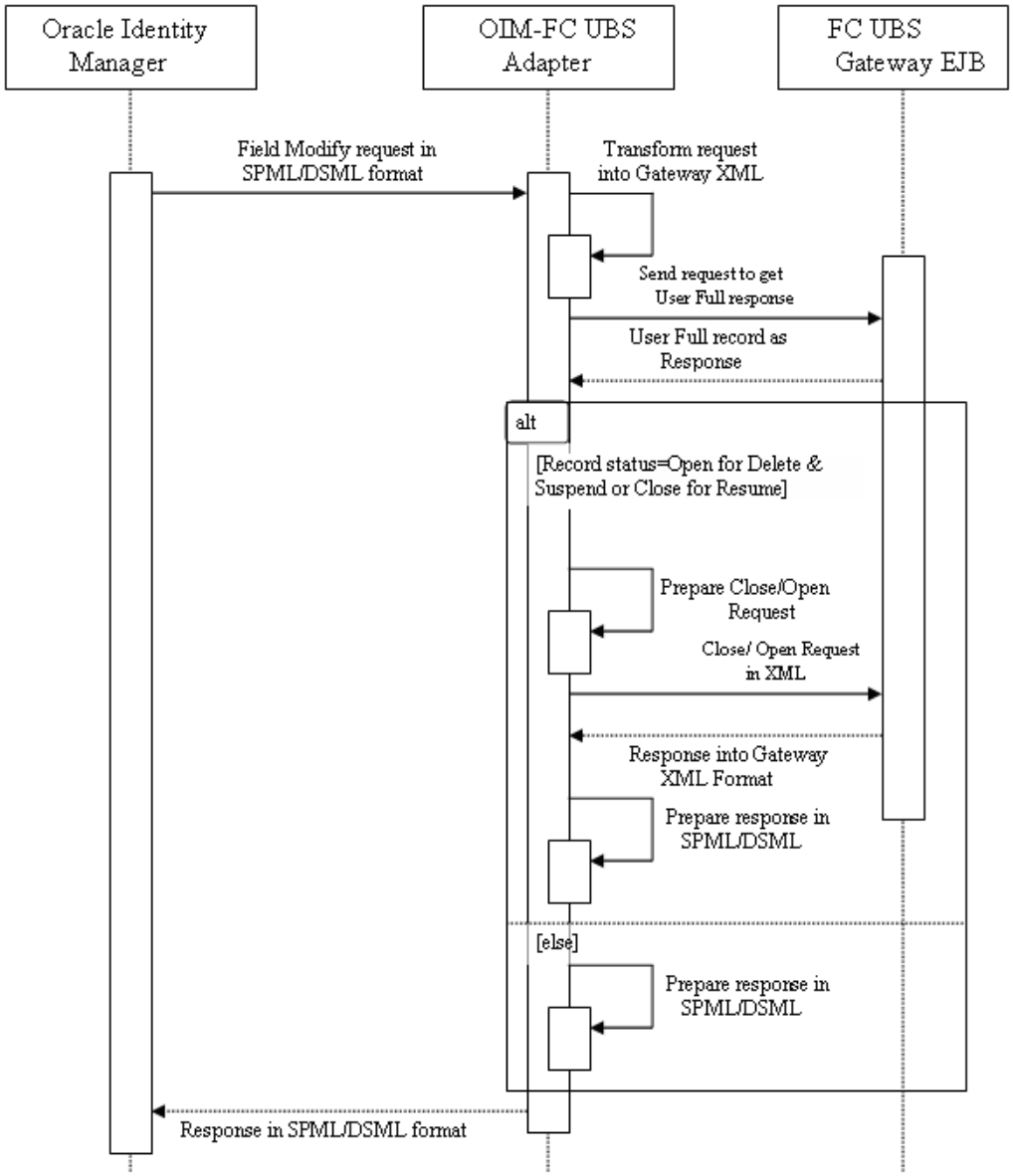
4.2.4.1 Message exchange sequence for User Creation



4.2.4.2 Message exchange sequence for User Field Modification/Set Password



4.2.4.3 Message exchange sequence for User Delete/Suspend/Resume Request



5. Installation / Configuration

5.1 Environment Setup/Configurations

FLEXCUBE - OIM Integration environment setup requires

- OIM FLEXCUBE Adapter setup & configuration
- OIM setup

Note: This implementation document describes the installation and setup of OIM FLEXCUBE Adapter on Oracle Fusion Middleware 11g Release 2 (11.1.2.3.0).

5.1.1 Enabling SSL for Weblogic and OIM Server

5.1.1.1 Self-Signed Certificate Creation

To enable SSL mode, Weblogic requires a keystore which contains private and trusted certificates. We have to use the same version of JDK (which is used by Weblogic Domain), to create the keystore and certificates, otherwise it may lead to many difficulties (suggested by Oracle Support).

Keytool utility available in Java JDK will be used to create Keystore. In command prompt set PATH to the JDK\bin location. Follow the below steps to create keystore and self-signed certificates:Keystore Creation

5.1.1.1.1 Key Store Creation

keytool -genkey -keystore <keystore_name.jks> -alias <alias_name> -dname "CN=<hostname>, OU=<Organization Unit>, O=<Organization>, L=<Location>, ST=<State>, C=<Country_Code>" -keyalg <Key Algorithm> -sigalg <Signature Algorithm> -keysize <key size> -validity <Number of Days> -keypass <Private key Password> -storepass <Store Password>

For example:

keytool -genkey -keystore AdminFlexcubeKeyStore.jks -alias FlexcubeCert -dname "CN=ofss00001.in.oracle.com, OU=OFSS, O=OFSS, L=Chennai, ST=TN, C=IN" -keyalg "RSA" -sigalg "SHA1withRSA" -keysize 2048 -validity 3650 -keypass Password@123 -storepass Password@123

Note: **CN=ofss00001.in.oracle.com** is the Host Name of the weblogic server

5.1.1.1.2 Export Private key as Certificate

keytool -export -v -alias <alias_name> -file <export_certificate_file_name_with_location.cer> -keystore <keystore_name.jks> > -keypass <Private key Password> -storepass <Store Password>

For example:

keytool -export -v -alias FlexcubeCert -file AdminFlexcubeCert.cer -keystore AdminFlexcubeKeyStore.jks -keypass Password@123 -storepass Password@123

5.1.1.1.3 Import as Trusted Certificate

keytool -import -v -trustcacerts -alias rootcacert -file <export_certificate_file_name_with_location.cer> -keystore <keystore_name.jks> > -keypass <Private key Password> -storepass <Store Password>

For example:

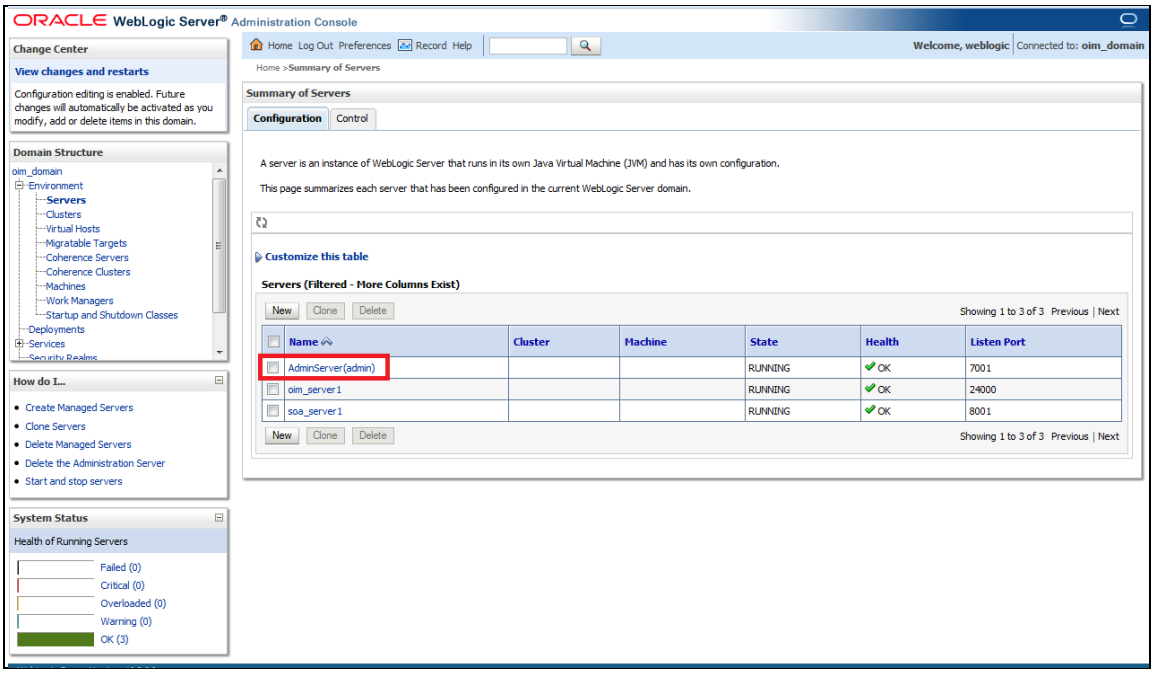
keytool -import -v -trustcacerts -alias rootcacert -file AdminFlexcubeCert.cer -keystore AdminFlexcubeKeyStore.jks -keypass Password@123 -storepass Password@123

References: Oracle Support Articles (Article ID 1281035.1, Article ID 1218695.1), in case of Certificates issued by the Trusted Authorities

5.1.1.2 Configuring Weblogic Console

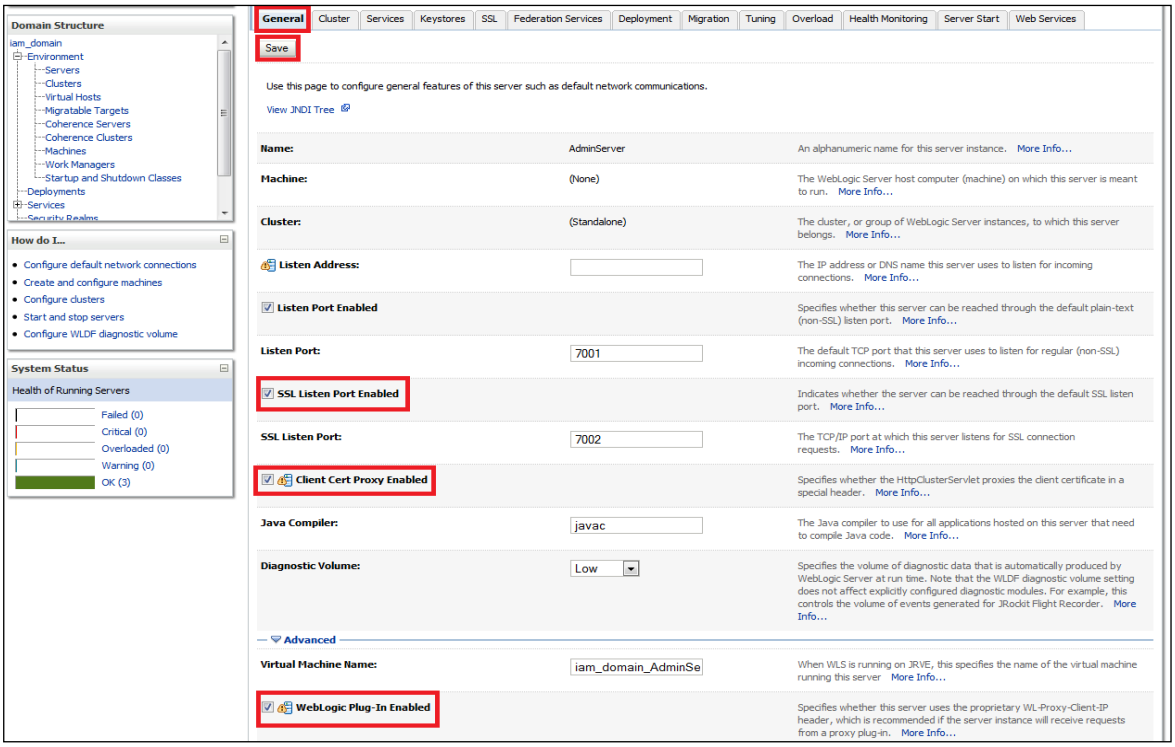
After domain creation, follow the below steps to enable SSL in Weblogic Admin server, OIM Server and SOA Server.

5.1.1.2.1 Select Admin Server to enable SSL options.



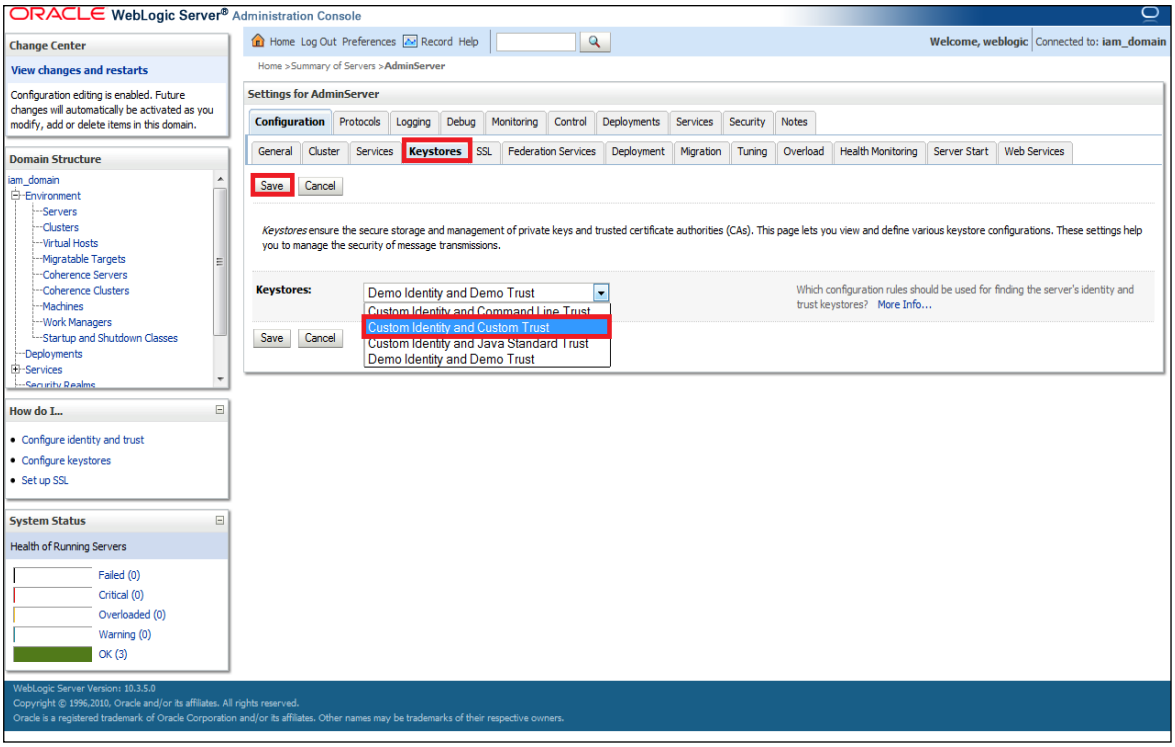
5.1.1.2.2 Follow the steps in General Tab as shown below:

1. Select SSL Listen Port Enabled, Client Cert Proxy Enabled, Weblogic Plug-In Enabled.
2. Click on Save.



5.1.1.2.3 Follow the steps in Keystores Tab as shown below:

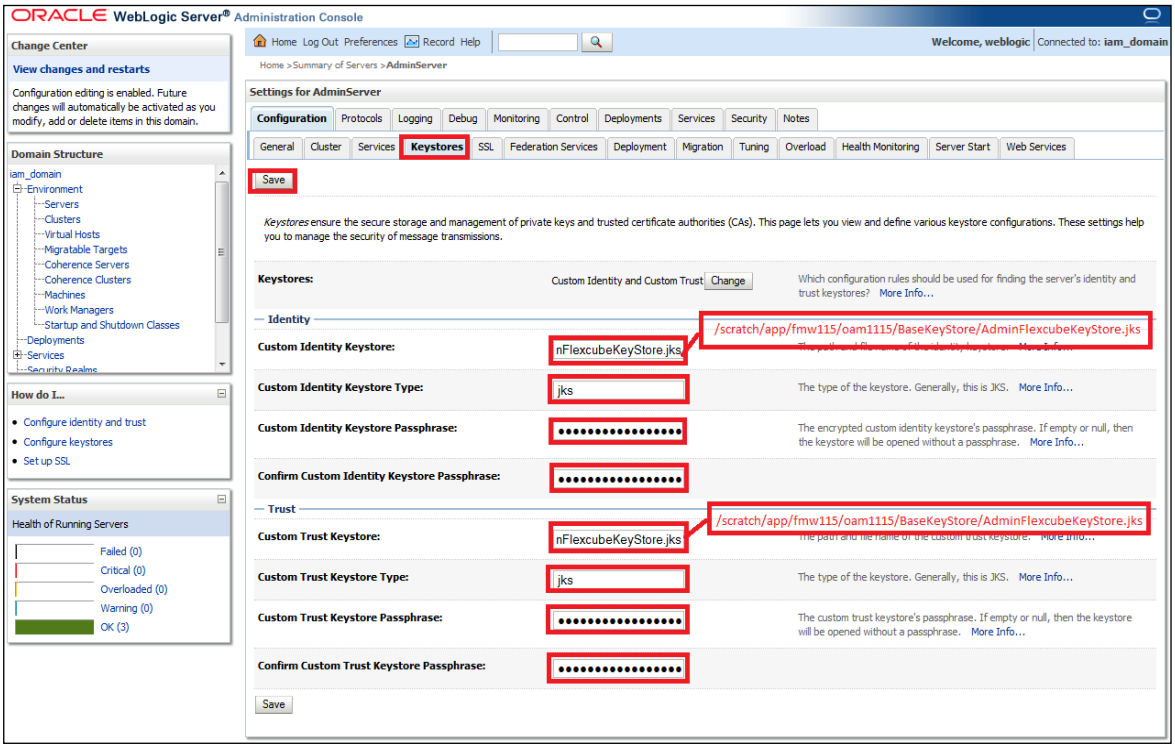
1. Click Change and select Keystores as **Custom Identity and Custom Trust**
2. Click on Save
3. Note: Keystores as **Custom Identity and Custom Trust** is as suggested by Oracle Support Team



5.1.1.2.4 Follow the steps in Keystores Tab as shown below:

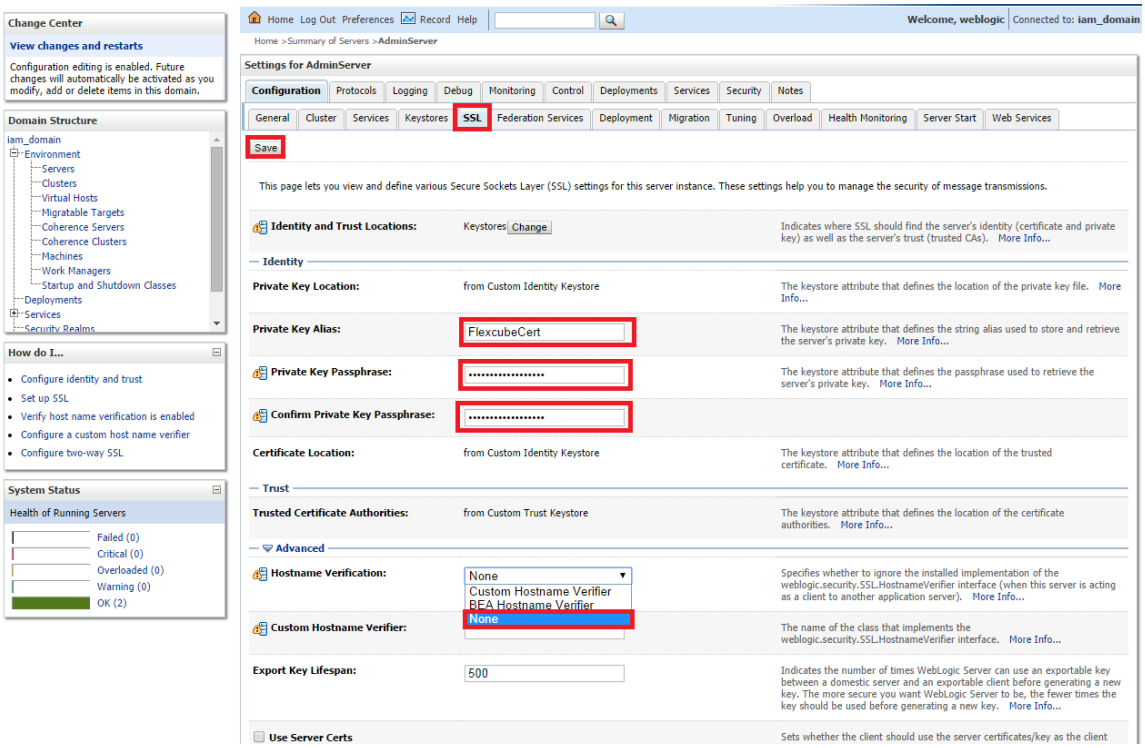
4. Enter Custom Identity Keystore and Custom Trust Keystore as same as the Keystore Name created in step 5.1.1.1.1 with full path.

5. Enter Custom Identity Keystore Type and Custom Trust Keystore Type as jks.
6. Enter Custom Identity Keystore Passphrase, Confirm Custom Identity Keystore Passphrase, Custom Trust Keystore Passphrase and Confirm Custom Trust Keystore Passphrase as same as the Store Password entered in step 5.1.1.1.1.
7. Click on Save.

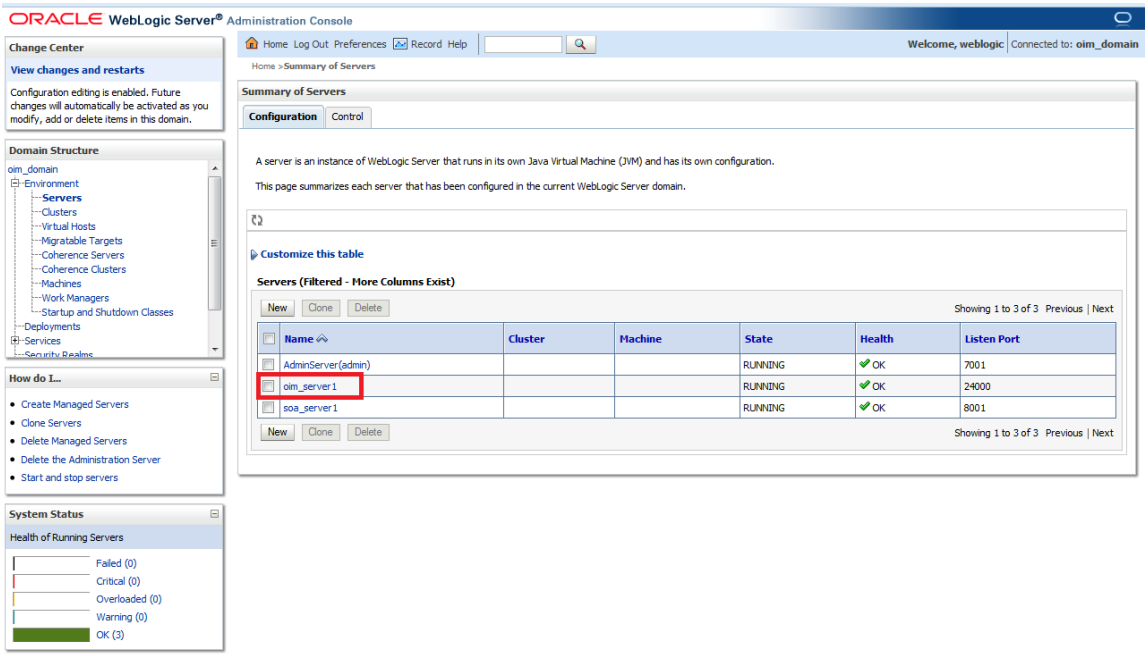


5.1.1.2.5 Follow the steps in SSL Tab as shown below:

1. Enter Private Key Alias as same as the alias name entered in step 5.1.1.1.1.
2. Enter Private Key Passphrase and Confirm Private Key Passphrase as same as the Private Key Password entered in step 5.1.1.1.1.
3. Change the Hostname Verification to None.
4. Use JSSE SSL option should be remain unchecked
5. Click on Save.



5.1.1.2.6 Select OIM Server & SOA Server to enable SSL options and Repeat the steps performed in 5.1.1.2.2 to 5.1.1.2.5.



5.1.1.2.7 Now the admin_server, oim_server and soa_server are SSL enabled. Restart all three servers.

5.1.2 Enabling SSL on GTC Connector Server

To have SSL enabled Provisioning Web Service in 5.1.5.23. We have to have a two way handshake between GTC Connector Server and the Application Server, where FCUBSProvisioningAdService web service deployed.

5.1.2.1 Export the KeyStore Certificate in 5.1.1.1.1

keytool -export -alias <aliasname> -file <exportfilename> -keystore <keystorename> -storetype jks -storepass <keystorepassword> -provider sun.security.provider.Sun

For Example:

keytool -export -alias FlexcubeCert -file webfile.cer -keystore FlexcubeKeyStore.jks -storetype jks -storepass Password@123 -provider sun.security.provider.Sun

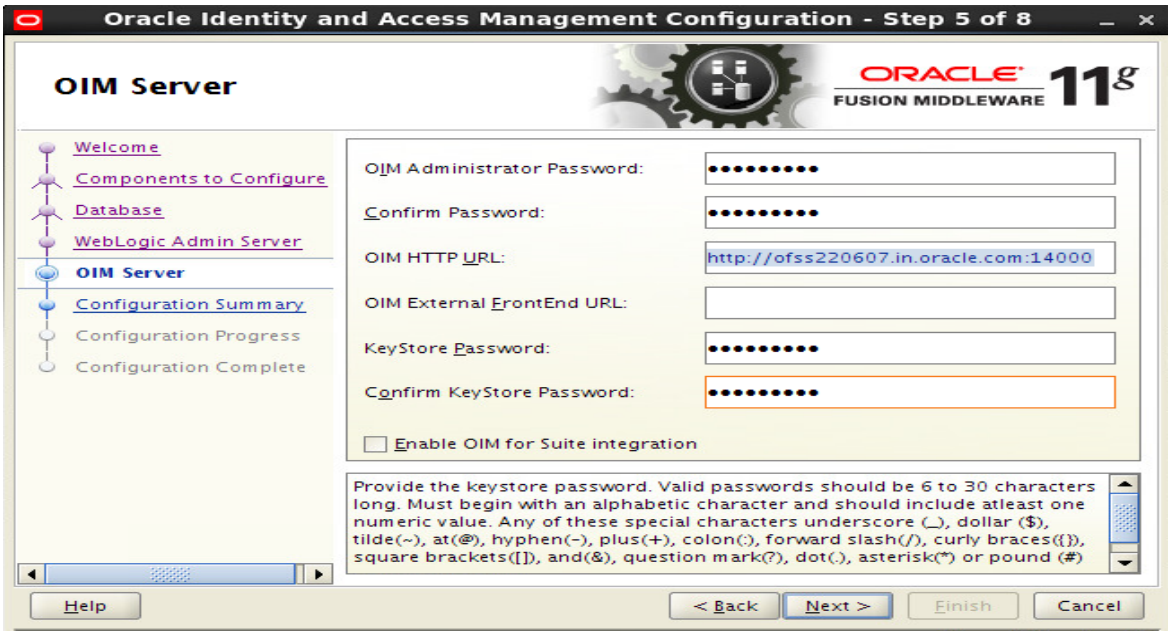
5.1.2.2 Import the Certificate to Xellarate Key Store

keytool -import -trustcacerts -alias <aliasname> -noprompt -keystore <Domain_home>/config/fmwconfig/default-keystore.jks -file <importfilename> -storepass <keystorepassword>

For Example:

keytool -import -trustcacerts -alias FlexcubeCert -noprompt -keystore /app/Middleware/user_projects/domains/oim_domain/config/fmwconfig/default-keystore.jks -file webfile.cer -storepass Password123

Note *: <Domain_home>/config/fmwconfig/default-keystore.jks will be the KeyStore Password while configuring OIM Server. To have this feature, you should have only Weblogic Admin Server, OIM Server and SOA Server in this OIM Domain.



5.1.2.3 Export Xellarate KeyStore Certificate

keytool -export -alias xell -noprompt -keystore <Domain_home>/config/fmwconfig/default-keystore.jks -file <xellexportfilename> -storetype jks -provider sun.security.provider.Sun

For Example:

keytool -export -alias xell -noprompt -keystore /app/Middleware/user_projects/domains/oim_domain/config/fmwconfig/default-keystore.jks -file xellcertificate.cer -storetype jks -provider sun.security.provider.Sun

5.1.2.4 Import the Xellarate Certificate to KeyStore Created in 5.1.1.1.1

keytool -import -alias <aliasname> -trustcacerts -file <xellimportfilename> -keystore <keystorename> -storetype jks -storepass <keystorepassword> -provider sun.security.provider.Sun

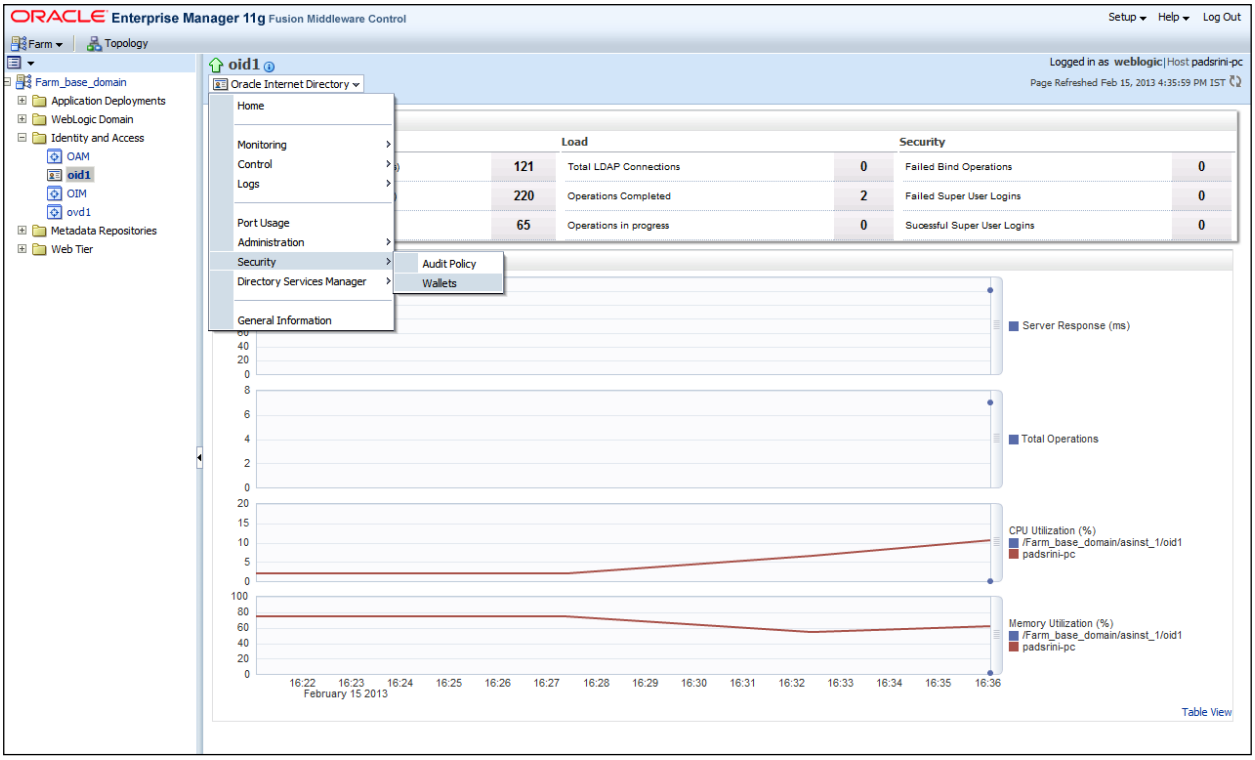
For Example:

keytool -import -alias xellcertificate -trustcacerts -file xellcertificate.cer -keystore FlexcubeKeyStore.jks -storetype jks -storepass Password@123 -provider sun.security.provider.Sun

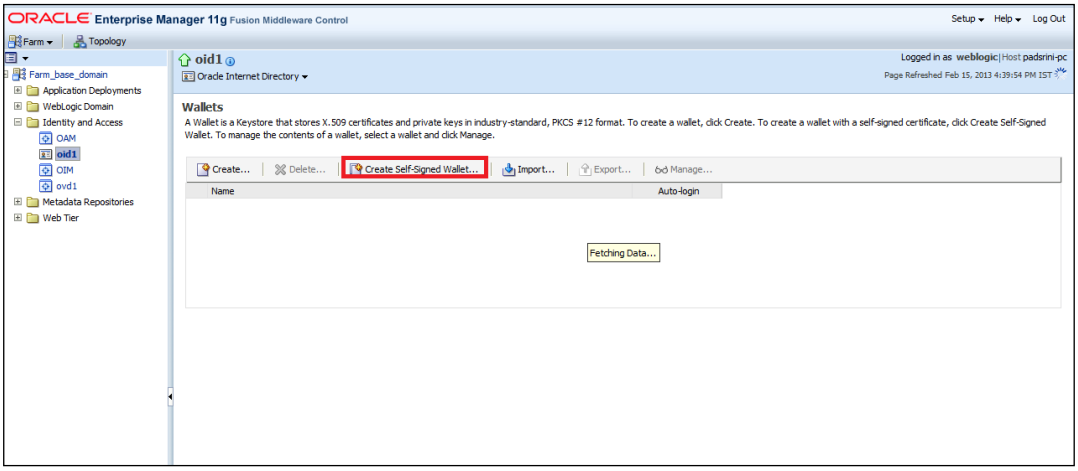
5.1.3 Configuring SSL Mode in Oracle Internet Directory

To enable SSL for OID LDAP Server refer and follow the below steps.

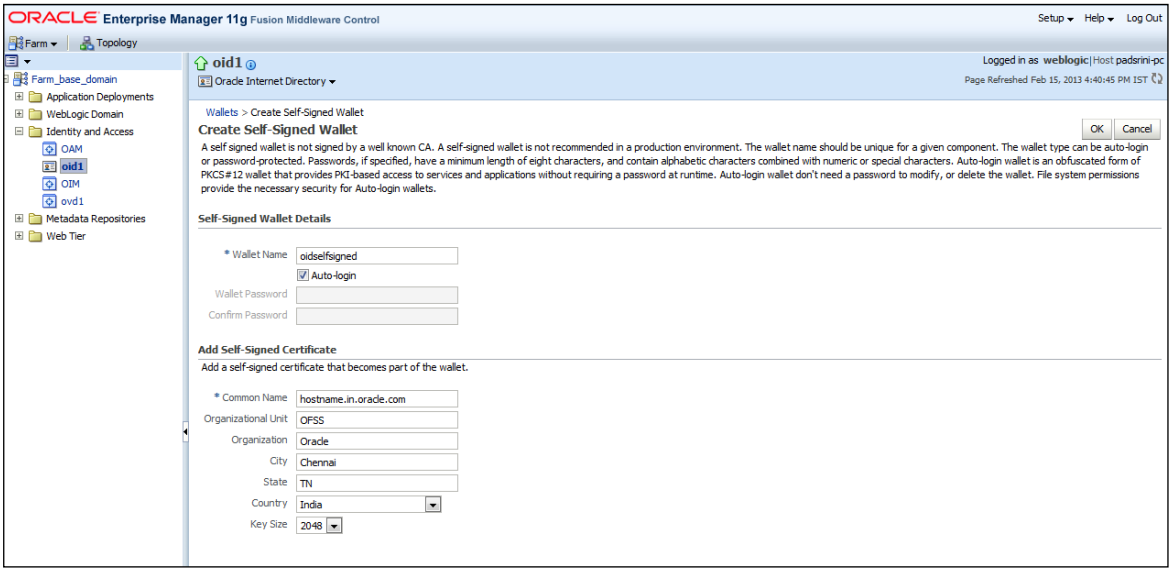
Login to the Enterprise Manager Console of the domain, in which Oracle Internet Directory is associated.

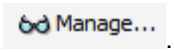


Click on Create Self-Signed Wallet.



Enter the Details as below & Click on OK.



Click on 

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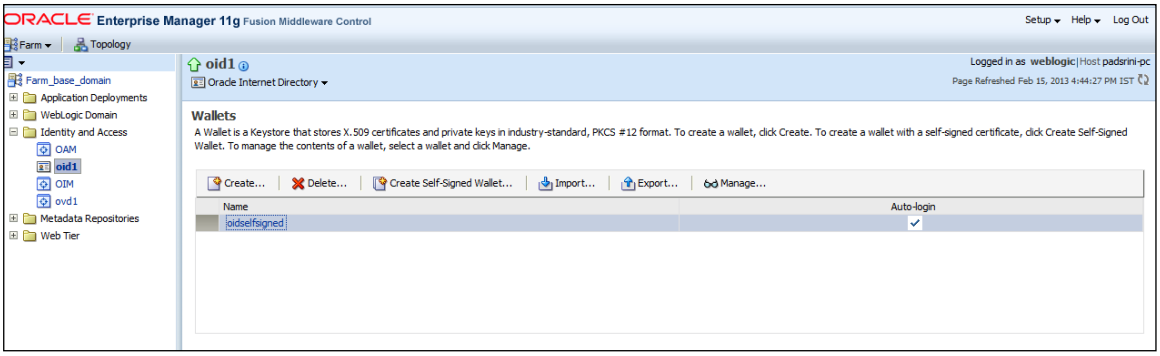
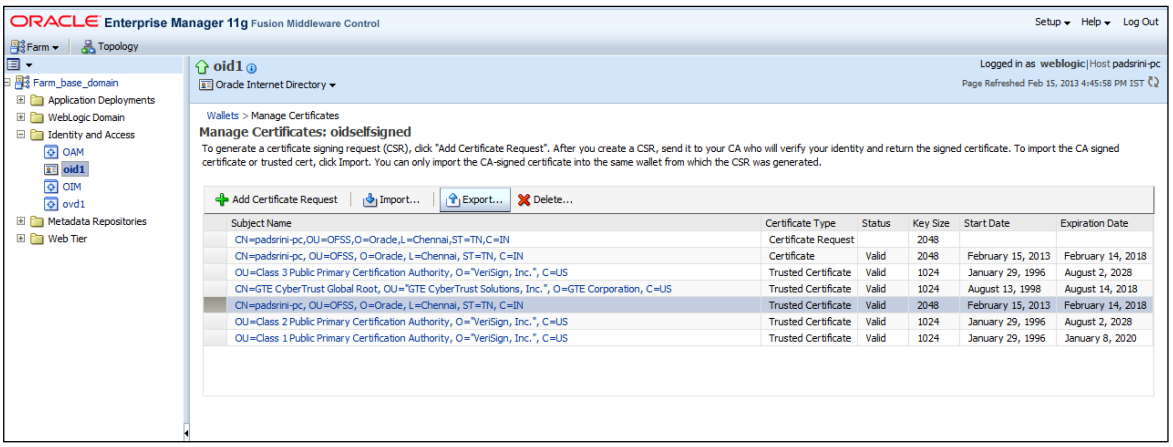
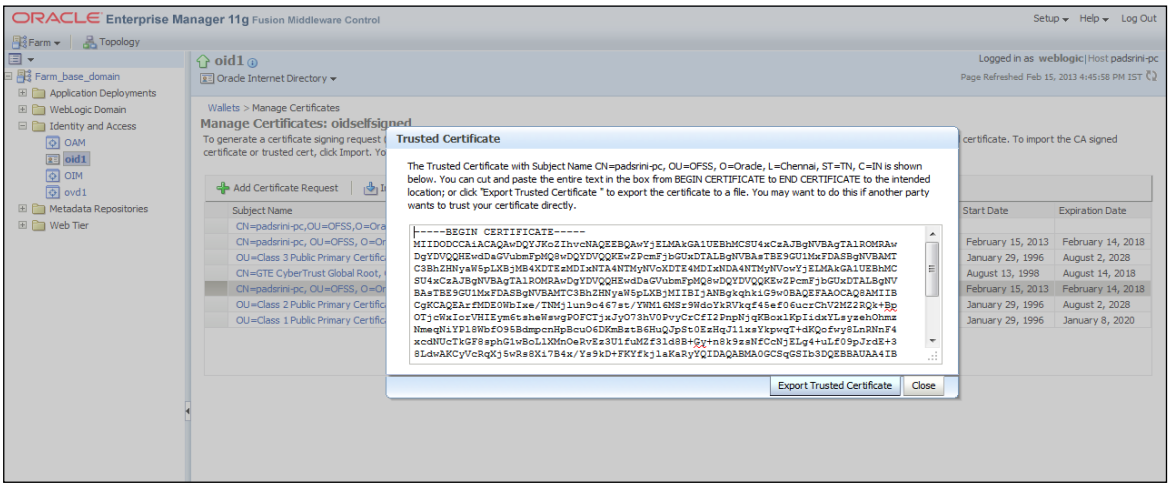


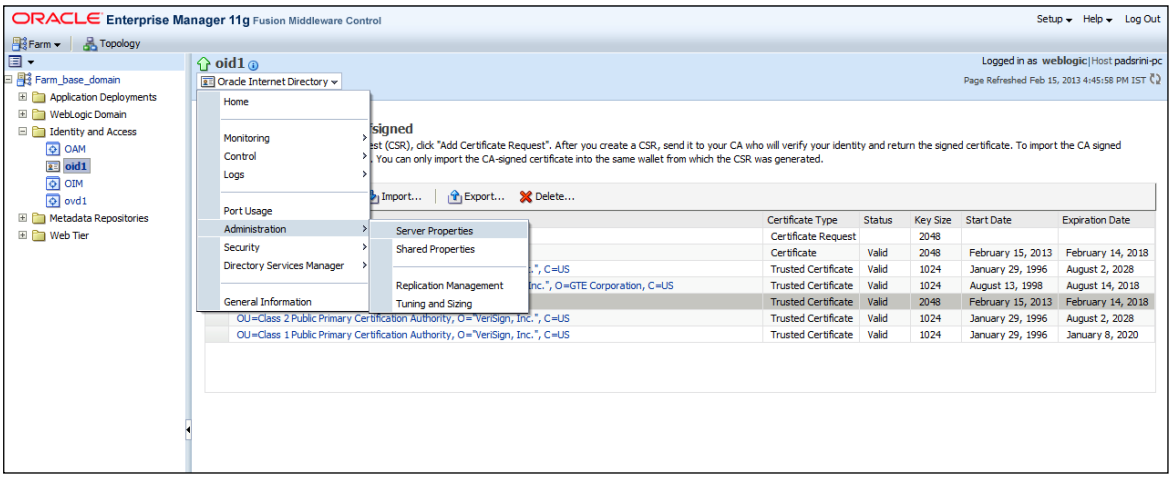
Select the Trusted Certificate & Click on Export.



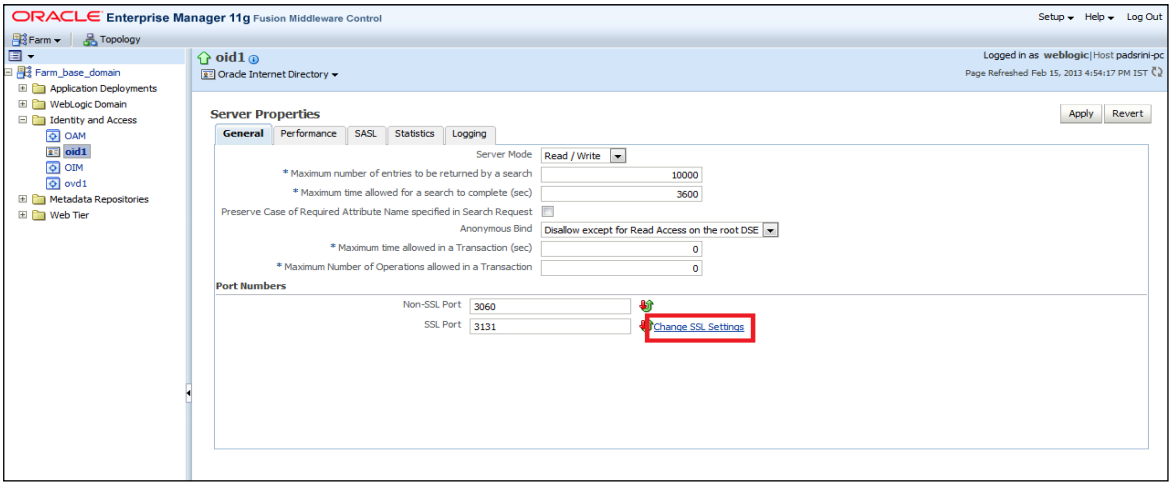
Click Export Trusted Certificate and save the certificate file.



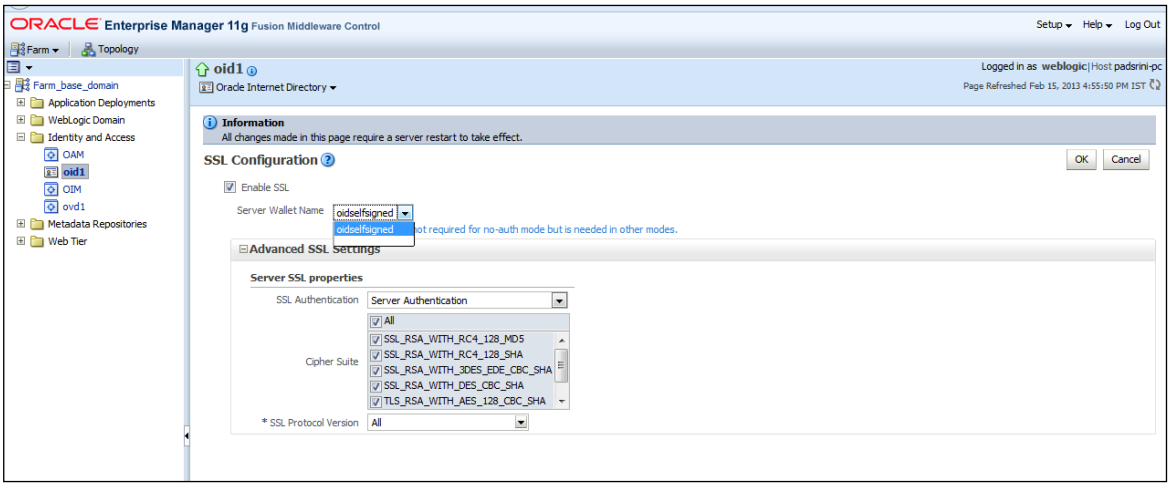
Click on Server Properties.



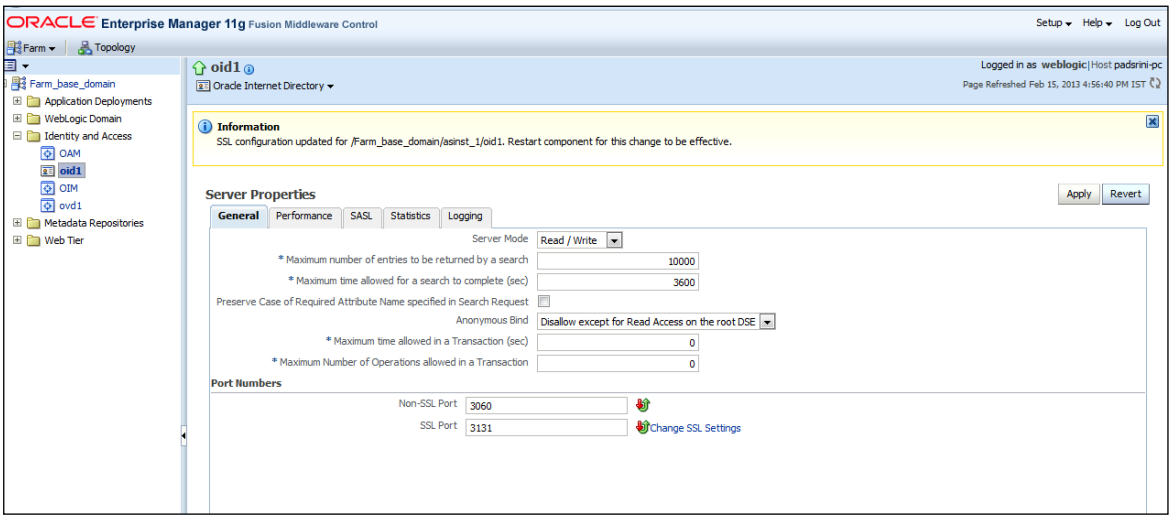
Click on Change SSL Settings.



Select the Wallet, SSL Authentication as Server Authentication, Cipher Suite, SSL Protocal Version as below & Click on OK.



Click on Apply.



5.1.3.1 Import LDAP Server SSL Certificate into OIM Server

Import the Exported Certificate into **wlserver_10.3/server/lib/DemoTrust.jks** of OIM Server Domain using the below command [Store Password is **DemoTrustKeyStorePassPhrase**]

keytool -import -keystore MW_HOME/wlserver_10.3/server/lib/DemoTrust.jks -file /home/testoc4j/OIM/globalv.crt -storepass DemoTrustKeyStorePassPhrase

Restart Both OID & OIM Server.

5.1.4 OIM FLEXCUBE Adapter Setup

Prerequisite: Gateway EJB component

OIM FCUBS adapter consists of two web services:

- FCUBSLOVAdService : To fetch list of values from FCUBS Database
- FCUBSProvisioningAdService: To handle OIM's request and response for user provisioning and de-provisioning services. This web service requires FCUBS Gateway EJB either on same Weblogic Application server or another. If it is on same Weblogic Application server then this web service is deployed as child of Gateway EJB.

OIM FCUBS adapter setup is all about deployment of these web services on Oracle Fusion Middleware 11g Release 2 (11.1.2.3.0).

5.1.4.1 Environment Setup

The following steps to be followed to do the initial environment setup for OIM FCUBS adapter deployment:

5.1.4.1.1 Copy following folders from the FCUBS Software Release area

- <FCUBS Release Name>\ADAPTERS\OIM\FCUBSLOVAdService
- <FCUBS Release Name>\ADAPTERS\OIM\FCUBSProvisioningAdService
- <FCUBS Release Name>\ADAPTERS\OIM\setup

to local machine (say ***D:\OIM*** for WINDOWS or ***/home/kernel/OIM*** for UNIX).

Note: If Gateway EJB server and OIM server is on same system, then copy entire folder from FCUBS software release area to local machine.

In this document SPMLADAPTER_INSTALL_DIR specifies the directory where adapter will be installed.

e.g.

For WINDOWS:

SPMLADAPTER_INSTALL_DIR=D:\

For UNIX:

SPMLADAPTER_INSTALL_DIR=/home/kernel/

OIM_SERVER_INSTALL_DIR specifies the OIM server installation directory (like D:\Oracle\Middleware\weblogic\Oracle_IDM1 in windows or /Oracle/Middleware/weblogic/ Oracle_IDM1 in unix).

5.1.4.1.2 Create a Data source in WebLogic Server Version: 10.3.6.0.

[Refer Appendix 8.1 Data Source Creation]

5.1.4.1.3 Modify configuration files as below :

Edit **<SPMLADAPTER_INSTALL_DIR>\OIM\FCUBSLOVAdService\src\webcontent\WEB-INF\web.xml**. This XML file shall have a similar section as the one shown below (Change the values given in bold)

```
<resource-ref>
                <res-ref-name>OIMLOVSQA</res-ref-name>
                      <res-type>javax.sql.DataSource</res-type>
                <res-auth>Container</res-auth>
</resource-ref>
<env-entry>
        <description>Property File Path</description>
        <env-entry-name>propertyPath</env-entry-name>
```

```
        <env-entry-type>java.lang.String</env-entry-type>

        <env-entry-value>D:/OIM/FCUBSLOVAdService/config/</env-entry-value>

</env-entry>
```

Edit resource-ref section: Mention the JNDI name of the Datasource created in Application server for FLEXCUBE UBS Messaging Database Layer Instance at step 3 as res-ref-name.

Edit Property File Path: Give the absolute path for lookup_prop.xml as env-entry-value. Ideally, this file is residing in < SPMLADAPTER_INSTALL_DIR>\OIM\FCUBSLOVAdService\config.

Note: Give "/" for at the end of the path. Also, note that as separator forward slash has been used instead of backward.

Edit <SPMLADAPTER_INSTALL_DIR>\OIM\FCUBSLOVAdService\config\lookup_prop.xml. This XML file shall have a similar section as the one shown below, (Change the values given in bold)

```
<!--  DataBase Connection -->

      <add key="FCUBS_CON_POOLNAME" value="OIMLOVSQA"/>

<!--  DataBase Connection -->

<add key="LOGGER_PATH"
value="D:/OIM/FCUBSLOVAdService/config/lookup_logger.xml"/>
```

Edit FCUBS_CON_POOLNAME: Give the same Datasource JNDI name mentioned in above web.xml for FLEXCUBE UBS Messaging Database Layer Instance.

Edit LOGGER_PATH: Give the logging configuration absolute path for lookup_logger.xml. This file is residing in **<SPMLADAPTER_INSTALL_DIR>\OIM\FCUBSLOVAdService\config** folder.

Note: As separator use forward slash instead of backward slash.

Edit **<SPMLADAPTER_INSTALL_DIR>\OIM\FCUBSLOVAdService\config\lookup_logger.xml**. This XML file shall have a similar section as the one shown below, (Change the values given in bold)

```
 <add key="ADOIM.LOGGER.FPATH" value="D:/OIM/FCUBSLOVAdService/log/"/>
```

ADOIM.LOGGER.FPATH: Give the absolute path where log files will be stored. It is recommended that mention the following path <SPMLADAPTER_INSTALL_DIR>/OIM/FCUBSLOVAdService/log/

Note: As separator use forward slash instead of backward slash. Give "/" for at the end of the path.

Edit **<SPMLADAPTER_INSTALL_DIR>\OIM\FCUBSProvisioningAdService\src\webcontent\WEB-INF\web.xml**. This XML file shall have a similar section as the one shown below (Change the values given in bold)

```
<ejb-ref>

    <ejb-ref-name>GWEJB_GW_EJB_Bean</ejb-ref-name>

    <ejb-ref-type>Session</ejb-ref-type>

    <home>com.ofss.fcubs.gw.ejb.GWEJBRemoteHome</home>
```

```
    <remote>com.ofss.fcubs.gw.ejb.GWEJBRemote</remote>

 </ejb-ref>

<env-entry>

        <description>Property File Path</description>

        <env-entry-name>propertyPath</env-entry-name>

        <env-entry-type>java.lang.String</env-entry-type>

        <env-entry-value>D:/OIM/FCUBSProvisioningAdService/config/</env-
entry-value>

</env-entry>
```

Edit ejb-link: To refer Gateway EJB from the web service locally the reference of Gateway EJB has been defined in this deployment descriptor file. Give the Gateway EJB name here as ejb-link, mentioned as ejb-name in ejb-jar.xml deployment descriptor file of Gateway EJB**.**

Edit Property File Path: Give the absolute path for ADOIM_Prop.xml as env-entry-value. This file is residing in **<SPMLADAPTER_INSTALL_DIR>\OIM\FCUBSProvisioningAdService\config.**

Note: Give "/" for at the end of the path. Also, note that as separator forward slash has been used instead of backward.

Edit **<SPMLADAPTER_INSTALL_DIR>\OIM\FCUBSLOVAdService\config\ADOIM_Prop.xml**. This XML file shall have a similar section as the one shown below, (Change the values given in bold)

```
      <add key="GW_EJB_JNDI_NAME" value="
GWEJB#com.ofss.fcubs.gw.ejb.GWEJBRemote "/>

      <add key="GW_EJB_CALL_TYPE" value="REMOTE"/>

       <add key="GW_EJB_CTX_FACTORY"
value="weblogic.jndi.WLInitialContextFactory"/>

      <add key="GW_EJB_SERVER_URL" value="t3s://localhost:7102"/>

      <add key="GW_EJB_SECURITY_PRINCIPAL" value=""/>

      <add key="GW_EJB_SECURITY_CREDENTIALS" value=""/>
```

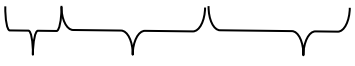
Edit GW_EJB_JNDI_NAME: Give the Gateway EJB JNDI name.

Edit GW_EJB_CALL_TYPE: Give the LOCAL or REMOTE (must be in Upper Case) based on the way EJB is to be referred from web service. If FCUBS Gateway EJB is deployed on same Weblogic Application server then it should be REMOTE.

Edit GW_EJB_SERVER_URL: Give the application server URL where Gateway EJB is deployed.

Following are the parts that make this URL:

t3s://HostName:PortNumber



Protocol Host Name Weblogic Port

Protocol: This should be t3s as in WebLogic application server.

Server URL: This should be the IP address or fully qualified computer name (i.e. <computer name>.<domain>) of the system where the application server is running on which Gateway EJB has been deployed.

Port: This should be the same as **request port** mentioned in domain.xml file.

Edit following section in the **<SPMLADAPTER_INSTALL_DIR>\OIM\FCUBSLOVAdService\config\ADOIM_Prop.xml** file: (Change the values given in bold)

```
      <add key="MAKER_ID" value="OIMUSER9"/>

      <add key="HEAD_OFFICE" value="CHO"/>

      <add key="REQ_SOURCE" value="IDM"/>

      <add key="UBS_OR_IS" value="FCUBS"/>



      <add key="LOGGER_PATH"

      value="D:/OIM/FCUBSProvisioningAdService/config/adoim_logger.xml"/>

      <add key="FCUBS_SPML_ERROR_FILE"

      value="D:/OIM/FCUBSProvisioningAdService/config/
FCUBS_SPML_ERROR.properties"/>

      <add key="ADOIM_MSG_LOGGING_ENABLED" value="N"/>

      <add key="ADOIM_MSG_LOGGING_PATH"

      value="D:/OIM/FCUBSProvisioningAdService/log/"/>
```

Edit MAKER_ID: Give FCUBS user id that can serve as maker id for all OIM requests**.** Please ensure that this id should be a valid user in FCUBS and should have rights for creating, authorizing and modifying user.

Edit HEAD_OFFICE: Give the head office branch code.

Edit REQ_SOURCE: Give the external source name. Please ensure that maintenance of this external source has been done in FCUBS.

Edit UBS_OR_IS: Give the application name to which the user need to be provisioned. The value will be either FCUBS or FCIS.

Edit LOGGER_PATH: Give the logging configuration absolute path for adoim_logger.xml. This file is residing in <SPMLADAPTER_INSTALL_DIR>\OIM\FCUBSProvisioningAdService\config folder.

Edit FCUBS_SPML_ERROR_FILE: Give the absolute path for fcubs_spml_error.properties. This file is residing in < SPMLADAPTER_INSTALL_DIR>\OIM\FCUBSProvisioningAdService\config folder.

Edit ADOIM_MSG_LOGGING_ENABLED: Give 'Y' if OIM request and response message is required to be stored separately otherwise give 'N".

Edit ADOIM_MSG_LOGGING_PATH: Give the absolute path where OIM request–response will get stored.

Note: As separator use forward slash instead of backward slash. Give "/" for at the end of the path.

Edit <SPMLADAPTER_INSTALL_DIR>\OIM\ FCUBSProvisioningAdService\config\adoim_logger.xml. This XML file shall have a similar section as the one shown below, (Change the values given in bold)

<add key="ADOIM.LOGGER.FPATH" value="**D:/OIM/FCUBSProvisioningAdService /log/**"/>

Edit ADOIM.LOGGER.FPATH: Give the absolute path where log files will be stored. It is recommended that mention the following path **<SPMLADAPTER_INSTALL_DIR>/OIM/ FCUBSProvisioningAdService/log/**

Note: As separator use forward slash instead of backward slash. Give "/" for at the end of the path.

Remark: GW_EJB_SECURITY_PRINCIPAL & GW_EJB_SECURITY_CREDENTIALS can be update using <SPMLADAPTER_INSTALL_DIR>\OIM\FCUBSProvisioningAdService\setup\ChangePassword.bat or ChangePassword.sh

5.1.4.1.4 Building the Deployment Units for WINDOWS

5.1.4.1.4.1 Building FCUBSLOVAdService.ear

- Edit <SPMLADAPTER_INSTALL_DIR>\OIM\FCUBSLOVAdService\setup\WEBLOGIC\ build.xml to set {server_home} entry to Weblogic Server installed directory

  Eg: D:\Middleware\wlserver_10.3
- Open a DOS command-prompt and change directory to, D:\OIM\FCUBSLOVAdService\
- Set PATH to JDK\bin and ANT\bin in the command prompt
- Set JAVA_HOME
- Change the directory to D:\OIM\FCUBSLOVAdService\setup\WEBLOGIC
- To execute the build file, type "ant" on the command-prompt and press enter.

  Above step creates an EAR file in D:\OIM\FCUBSLOVAdService\build with the name FCUBSLOVAdService.ear

5.1.4.1.4.2 Building FCUBSProvisioningAdService.ear

- Edit **<SPMLADAPTER_INSTALL_DIR>\OIM\FCUBSProvisioningAdService\setup\WEBLOGIC\build.xml** to set {server_home} and {JAVA_HOME} entry to Weblogic Server installed directory and JDK Installed directory.

  Eg: D:\Middleware\wlserver_10.3

  C:\Program Files\java\jdk1.7.0_51
- Change directory to, D:\OIM\FCUBSProvisioningAdService\setup\WEBLOGIC
- To execute the build file, type "ant" on the command-prompt and press enter.

Above step creates an EAR file in build D:\OIM\FCUBSProvisioningAdService folder with the name FCUBSProvisioningAdService.ear

5.1.4.1.5 Building the Deployment Units for UNIX / Linux

5.1.4.1.5.1 Building FCUBSLOVAdService.ear

- Modify {server_home} entry in the build.xml to where Weblogic Server is installed (for example /home/kernel/Middleware/wlserver_10.3)
- Open a UNIX shell prompt and change directory to, /home/OIM/FCUBSLOVAdService
- Set PATH environment variable with JDK/bin path and ANT\bin path in the command prompt.
- Change the directory to <SPMLADAPTER_INSTALL_DIR>/FCUBSLOVAdService/setup/WEBLOGIC
- To execute the build file, type “ant” on the shell prompt and press enter.

Above step creates an EAR file in /home/kernel/OIM/FCUBSLOVAdService/build folder with the name FCUBSLOVAdService.ear

5.1.4.1.5.2 Building FCUBSProvisioningAdService.ear

- Edit <SPMLADAPTER_INSTALL_DIR>/OIM/FCUBSProvisioningAdService/setup/WEBLOGIC/build.xml to set {server_home} entry to Weblogic Server installed directory

  Eg: home/Oracle/Middleware/wlserver_10.3

  home/java/jdk1.7.0_51
- Change directory to, /home/kernel/OIM/FCUBSProvisioningAdService/setup/WEBLOGIC
- To execute the build file, type “ant” on the command-prompt and press enter.

Above step creates an EAR file in /home/kernel/OIM/FCUBSProvisioningAdService/build folder with the name FCUBSProvisioningAdService.ear

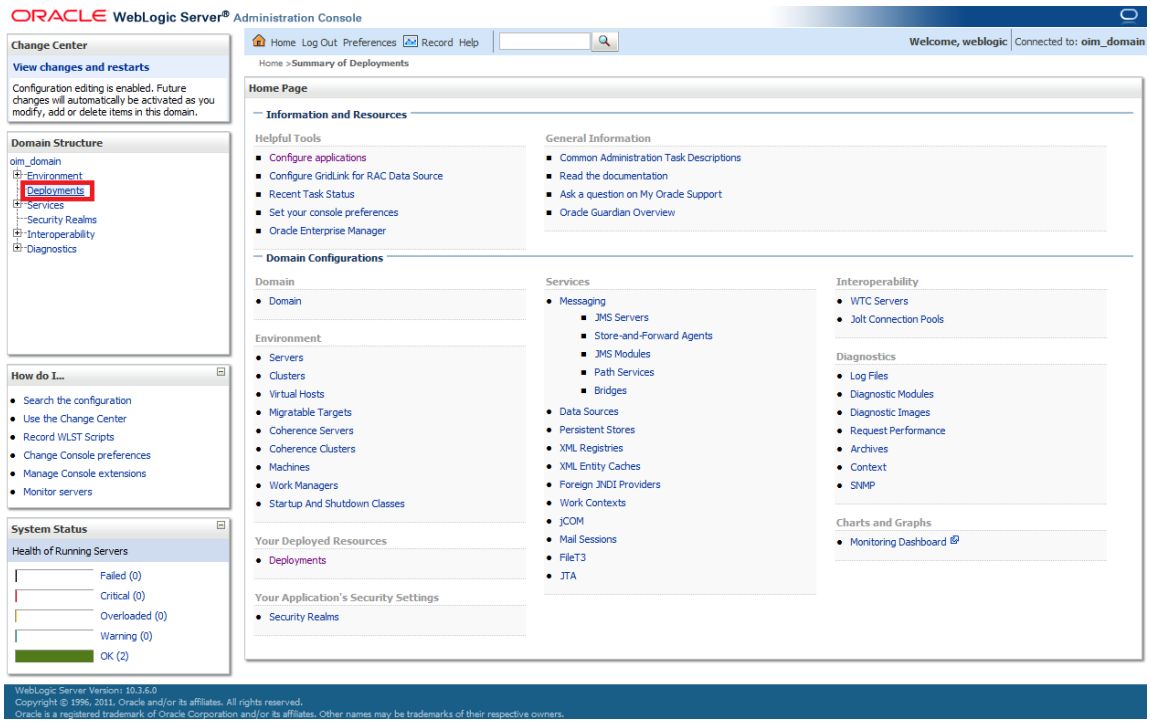
5.1.4.2 Deployment

Deploy FCUBSLOVAdService

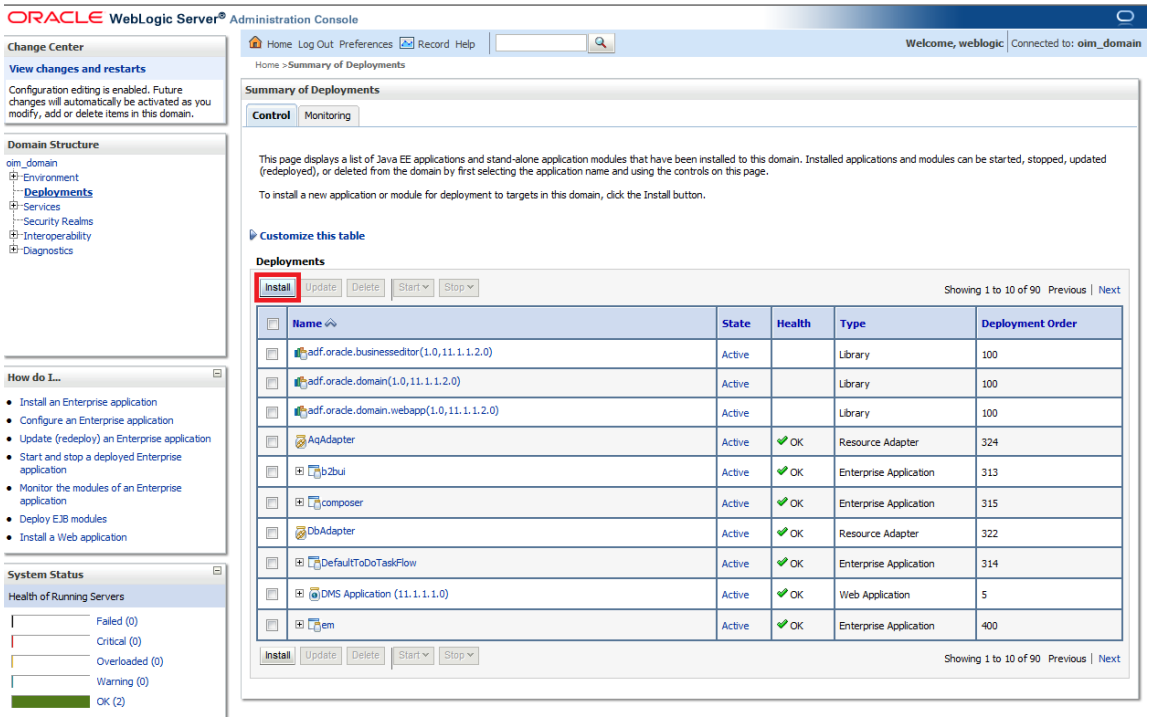
Login to Administrative Console

Enter Weblogic administrator username/password and press Login.

Click on Deployments as shown in below screen.

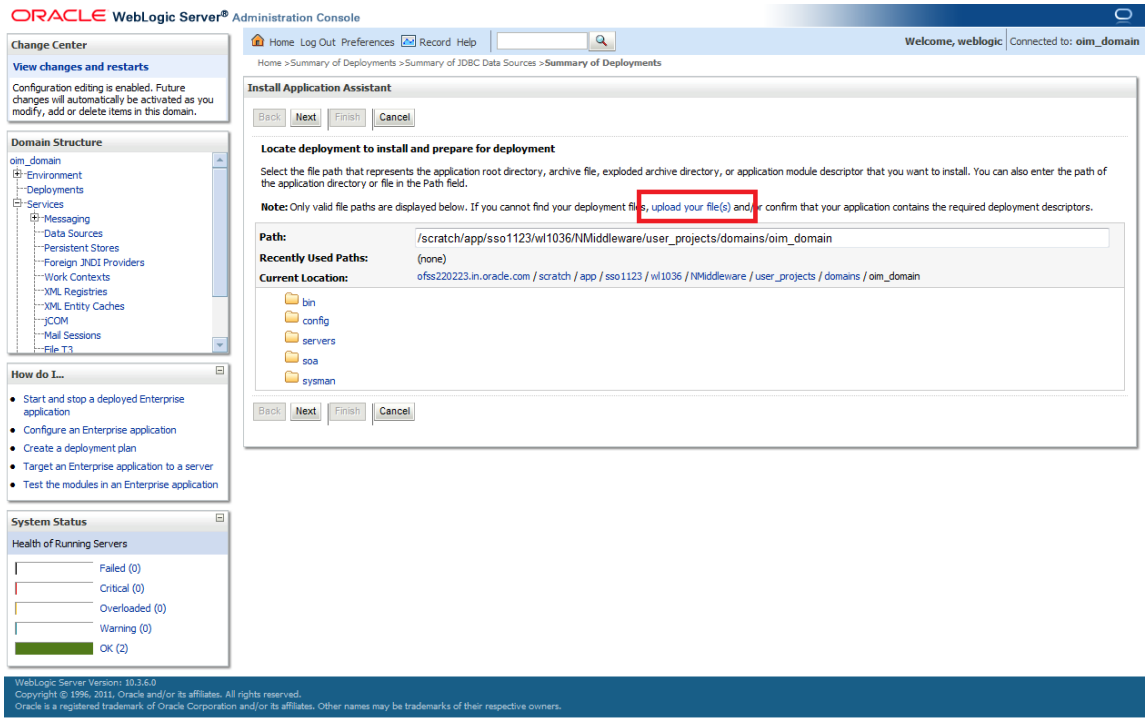


Click on the Install as shown below.



The following screen is displayed.

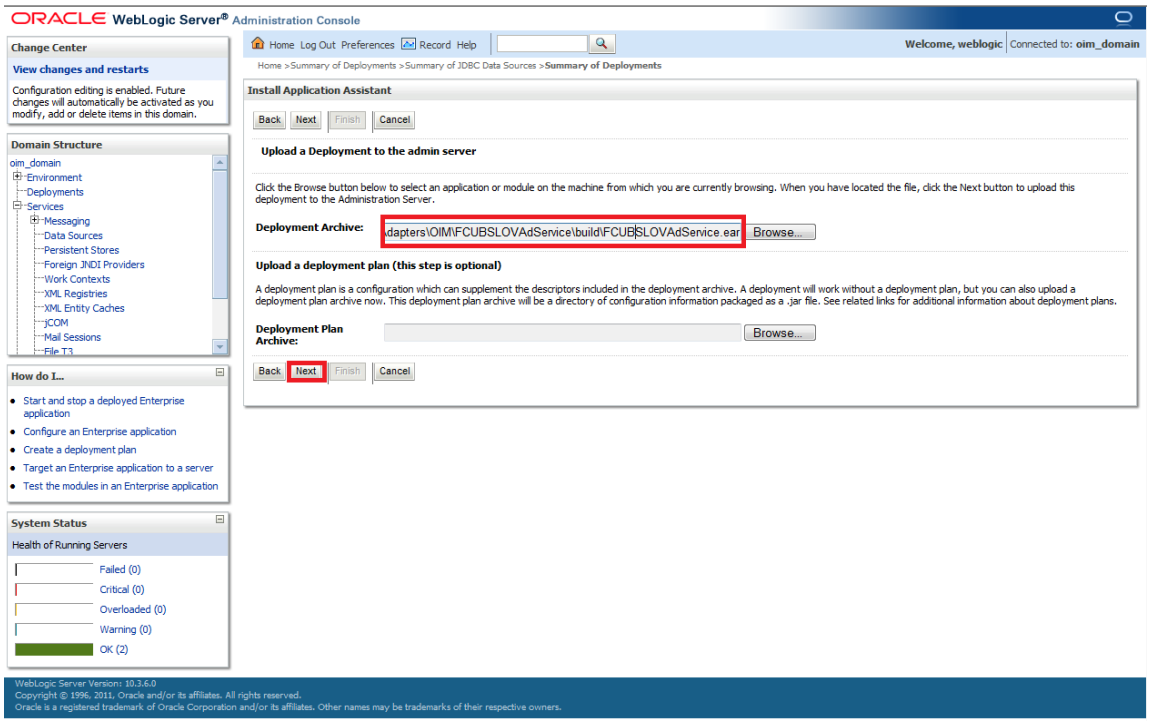
a. Click on upload your file(s)



Choose the enterprise archive file from the build path:

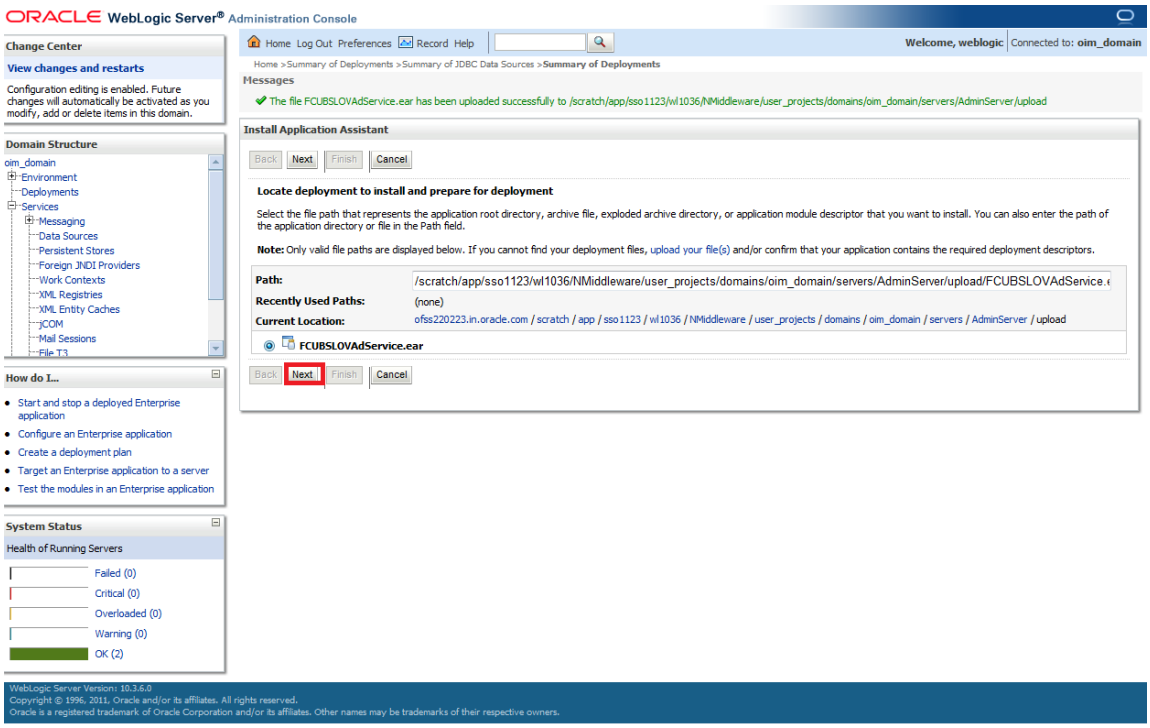
<SPMLADAPTER_INSTALL_DIR>\OIM\FCUBSLOVAdService\build\

a. Click on Next



Select the enterprises archive file FCUBSLOVAdService.ear

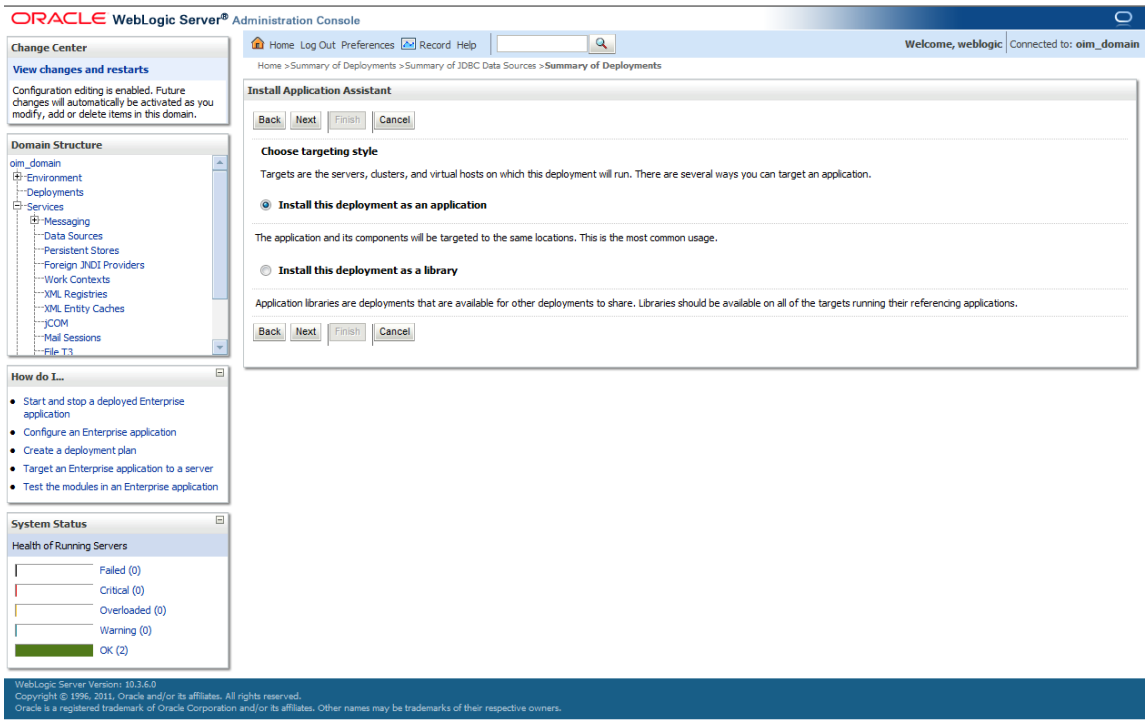
a. Click on Next



The following screen is displayed.

a. Select – Install this deployment as an application.

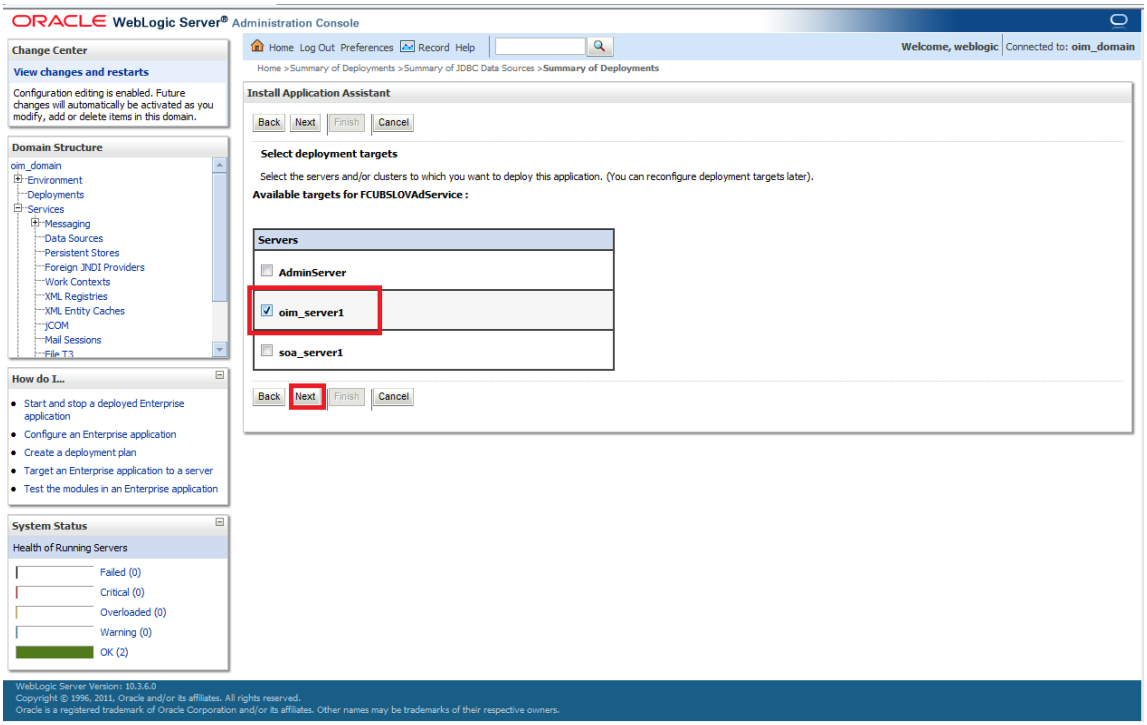
b. Click on Next.



The following screen is displayed.

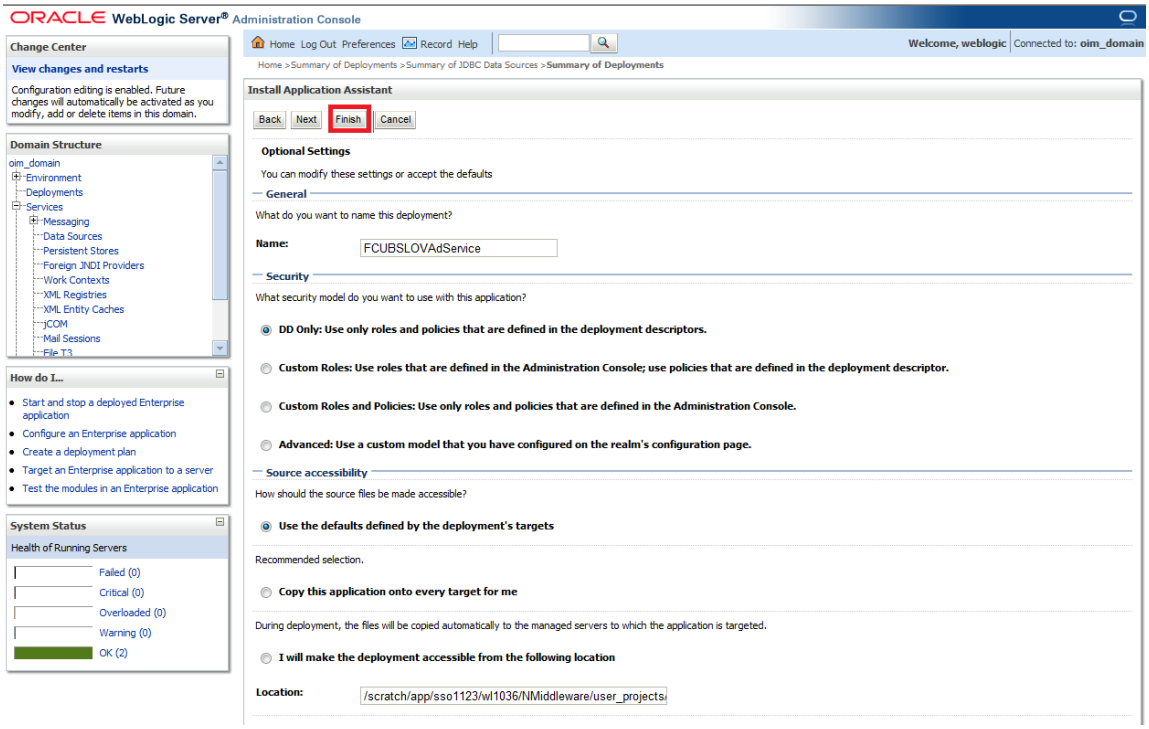
a. Select the Application Server Instance in which the FCUBSLOVAdService needs to be deployed.

b. Click on Next.



The following screen is displayed.

b. Click on Finish.



Deploy FCUBSProvisioningAdService

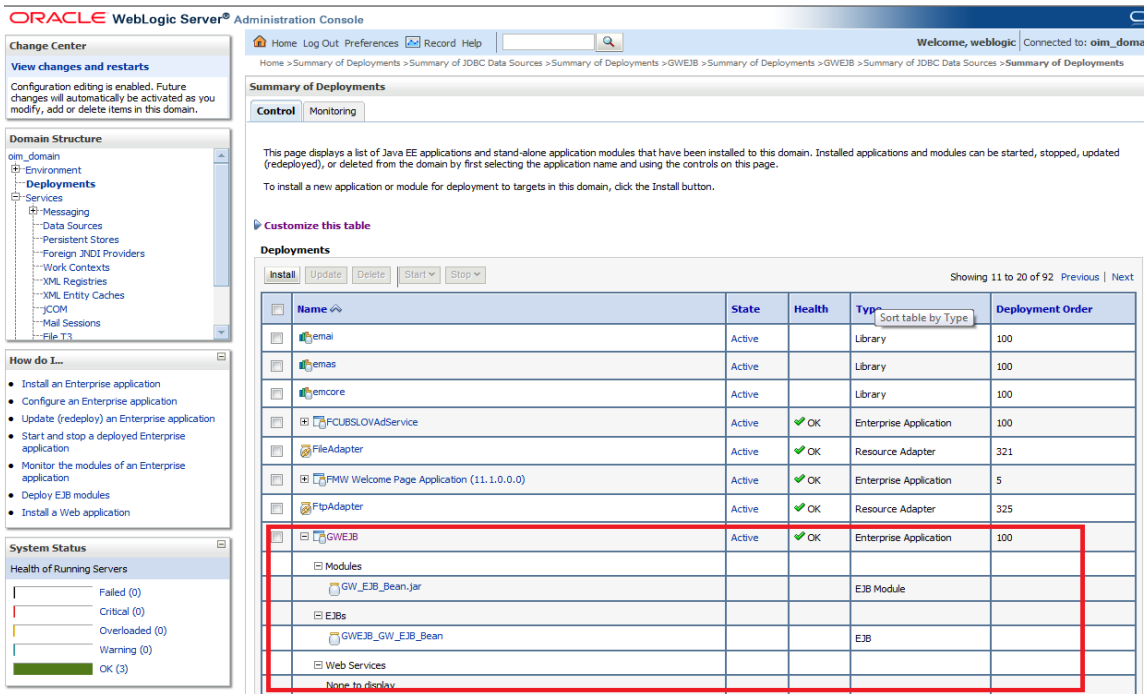
If the **GW_EJB_CALL_TYPE** is set as **REMOTE** in the **ADOIM_Prop.xml** then follow the same step as above (Section 5.1.4.2.1) to deploy the FCUBSProvisioningAdService web service with following changes

- Select the ear file from the path <SPMLADAPTER_INSTALL_DIR>\OIM\ FCUBSProvisioningAdService\build\FCUBSProvisioningAdService.ear
- Give the application name as FCUBSProvisioningAdService.

If the **GW_EJB_CALL_TYPE** is set as **REMOTE** in the **ADOIM_Prop.xml**, follow the below steps

The following screen is displayed.

1. Make sure that Gateway EJB bean has been deployed there as shown in below screen shot.



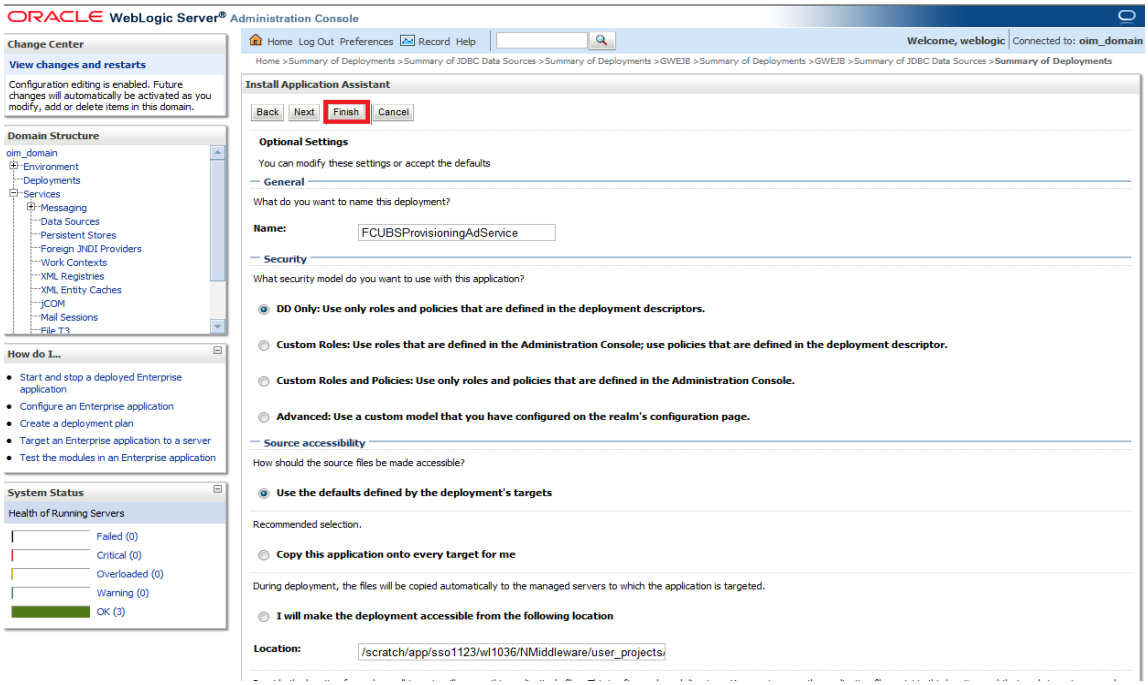
Refer 5.1.4.2.1 to know more about the deployment steps.

2. Choose the enterprise archive file Path from the build path:

   <SPMLADAPTER_INSTALL_DIR>\OIM\FCUBSProvisioningAdService\build\

3. Select the enterprises archive file FCUBSProvisioningAdService.ear

4. Click on Finish.



5.1.5 Build GWEJB

To execute the FCUBS Installer for GWEJB build following folder/files should be created/copied at **\ADAPTERS\OIM\FCUBSGW** along with the compiled sources.

- MAIN (Blank folder)
- FCHome.ini (copy from OSDC sources, file will be present at parallel to ADAPTERS folder)

After this GWEJB ear can be build with the source location as **\ADAPTERS\OIM\FCUBSGW .**

For GWEJB build kindly refer the doc **Gateway_EAR_Building.doc .**

Deploy the created GWEJB ear in OIM server.

5.1.6 OIM Setup

Prerequisite: Oracle Identity Server & Oracle Design Console.

OIM side setup should be done on the system where OIM server is running. This setup includes

Java code deployment of OIM's pre-populate adapter, entity adapter and schedule task & importing integration specific configuration files into OIM.

The following steps to be followed to do the initial environment setup:

5.1.6.1 Copy following folders from the FCUBS Software Release area

- <FCUBS Release Name>\ADAPTERS\OIM\OIM-Config
- <FCUBS RELEASE NAME>\ADAPTERS\OIM\setup

  to local machine (say D:\OIM for WINDOWS or /home/kernel/OIM for UNIX).

5.1.6.2 Building the Lookup Search Scheduled Task deployment units for WINDOWS.

- Change directory to, D:\OIM\OIM-Config\Sch-Task\setup
- Modify the OIM_SERVER_INSTALL_DIR entry in the build.xml to where OIM Server is installed (for example D:\Oracle\Middleware\weblogic\Oracle_IDM1) and JAVA_HOME entry.
- In the below section of build.xml change the WSDL location hostname and port.

  <exec executable="${JAVA_HOME}/bin/wsimport">

  <arg line="-keep -p com.iflex.fcubs.integration.oim.ws.client **http://<hostname>:<port>/FCUBSLOVAdService/FCUBSLOVAdServiceSEI?WSDL**"/>

  </exec>
- To execute the build file, type "ant" on the command-prompt and press enter.

Above step creates a JAR file in D:\OIM\OIM-Config\Sch-Task\build\ FCUBSLOVSchTask folder with the name **FCUBSLOVSchTask.Jar**

- Copy this FCUBSLOVSchTask.Jar to the <OIM_SERVER_INSTALL_DIR>\server\ScheduleTask folder and <OIM_SERVER_INSTALL_DIR>\server\apps\oim.ear\APP-INF\lib

5.1.6.3 Building the Lookup Search Scheduled Task deployment units for UNIX

- Change directory to /home/kernel/OIM/OIM-Config/Sch-Task/setup
- Modify the OIM_SERVER_INSTALL_DIR entry in the build.xml to where OIM Server is installed (for example /Oracle/Middleware/weblogic/Oracle_IDM1) and JAVA_HOME entry.
- In the below section of build.xml change the WSDL location hostname and port.

<exec executable="${JAVA_HOME}/bin/wsimport">

<arg line="-keep -p com.iflex.fcubs.integration.oim.ws.client
http://<hostname>:<port>/FCUBSLOVAdService/FCUBSLOVAdServiceSEI?WSDL"/>

</exec>

- To execute the build file, type “ant” on the shell and press enter.

Above step creates a JAR file in /home/kernel/OIM/OIM-Config/Sch-Task/build/FCUBSLOVSchTask folder with the name **FCUBSLOVSchTask.Jar**

- Copy this FCUBSLOVSchTask.Jar to the <OIM_SERVER_INSTALL_DIR>/server/ScheduleTask folder and <OIM_SERVER_INSTALL_DIR>/server/apps/oim.ear/APP-INF/lib

5.1.6.4 Deployment of Pre-population Adapters

Below Steps will be valid In case of different name used to create the form in 5.1.5.35

- Change the directory to

  <AdapterSource>/OIM/OIM-Config/PrePopulateAdapter

- Edit the plugin.xml and update the FlexcubeForm into the form name entered in 5.1.5.35

```
<?xml version="1.0" encoding="UTF-8" ?>
<oimplugins xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
 <plugins pluginpoint="oracle.iam.request.plugins.PrePopulationAdapter">
  <plugin pluginclass="com.oracle.oim.utility.eventhandler.UserIDPrepopulateAdapter" version="1.0"
          name="UserIDPrepopulateAdapter">
   <metadata name="PrePopulationAdapater">
    <value>FlexcubeForm::USERID</value>
   </metadata>
  </plugin>
  <plugin pluginclass="com.oracle.oim.utility.eventhandler.UserNamePrepopulateAdapter"  version="1.0"
          name="UserNamePrepopulateAdapter">
   <metadata name="PrePopulationAdapater">
    <value>FlexcubeForm::USERNAME</value>
   </metadata>
  </plugin>
  <plugin pluginclass="com.oracle.oim.utility.eventhandler.UserPasswordPrepopulateAdapter" version="1.0"
          name="UserPasswordPrepopulateAdapter">
   <metadata name="PrePopulationAdapater">
    <value>FlexcubeForm::USERPASSWORD</value>
```

```
 </metadata>
 </plugin>
 <plugin pluginclass="com.oracle.oim.utility.eventhandler.EmailPrepopulateAdapter" version="1.0"
         name="EmailPrepopulateAdapter">
  <metadata name="PrePopulationAdapater">
   <value>FlexcubeForm::EMAIL</value>
  </metadata>
 </plugin>
 <plugin pluginclass="com.oracle.oim.utility.eventhandler.LdapUserPrepopulateAdapter" version="1.0"
         name="LdapUserPrepopulateAdapter">
  <metadata name="PrePopulationAdapater">
   <value>FlexcubeForm::LDAPUSR</value>
  </metadata>
 </plugin>
 <plugin pluginclass="com.oracle.oim.utility.eventhandler.StartDatePrepopulateAdapter" version="1.0"
         name="StartDatePrepopulateAdapter">
  <metadata name="PrePopulationAdapater">
   <value>FlexcubeForm::STARTDATE</value>
  </metadata>
 </plugin>
</plugins>
<plugins pluginpoint="oracle.iam.platform.kernel.spi.EventHandler">
 <plugin pluginclass="com.oracle.oim.utility.eventhandler.UserPasswordPreProcessHandler" version="1.0"
         name="UserPasswordPreProcessHandler"></plugin>
</plugins>
</oimplugins>
```

- Change the directory to

  <AdapterSource>/OIM/OIM-Config/PrePopulateAdapter /setup

- Modify the OIM_SERVER_INSTALL_DIR entry in the build.xml to where OIM Server is installed (for example D:\Oracle\Middleware\weblogic\Oracle_IDM1) and JAVA_HOME entry
  - To execute the build file, type “ant” on the shell and press enter.

Above step creates a zip file in <AdapterSource>/OIM/OIM-Config/PrePopulateAdapter/build/ folder with the name **prepopulateadapter.zip**

- Copy the <AdapterSource>/OIM/OIM-Config/PrePopulateAdapter/build/prepopulateadapter.zip into <OIM_SERVER_INSTALL_DIR>/server/plugins/

- <OIM_SERVER_INSTALL_DIR>/server/plugin_utility/ant.properties should be changed from

```
############################################################
## The installation directory for WLS or WAS
############################################################
#wls.home=@wls_home
#was.home=@was_home

############################################################
# The OIM server directory for OIM. For example: MW_HOME/Oracle_IDM1/server
############################################################
#oim.home@oim_home

############################################################
#login file name with path for WAS or WLS
############################################################
#login.config=${oim.home}/config/authwl.conf
#login.config=${oim.home}/config/authws.conf

############################################################
# Represents the directory where Oracle Fusion Middleware is installed.
############################################################
#mw.home=@mw_home
```

To

```
############################################################
## The installation directory for WLS or WAS
############################################################
wls.home=<Installation_DIR>/Middleware/wlserver_10.3
#was.home=@was_home

############################################################
# The OIM server directory for OIM. For example: MW_HOME/Oracle_IDM1/server
############################################################
oim.home=<OIM_INSTALLATION_DIR>/server/
```

```
#############################################################
#login file name with path for WAS or WLS
#############################################################
login.config=${oim.home}/config/authwl.conf
#login.config=${oim.home}/config/authws.conf


#############################################################
# Represents the directory where Oracle Fusion Middleware is installed.
#############################################################
mw.home=<Installation_DIR>/Middleware
```

- Set the ANT_HOME & JAVA_HOME
- In Command Prompt / SHELL type the below command and Press Enter
- ant -f pluginregistration.xml register
- Following Information has to be provided
  - OIM Admin User – xelsysadm
  - OIM Admin User – Password
  - OIM Admin server URL : t3://hostname:portname
  - Full path of adapter which needs to be imported
<OIM_SERVER_INSTALL_DIR>/server/plugins/prepopulateadapter.zip
- Result will be displayed like

```
Plugin com.oracle.oim.utility.eventhandler.LdapUserPrepopulateAdapter version 1.0 Registered
Plugin com.oracle.oim.utility.eventhandler.UserIDPrepopulateAdapter version 1.0 Registered
Plugin com.oracle.oim.utility.eventhandler.StartDatePrepopulateAdapter version 1.0 Registered
Plugin com.oracle.oim.utility.eventhandler.UserNamePrepopulateAdapter version 1.0 Registered
Plugin com.oracle.oim.utility.eventhandler.UserPasswordPrepopulateadapter version 1.0 Registered
Plugin com.oracle.oim.utility.eventhandler.EmailPrepopulateAdapter version 1.0 Registered
Plugin com.oracle.oim.utility.eventhandler.UserPasswordPreProcessHandler version 1.0 Registered
```

- Modify the weblogic.properties under < OIM_SERVER_INSTALL_DIR >/server/bin

```
wls_servername=@servername
application_name=@appname
metadata_from_loc=@metadata_from_loc
```

to

```
wls_servername=oim_server1
application_name=OIMMetadata
```

metadata_from_loc=**<AdapterSource>/OIM/OIM-Config/PrePopulateAdapter/oim**

- Type **sh weblogicImportMetadata.sh** in shell or **weblogicImportMeteData.bat** in command prompt and press enter to execute the command.
- You have to enter Weblogic Admin Server – user name, password and URL (like t3://localhost:7001)
- Type **sh PurgeCache.sh all** in shell or **PurgeCache.bat all** in command prompt and press enter to execute the command.
- Now you have to enter oim admin user name (xelsysadm), password and oim server URL (like t3://localhost:14000)
- Restart the OIM Server to impact the changes done.

5.1.6.5 Create folders for Reconciliation

- For reconciliation, there should be different folder for staging files (yet to be reconciled) and for processed files (after reconciliation). These folders can be anywhere that OIM should able to access. If it is other than the OIM server system then that network path should be mapped as network drive.
- Create folder to keep staging file, for example

  <OIM_SERVER_INSTALL_DIR>\xellerate\GTC\Recon\Staging
- Create folder to keep processed file, for example

  <OIM_SERVER_INSTALL_DIR>\xellerate\GTC\Recon\Archive

5.1.6.6 Importing Configuration Files

This step involves import of integration specific configuration files into OIM using OIM provided Deployment Manager.

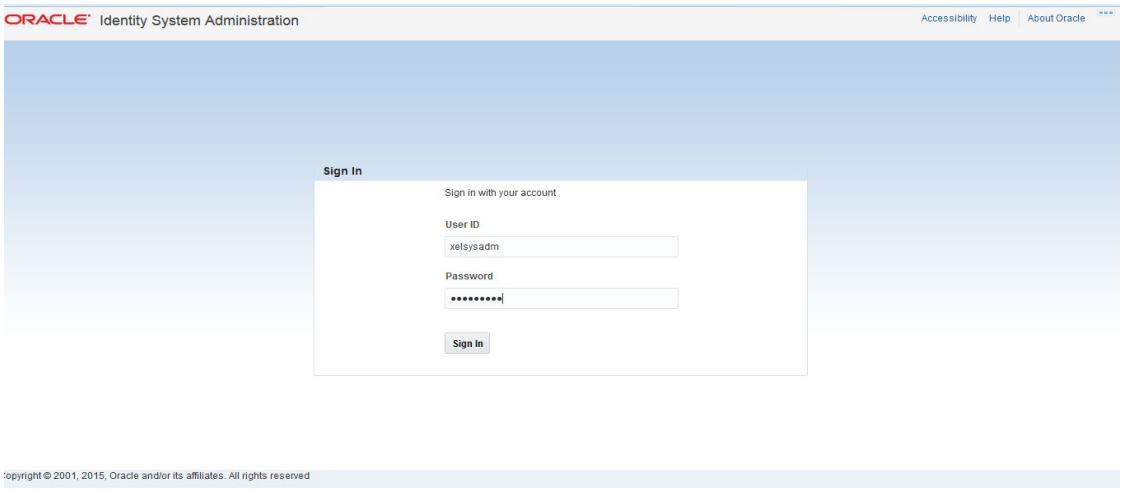
Prerequisite: Ensure that OIM setup steps have been followed properly.

Note: Do the import in the same order as it is described below.

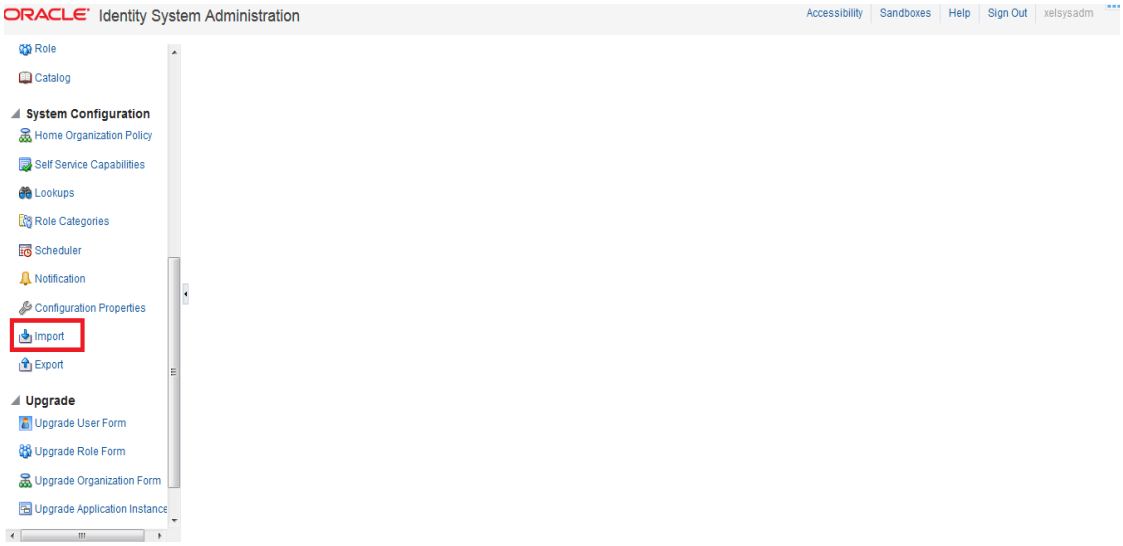
Open the Oracle Identity Manager Administrative console. (Give the following URL in the browser: http://<hostname>:<oimport>/sysadmin)

Login to Administrative Console

Enter OIM administrator username/password and press Sign In.



Click on Import option under System Configuration.

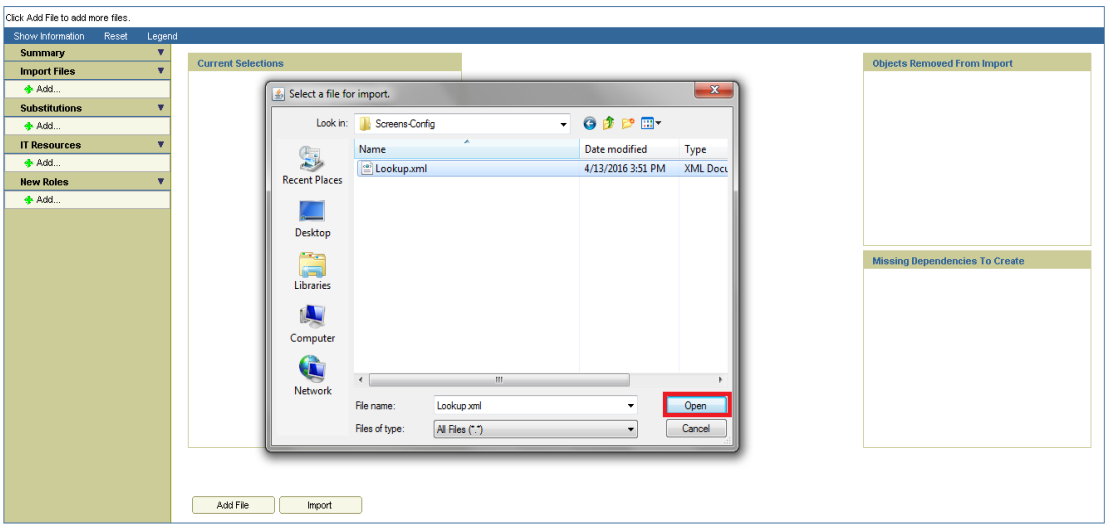


The following screen will get displayed with Add File option.

a. Select Lookup.xml file from the folder <SPMLADAPTER_INSTALL_DIR>\OIM\OIM-Config\Screens-Config.

b. Click on Open.

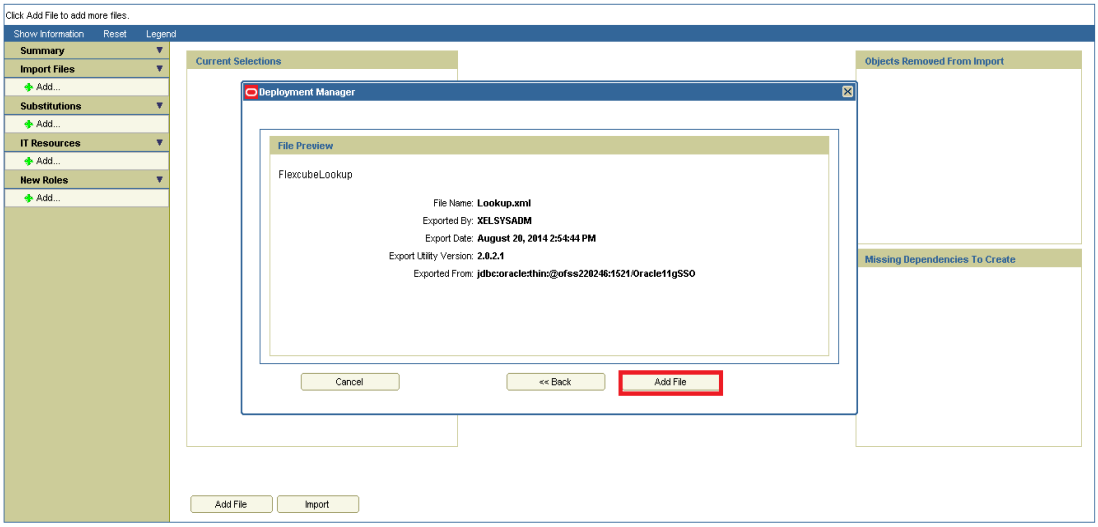
Deployment Manager - Import



We will get File preview screen

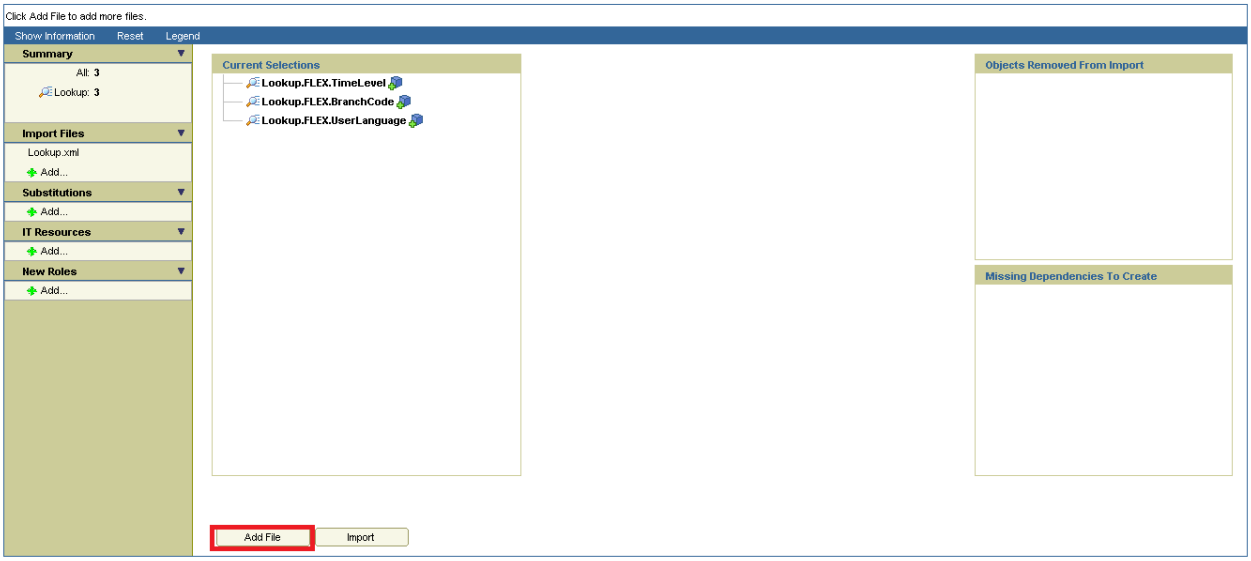
a. Click on Add file.

Deployment Manager - Import



Click on Add File

Deployment Manager - Import

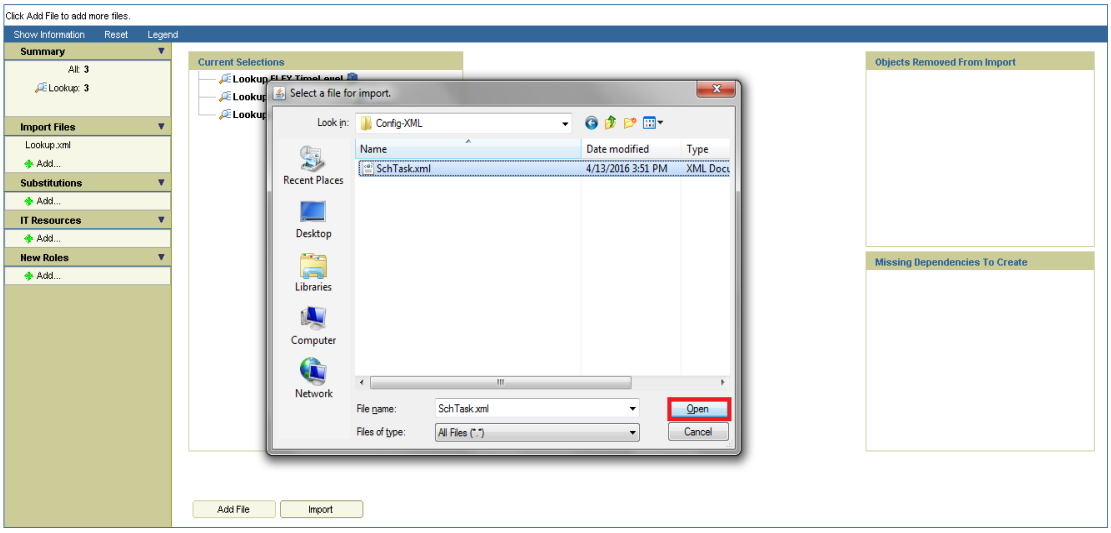


Select SchTask.xml file from the folder

<SPMLADAPTER_INSTALL_DIR>\OIM\OIM-Config\Sch-Tasks\Config-XML.

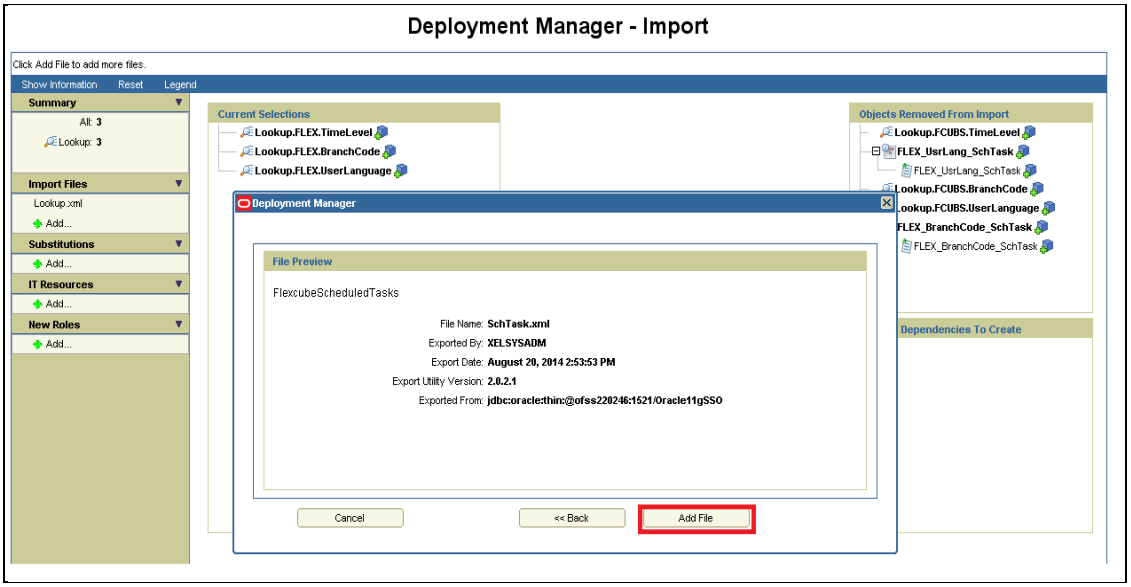
a. Click on Open.

Deployment Manager - Import

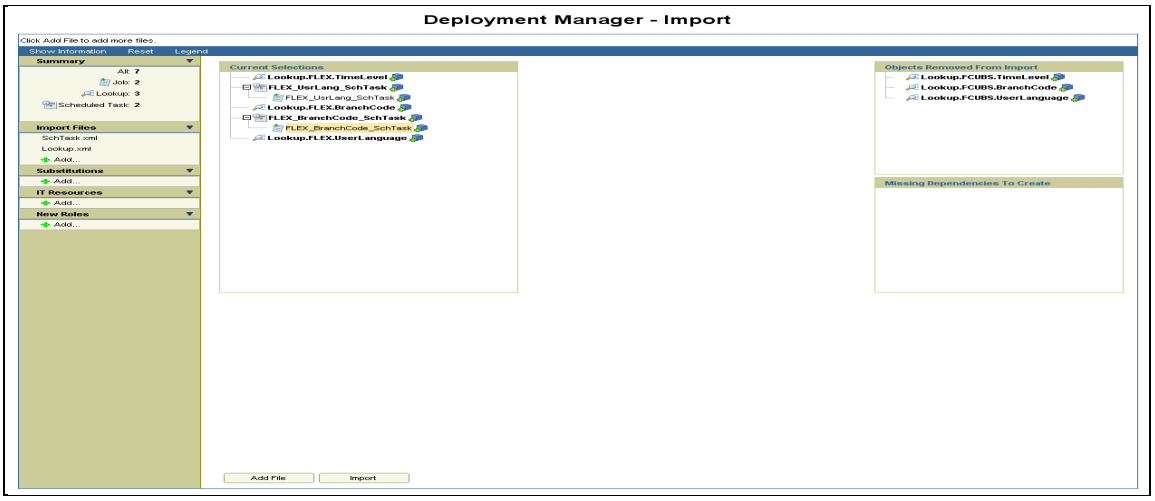


We will get File preview screen

a. Click on Add file.

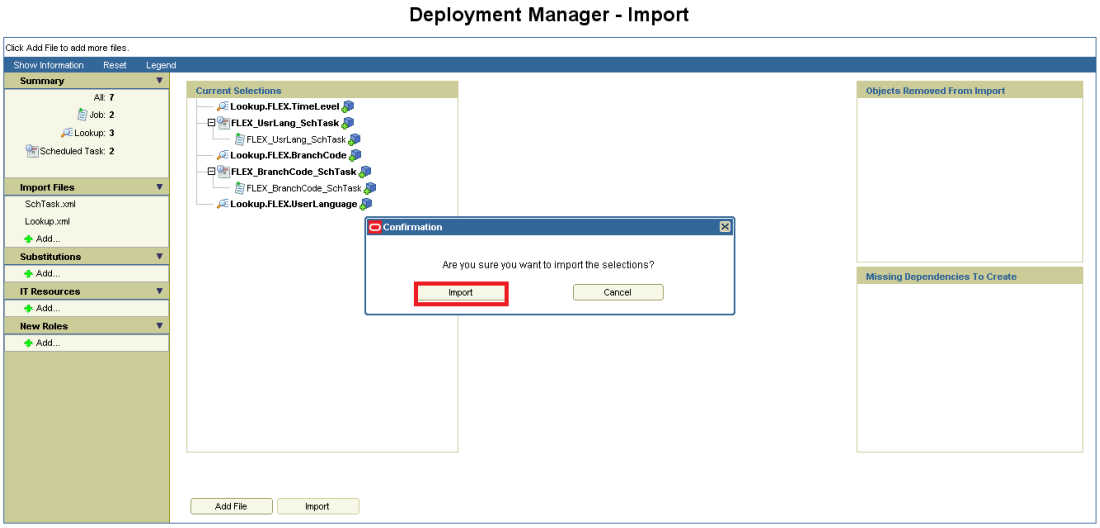


Click on Import.



Above will prompt for Import Confirmation

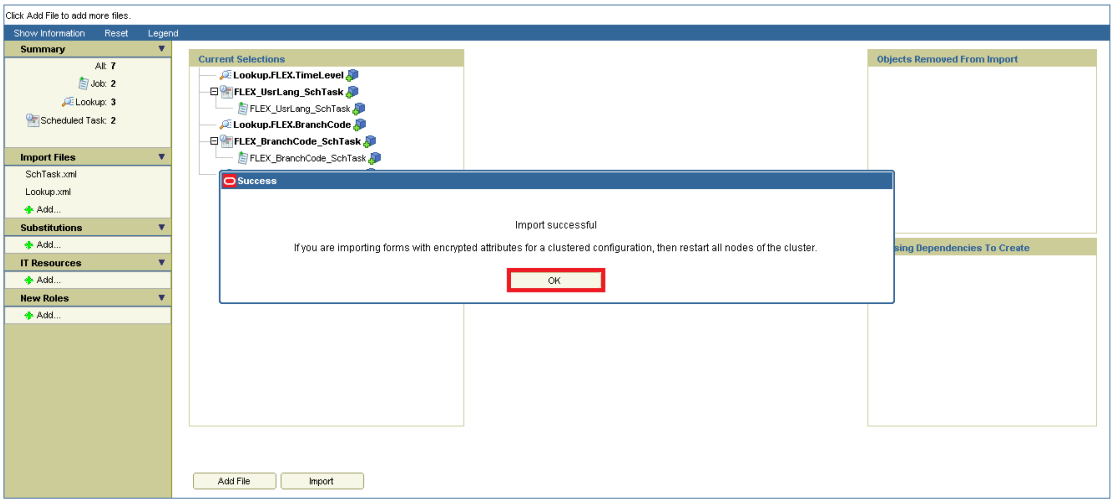
a. Click on Import to start import.



On successful import following screen will come.

a. Ensure that import is successful and click on ok.

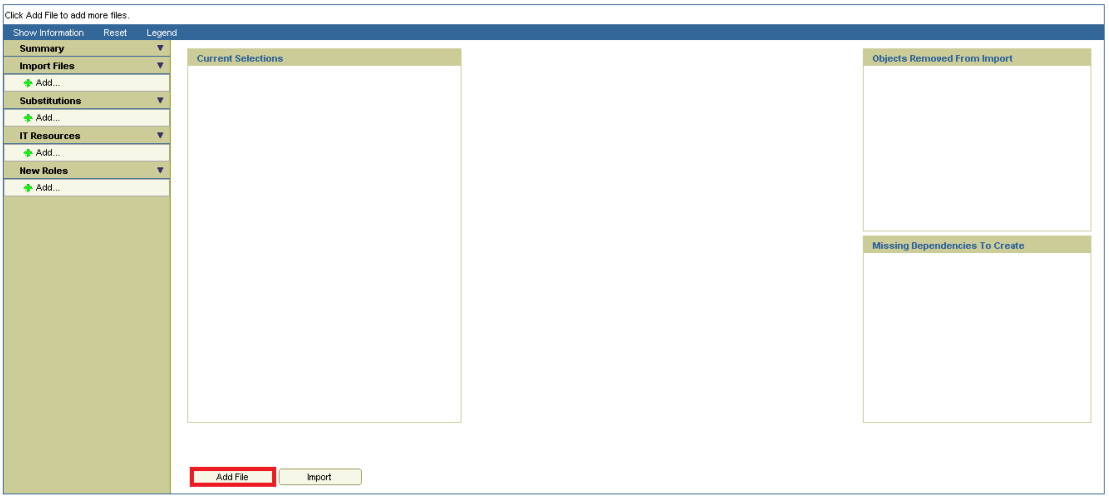
Deployment Manager - Import



The following screen will get displayed.

a. Click on Add File.

Deployment Manager - Import

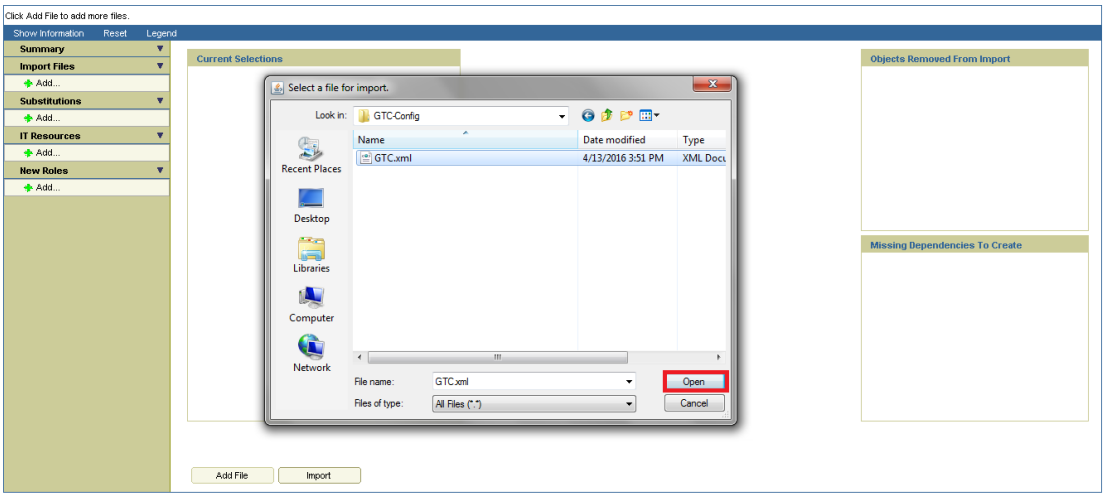


Open file window will get appeared.

b. Select GTC.xml file from the folder <SPMLADAPTER_INSTALL_DIR>\OIM\OIM-Config\GTC-Config\.

c. Click on Open.

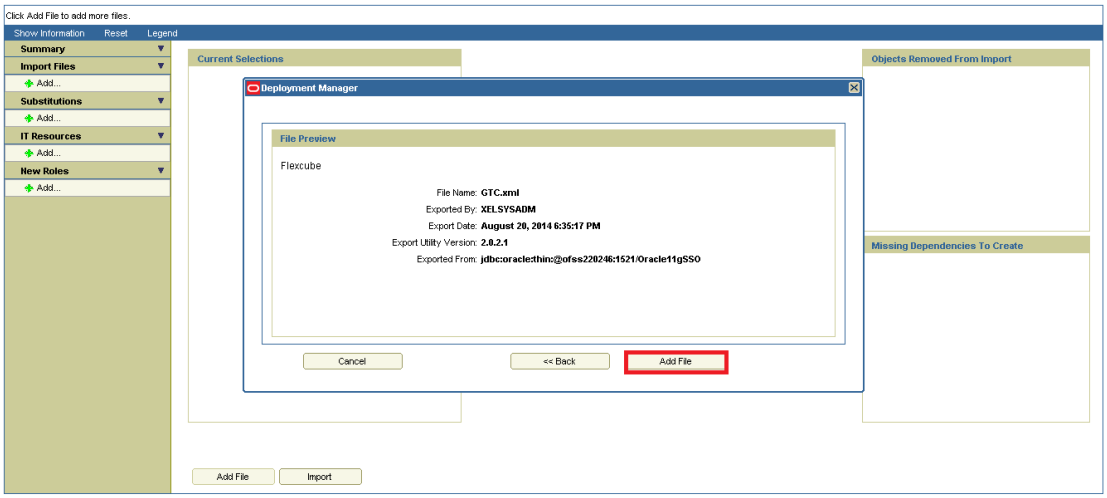
Deployment Manager - Import



We will get File preview screen

d. Click on Add file.

Deployment Manager - Import



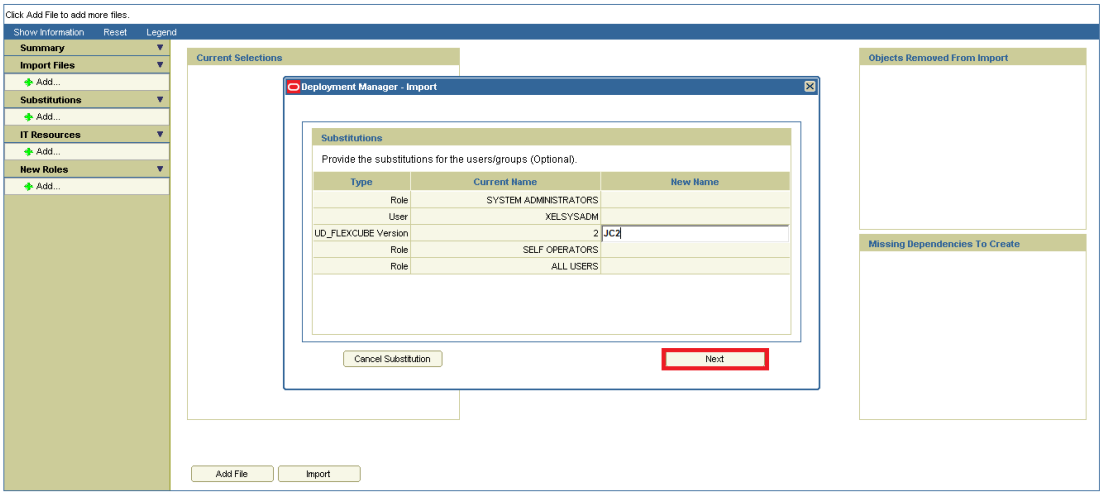
Next screen will be the substitution screen.

e. If the GTC is imported first time then click on Next.

f. If GTC have been already imported once successfully, change the Version name for example UD_FLEXCUBE Version = FLEXCUBE V2.

g. Click on Next.

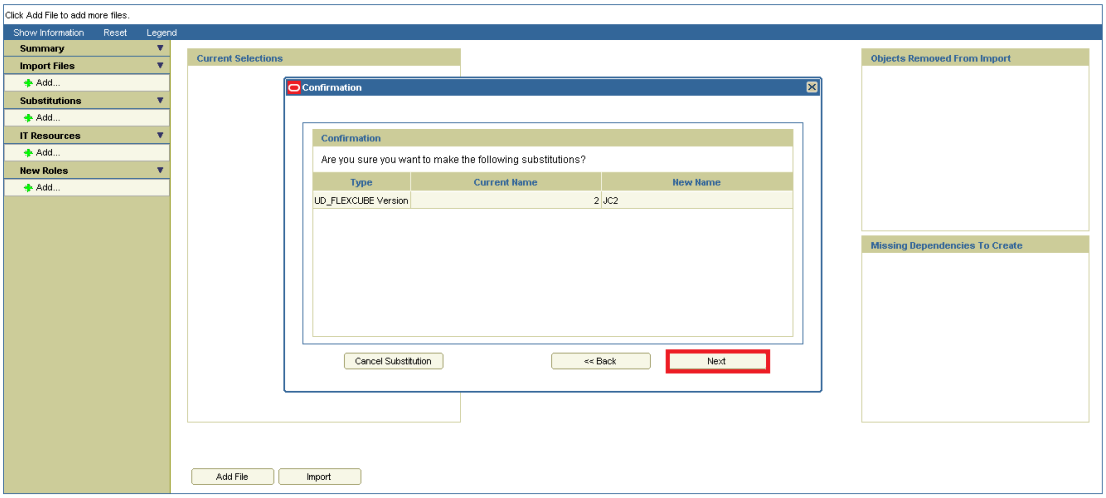
Deployment Manager - Import



Above will prompt for substitution Confirmation

h. If any value has been changed on previous screen it will list those substitution otherwise below screen will get displayed. Click on Next.

Deployment Manager - Import



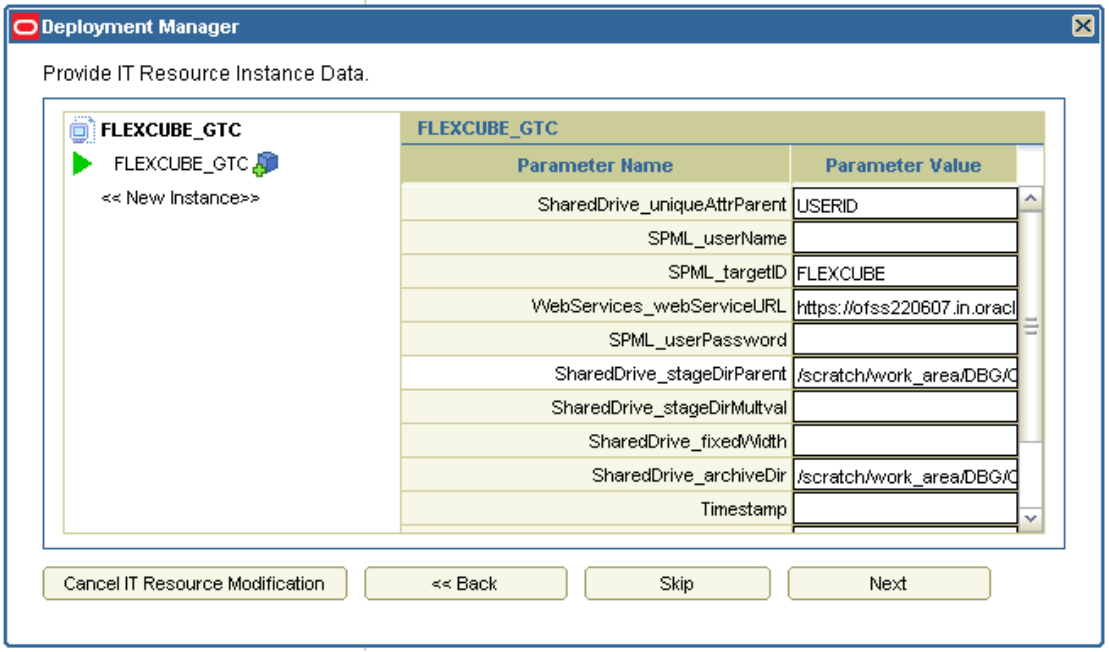
Next, Provide IT resource instance data screen will get displayed.

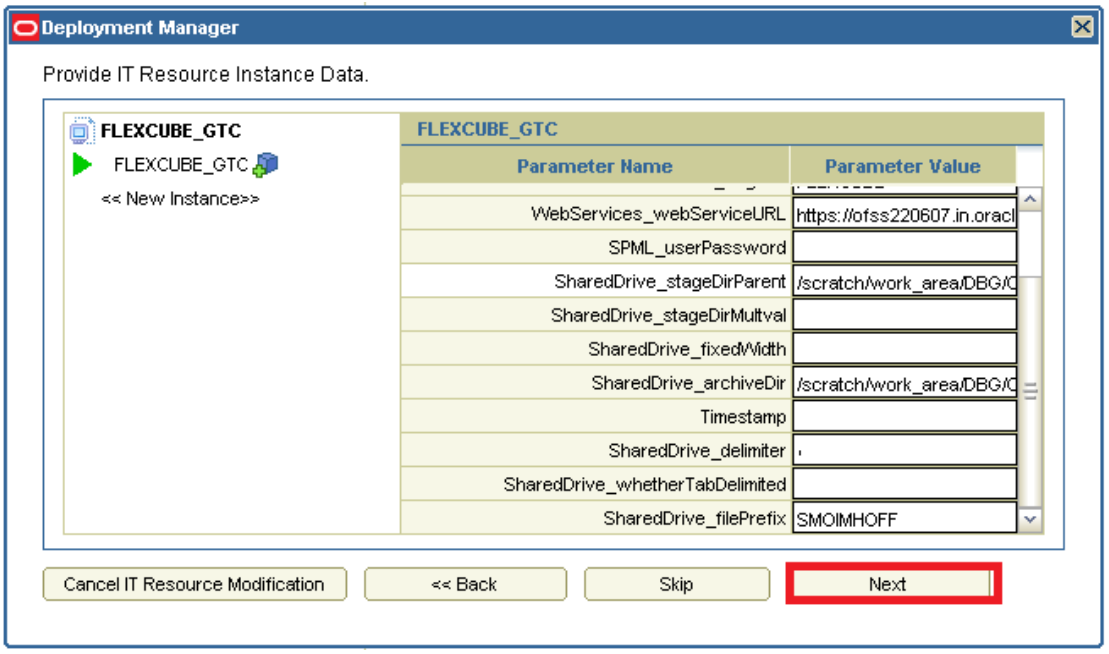
i. Ensure that the green arrow should point to FLEXCUBE_GTC.

j. Provide followings to the right hand table:

Parameter Name	Parameter Value
SPML_targetID	FLEXCUBE
SharedDrive_filePrefix	SMOIMHOFF
SharedDrive_stageDirParent	Full path of the staging folder created in step 4 of OIM setup Eg: /home/Oracle/Oracle/Middleware/FCUBS-OIM-Config/Staging
Webservices_webserviceURL	Provisioning web servic**e** **FCUBSProvisioningAdService** URL deployed in step .Typically it should be like https://<hostName>:<port>/FCUBSProvisioningAdService/FCUBSProvisioningAdServiceSEI Eg: https://ofss000000:14001/FCUBSProvisioningAdService/FCUBSProvisioningAdServiceSEI
SharedDrive_archiveDir	Full path of the archiving folder created in step 4 of OIM setup Eg: /home/Oracle/Oracle/Middleware/FCUBS-OIM-Config/Archive
SharedDrive_delimeter	, [Comma]
SharedDrive_uniqueAttrParent	USERID

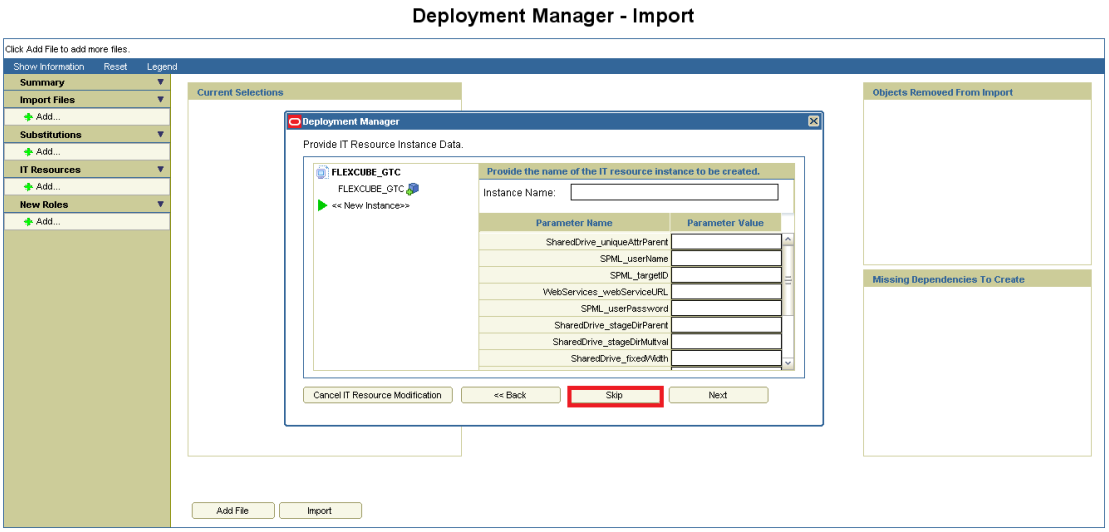
k. Click on Next.


Deployment Manager
Provide IT Resource Instance Data.
FLEXCUBE_GTC
FLEXCUBE_GTC
<< New Instance>>
FLEXCUBE_GTC
Parameter Name
Parameter Value
SharedDrive_uniqueAttrParent
USERID
SPML_userName
SPML_targetID
FLEXCUBE
WebServices_webServiceURL
https://ofss220607.in.oracl
SPML_userPassword
SharedDrive_stageDirParent
/scratch/work_area/DBG/C
SharedDrive_stageDirMultval
SharedDrive_fixedWidth
SharedDrive_archiveDir
/scratch/work_area/DBG/C
Timestamp
Cancel IT Resource Modification
<< Back
Skip
Next


Deployment Manager
Provide IT Resource Instance Data.
FLEXCUBE_GTC
FLEXCUBE_GTC
<< New Instance>>
FLEXCUBE_GTC
Parameter Name
Parameter Value
WebServices_webServiceURL
https://ofss220607.in.oracl
SPML_userPassword
SharedDrive_stageDirParent
/scratch/work_area/DBG/C
SharedDrive_stageDirMultval
SharedDrive_fixedWidth
SharedDrive_archiveDir
/scratch/work_area/DBG/C
Timestamp
SharedDrive_delimiter
,
SharedDrive_whetherTabDelimited
SharedDrive_filePrefix
SMOIMHOFF
Cancel IT Resource Modification
<< Back
Skip
Next

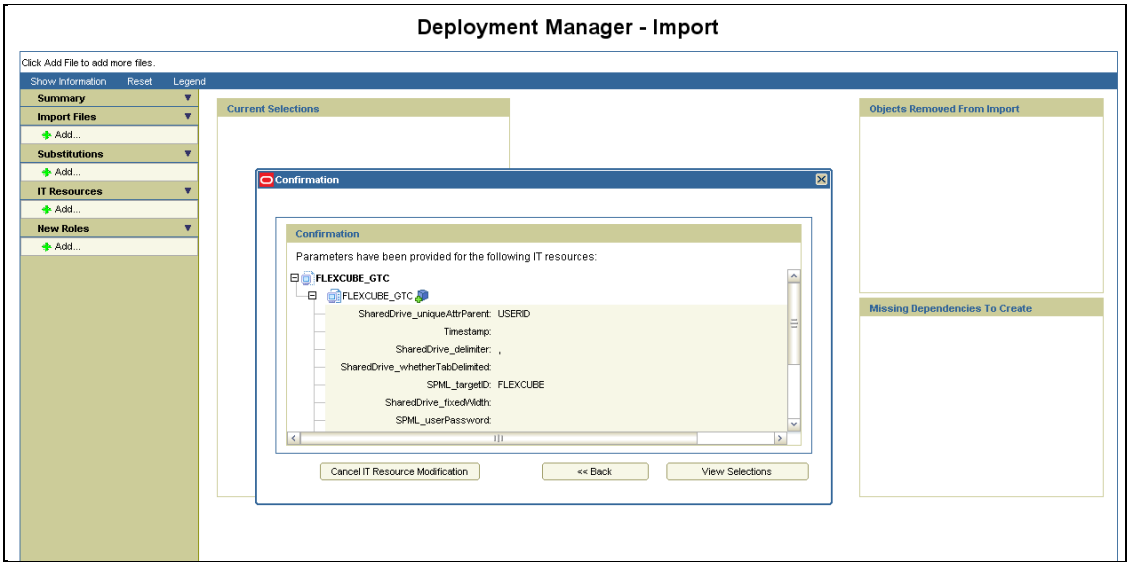
The following screen will get displayed.

l. Click on Skip.



A confirmation window for parameter values will get displayed.

m. Confirm the values and click on View Selections.

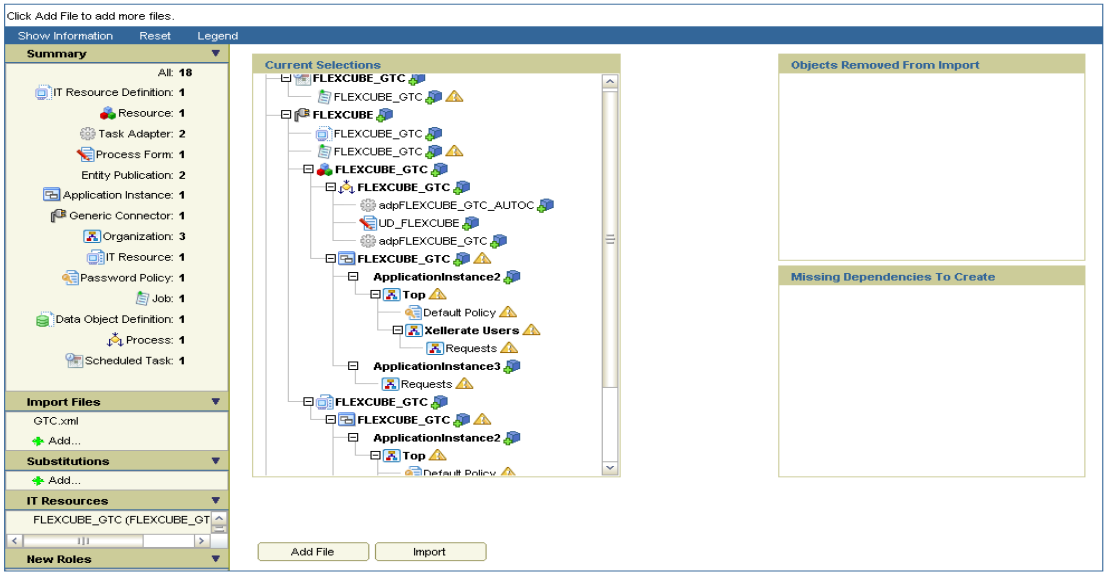


We will get Selection screen that will show all components of GTC.

n. Make sure that there should be no items in Missing Dependencies to create box on right below of the screen. If so, probably some previous imports has been missed out or not imported successfully. Repeat the earlier imports again.

o. Otherwise click on Import.

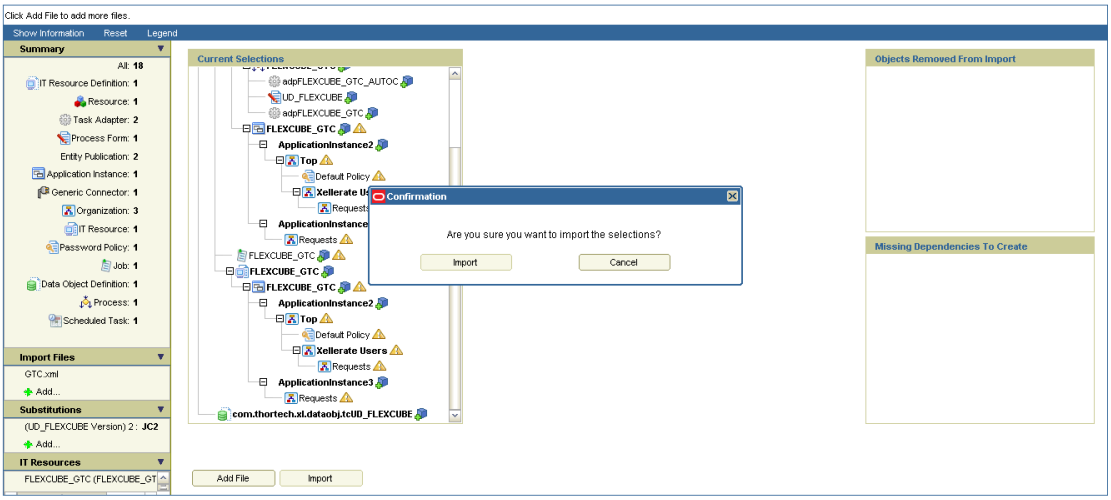
Deployment Manager - Import



Above will prompt for Import Confirmation

p. Click on Import to start import.

Deployment Manager - Import

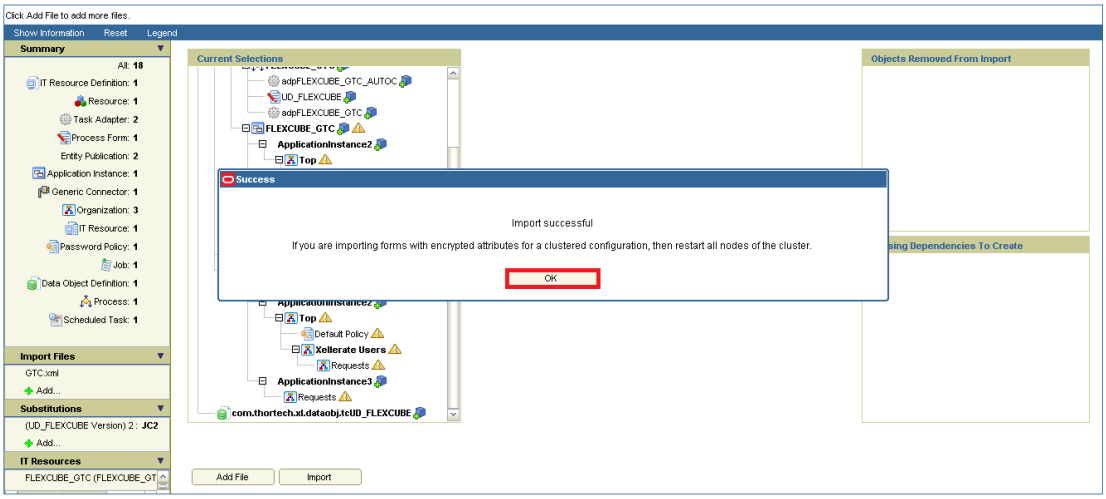


Note: Import of GTC.xml may take more time as compare to other imports.

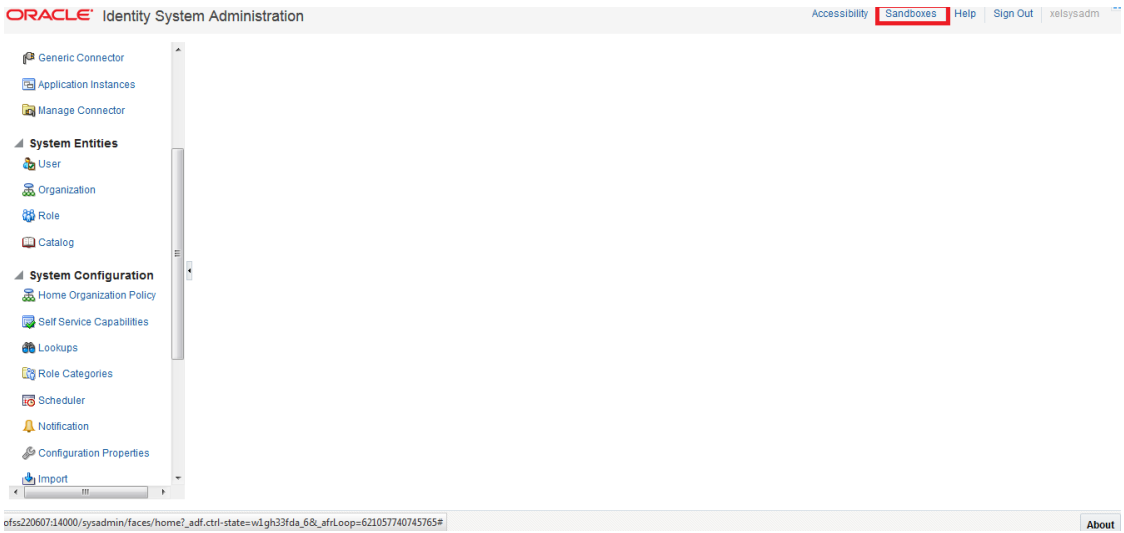
On successful import following screen will come.

q. Ensure that import is successful and click on ok.

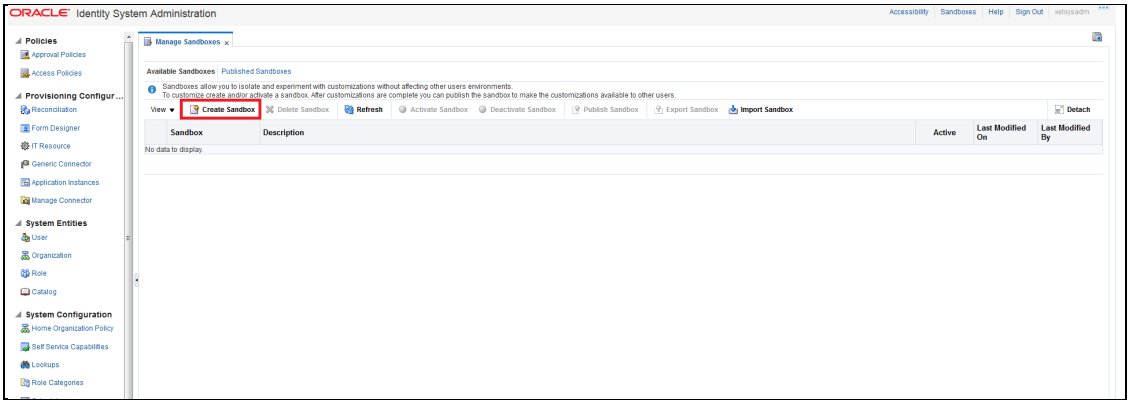
Deployment Manager - Import



Click on Sandboxes.



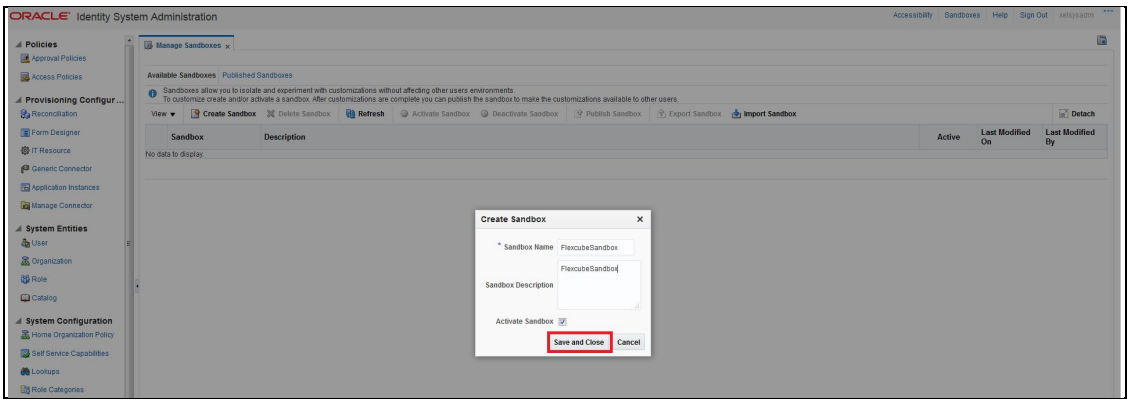
Click on Create Sandbox.



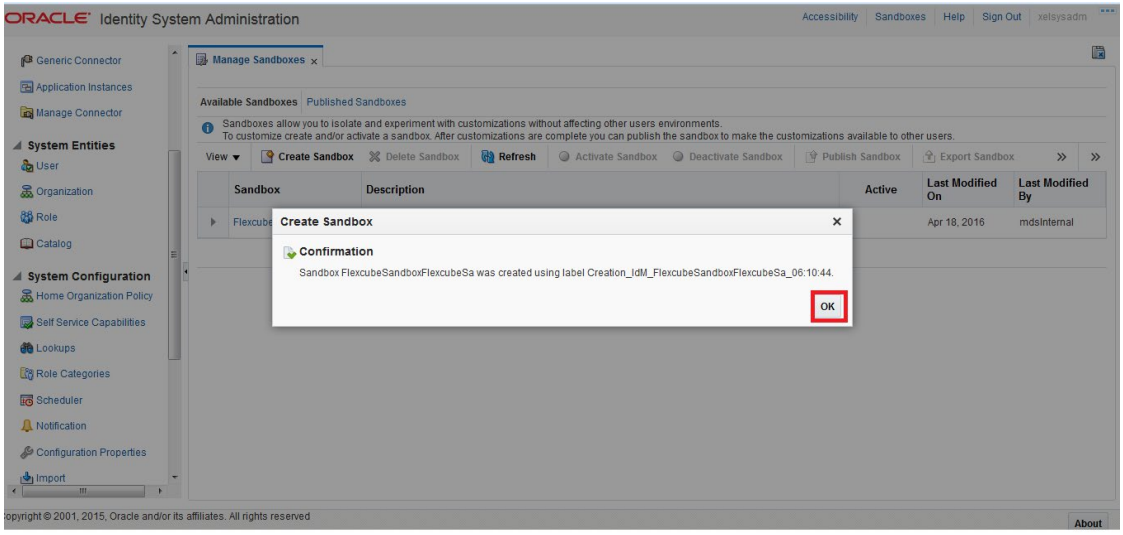
Enter the Below Details and Click on Save and Close.

r. Sandbox Name : FlexcubeSandbox

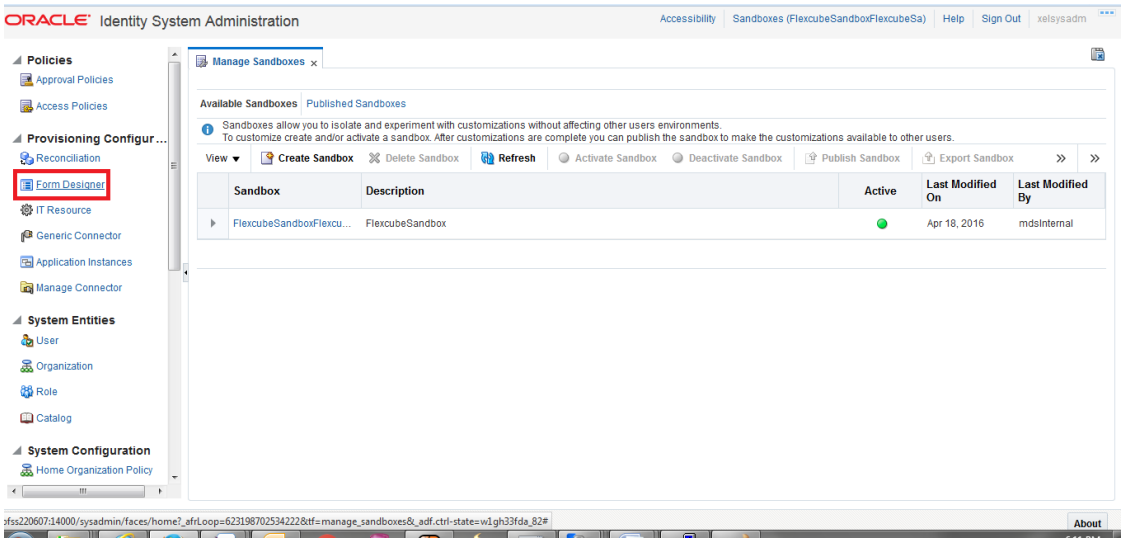
s. Sandbox Description : FlexcubeSandbox



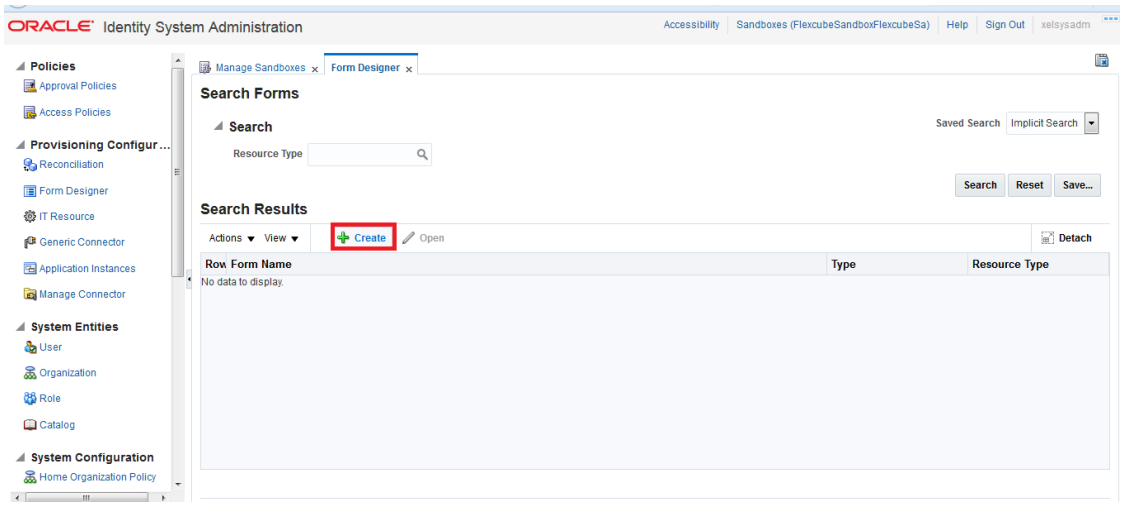
Click on Ok.



Click on Form Designer under Provisioning Configuration.



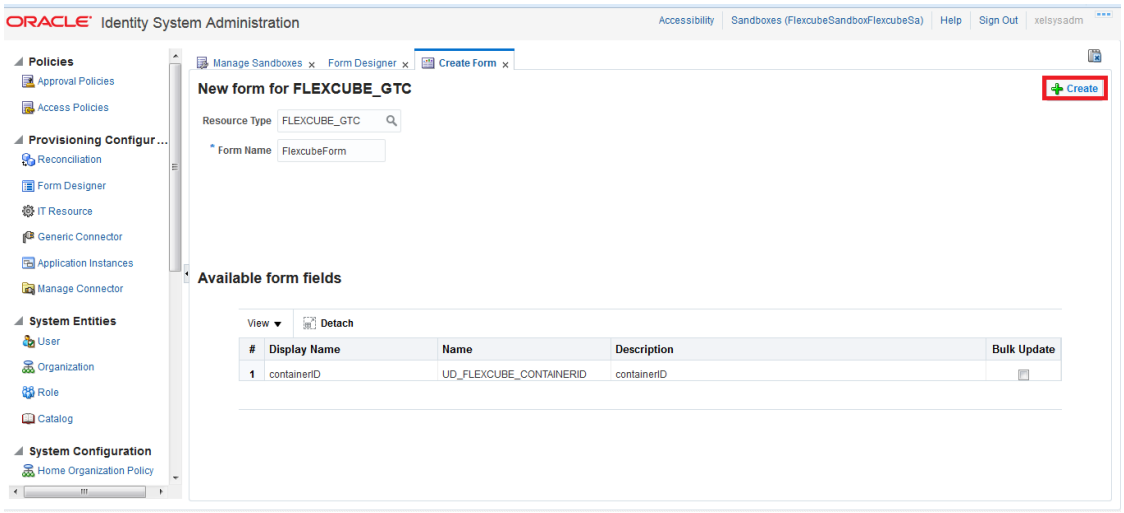
Click on Create



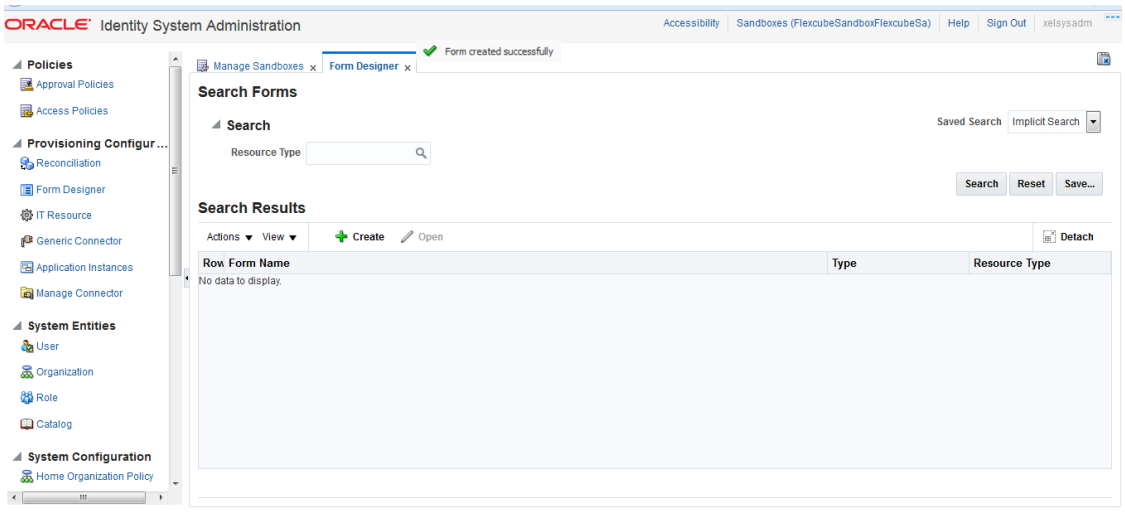
Enter the below details and Click on Create

- Resource Type : FLEXCUBE_GTC
- Form Name : FlexcubeForm

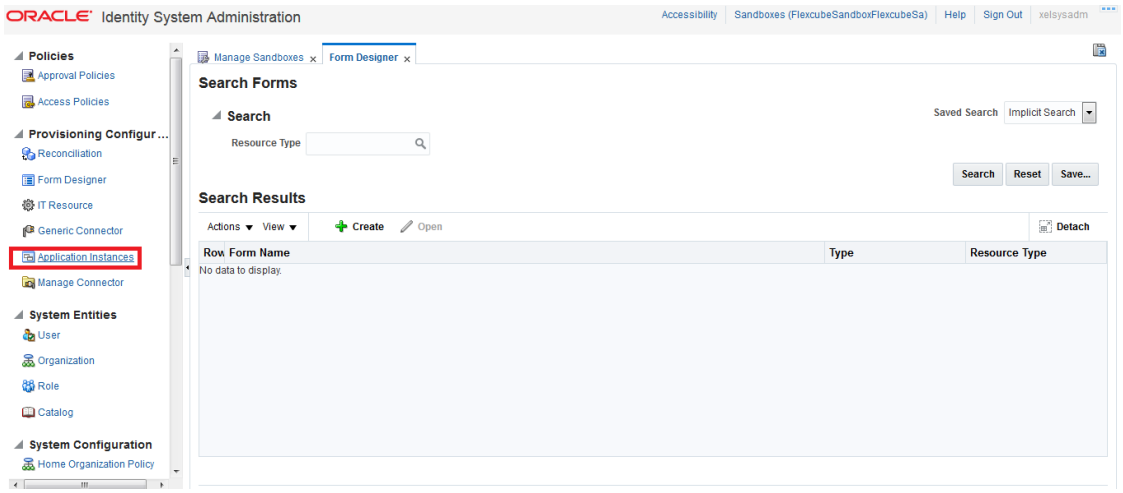
Note*: Form Name should be same as above



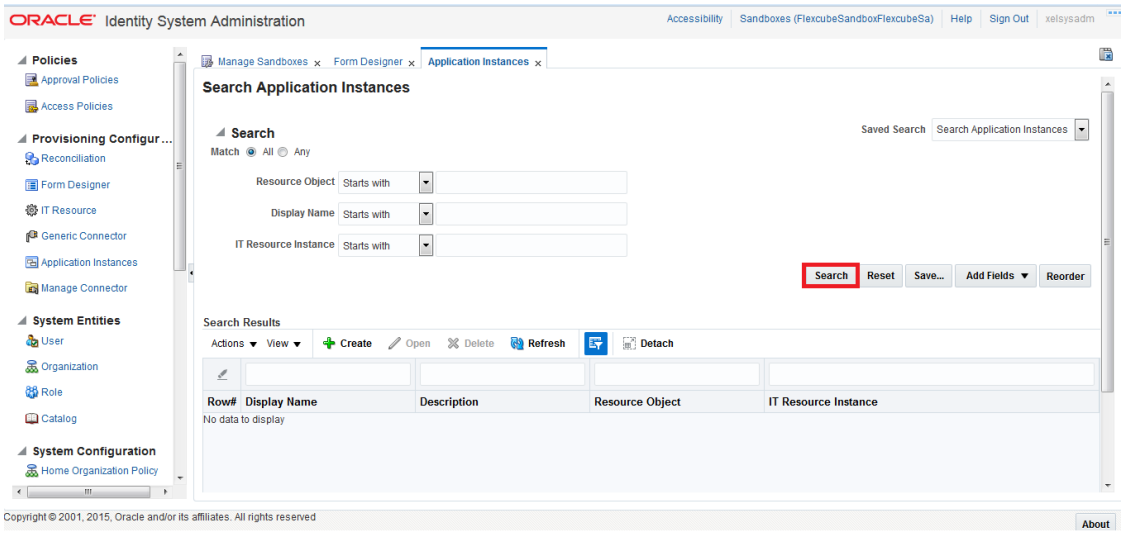
Successful form creation will be like below:



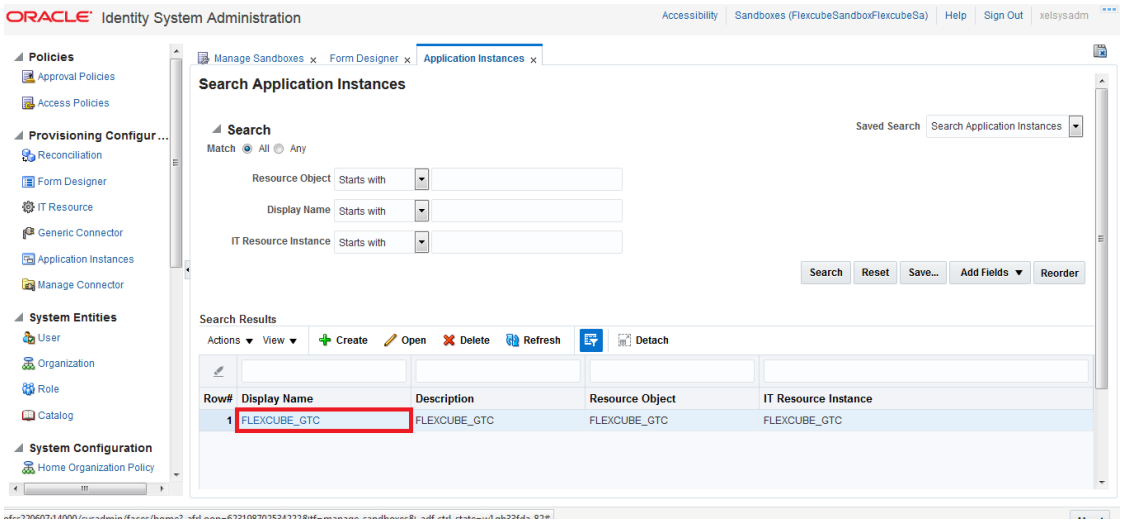
Click on Application Instances under Provisioning Configuration.



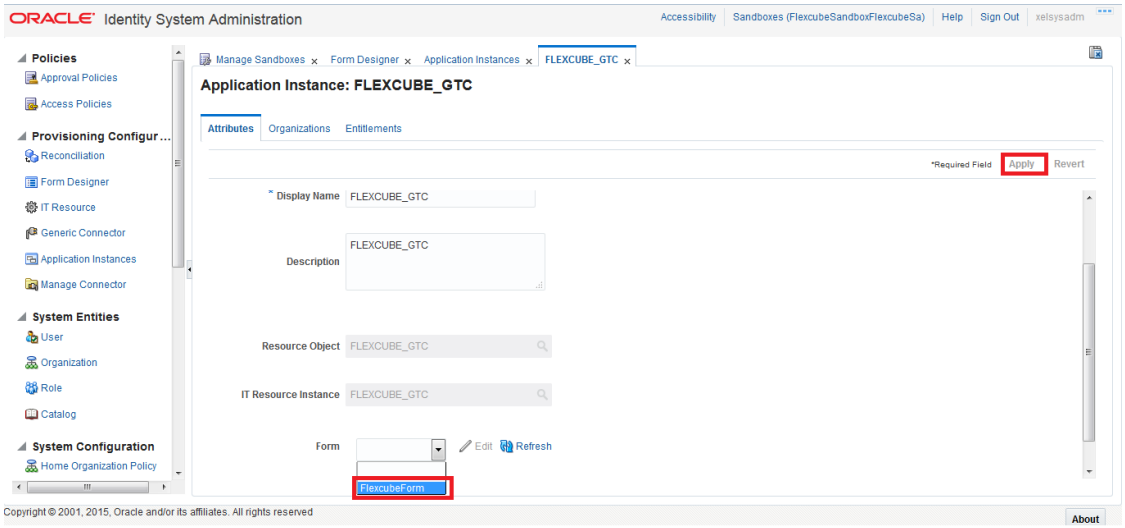
Click on Search.



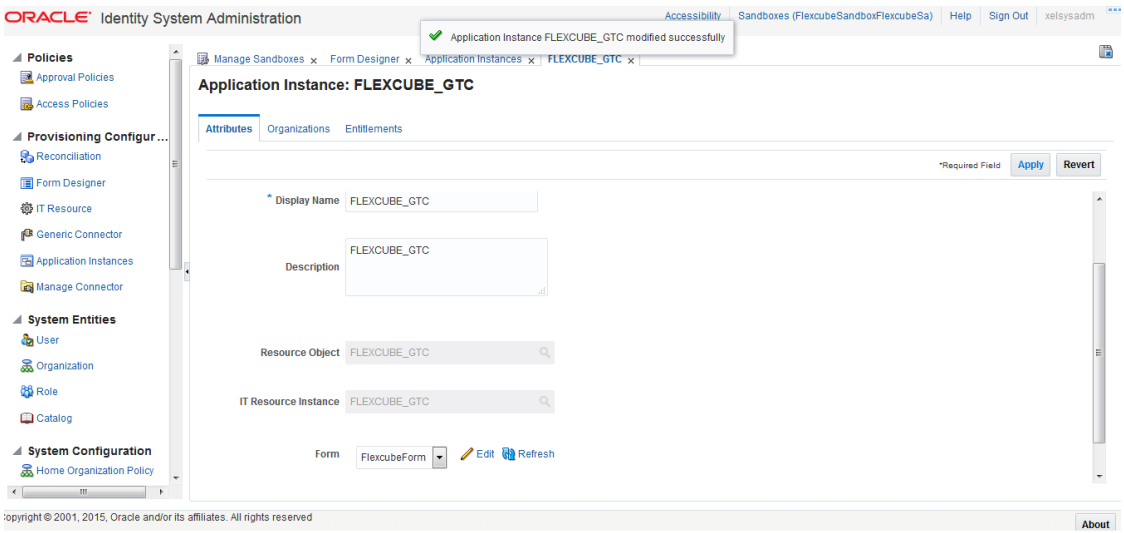
Click on FLEXCUBE_GTC.



Choose the Form as FlexcubeForm and Click on Apply.

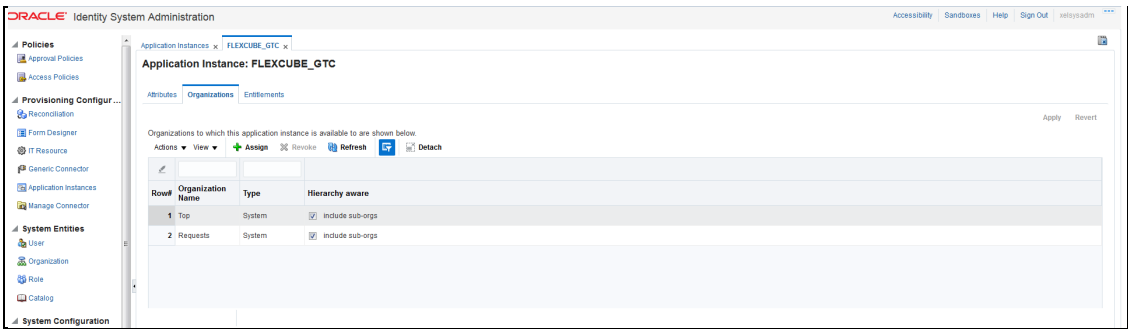


On Successful modification will be shown like below:

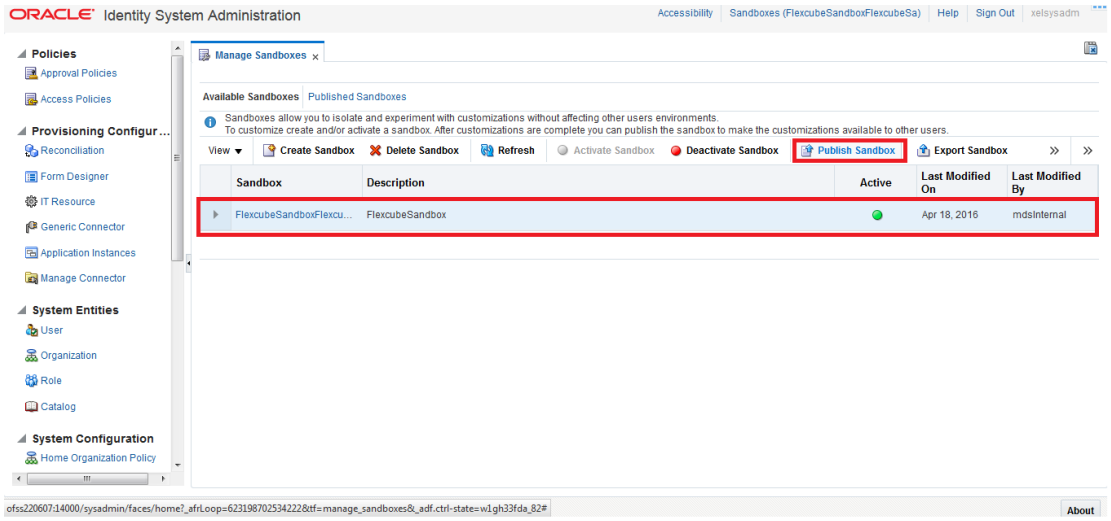


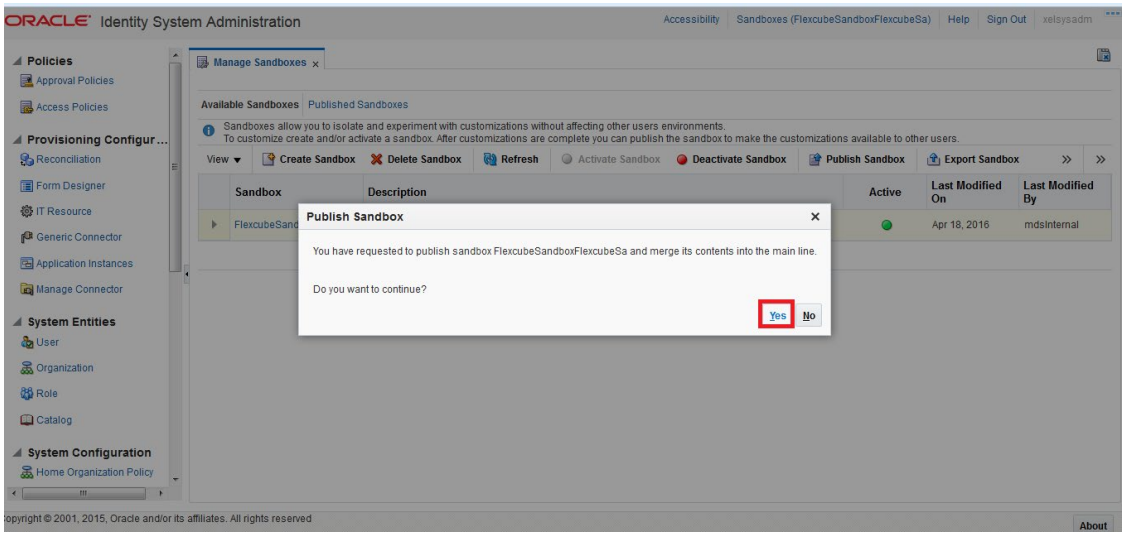
Application Instance belongs to the following Organizations

Note: In case provisioning has to be applied for different Organizations then Create the Organizations under System Entities and map those Organizations to the Application Instance.

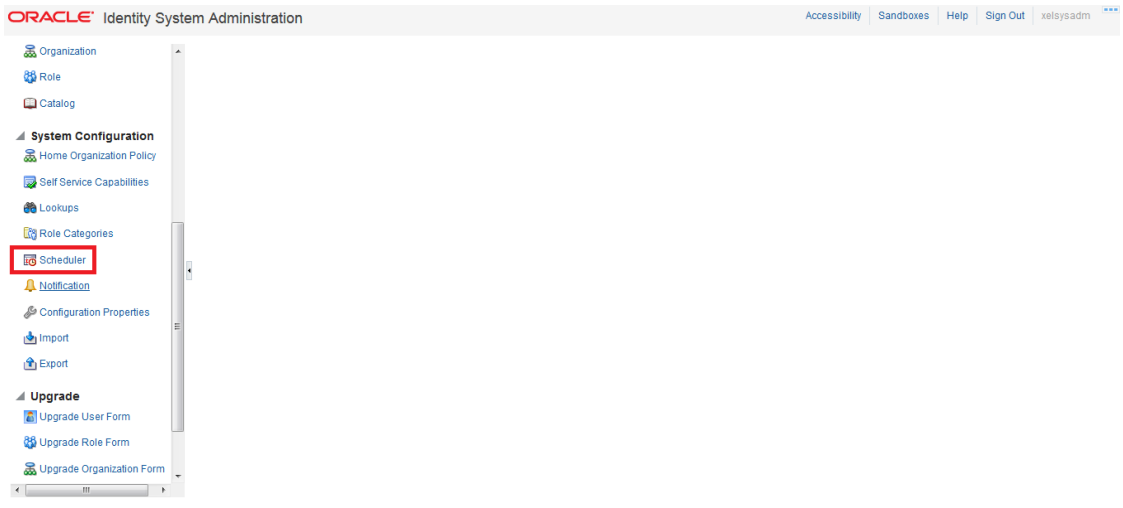


Select and click on Publish Sandbox.

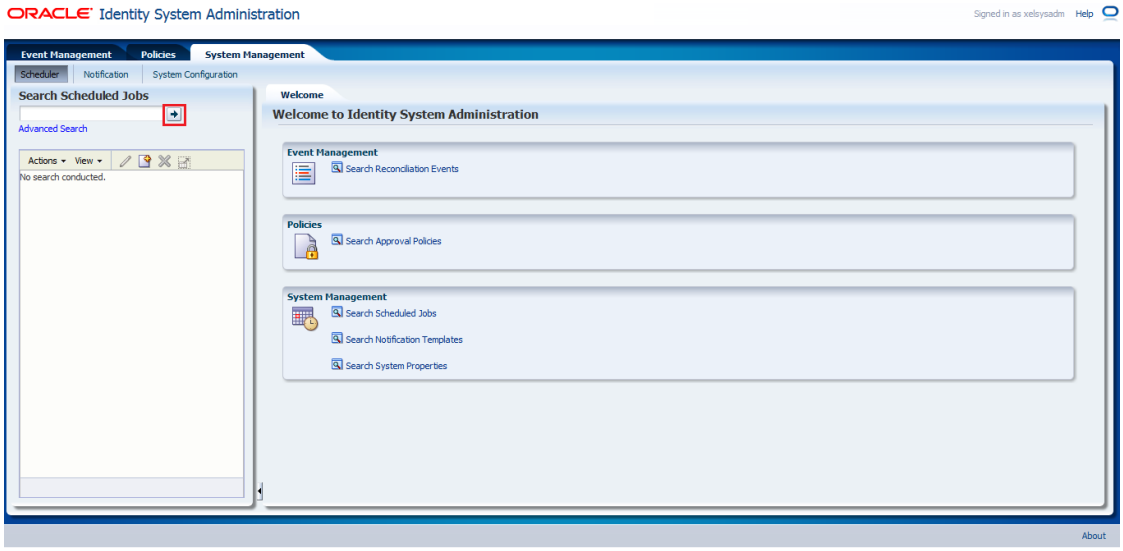




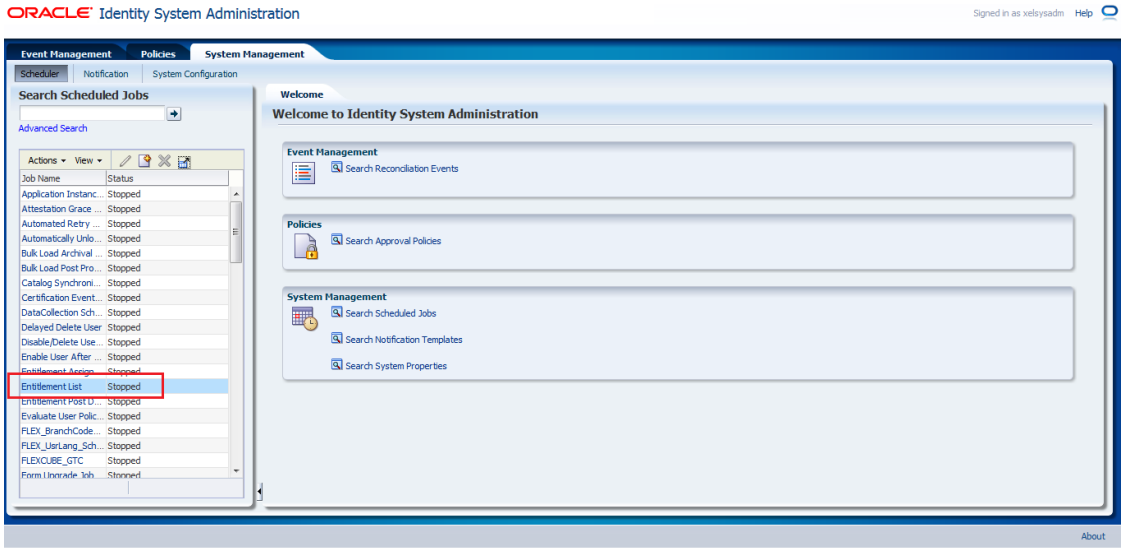
Click on Scheduler under System Configuration.



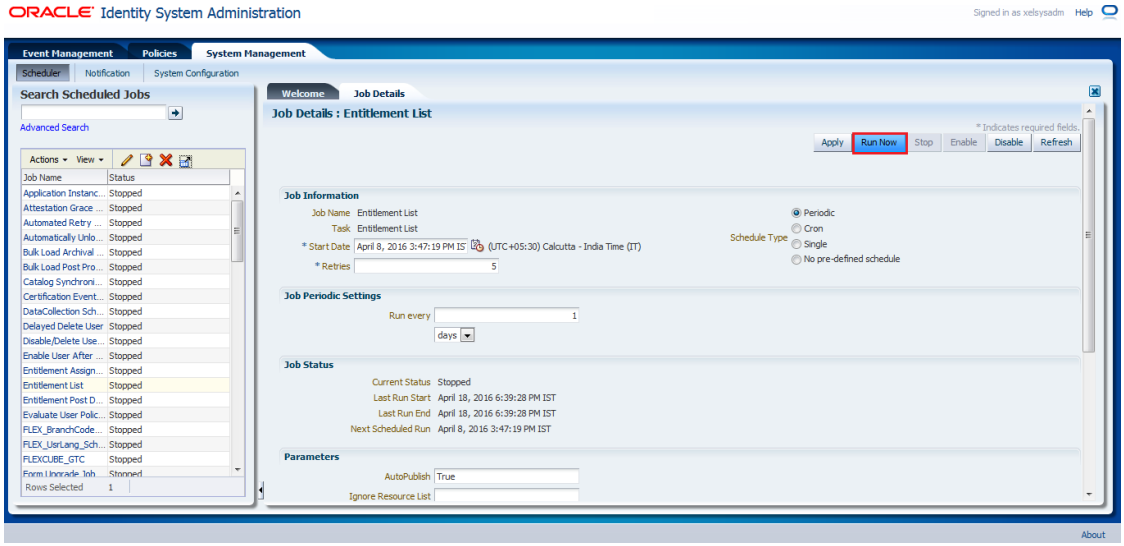
Click on to Search for Scheduled Job List.


ORACLE Identity System Administration
Signed in as xelsysadm
Help
Event Management
Policies
System Management
Scheduler
Notification
System Configuration
Search Scheduled Jobs
Advanced Search
Actions
View
No search conducted.
Welcome
Welcome to Identity System Administration
Event Management
Search Reconciliation Events
Policies
Search Approval Policies
System Management
Search Scheduled Jobs
Search Notification Templates
Search System Properties
About

Click on Entitlement List



Click on Run Now.

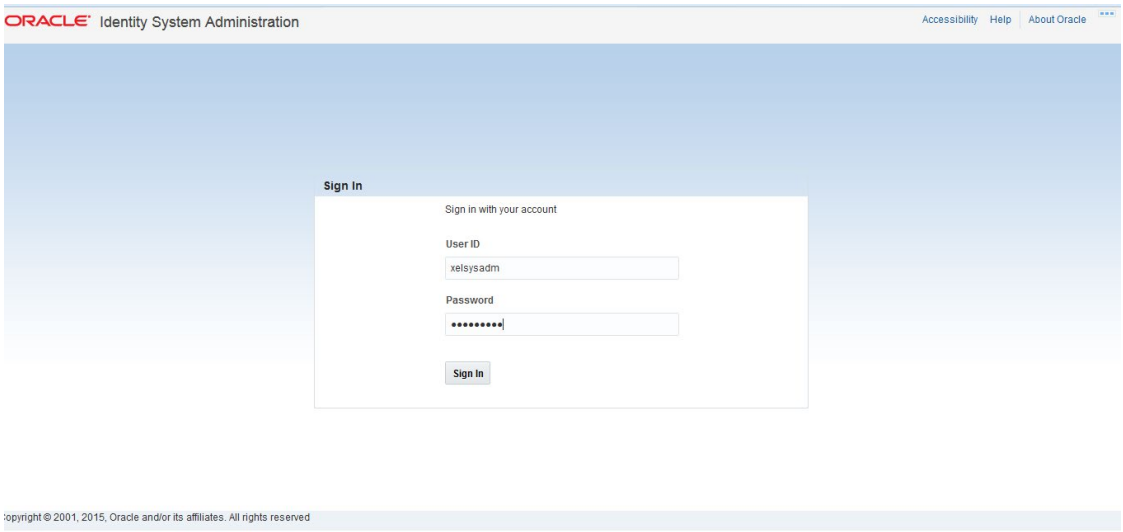


Schedule Task Setup

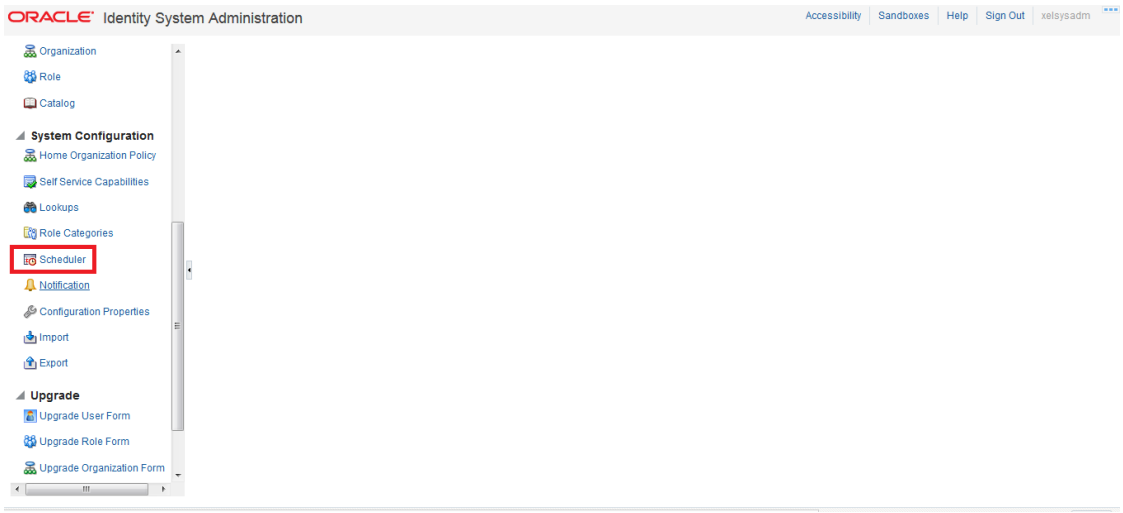
This step involves setting up Schedule task parameters.

5.1.6.6.1 Open the Oracle Identity Manager Administrative console. (Give the following URL in the browser: http://<hostname>:<oimport>/sysadmin)

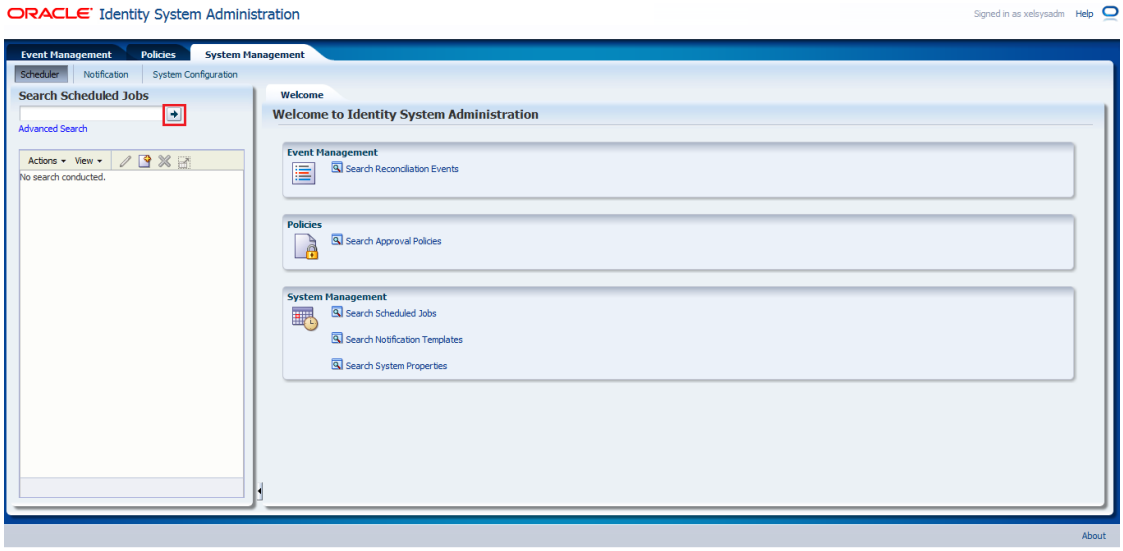
Enter OIM administrator username/password and press Login.



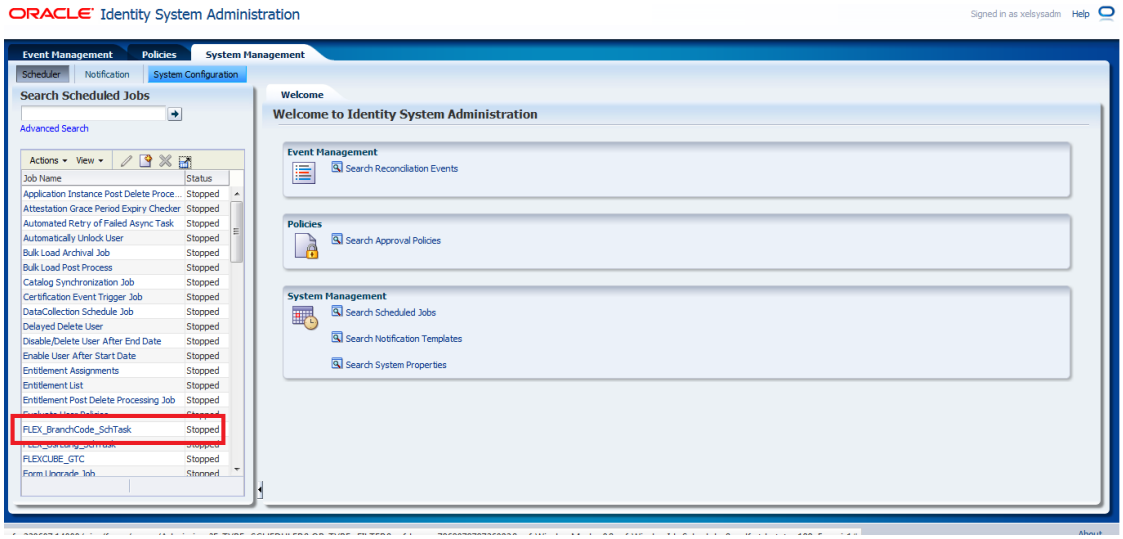
Click on Scheduler under System Configuration.



Click on to Search for Scheduled Job List.


ORACLE Identity System Administration
Signed in as xelsysadm
Help
Event Management
Policies
System Management
Scheduler
Notification
System Configuration
Search Scheduled Jobs
Advanced Search
Actions
View
No search conducted.
Welcome
Welcome to Identity System Administration
Event Management
Search Reconciliation Events
Policies
Search Approval Policies
System Management
Search Scheduled Jobs
Search Notification Templates
Search System Properties
About

Click on FLEX_BranchCode_SchTask.



On the Edit Schedule Task screen.

- WebService Url : FCUBSLOVAdService deployed in section [5.1.4.2.1]

https://<hostname>:<ssl_port>/FCUBSLOVAdService/FCUBSLOVAdServiceSEI

- Query :

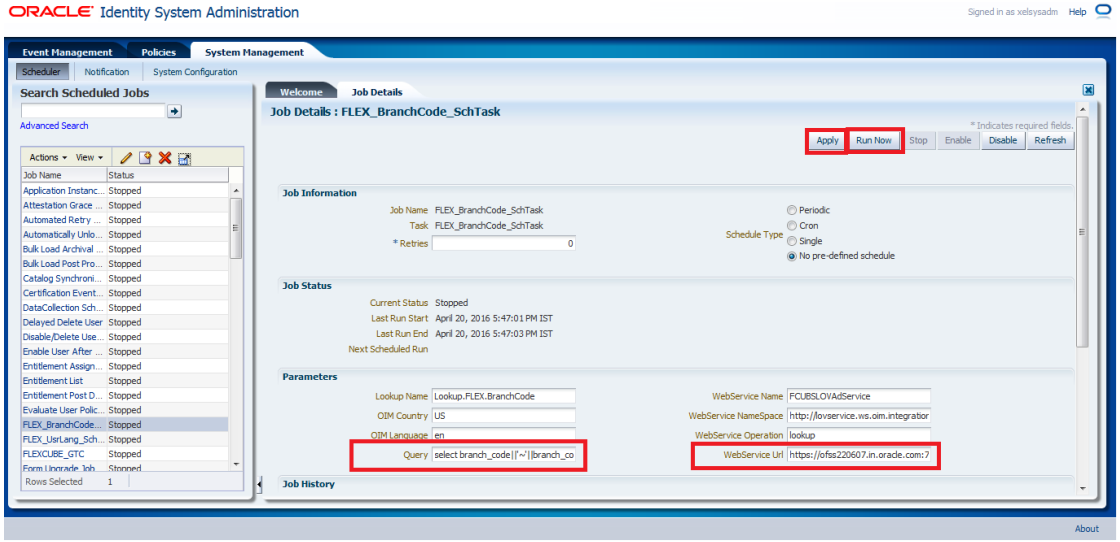
  FCUBS :

  select branch_code||'~'||branch_code from sttm_branch order by branch_code

  FCIS :

  select moduleid||'~'||moduleid from moduleprofilebasetbl where once_auth='Y' order by moduleid

- Click on Apply and Click on Run.

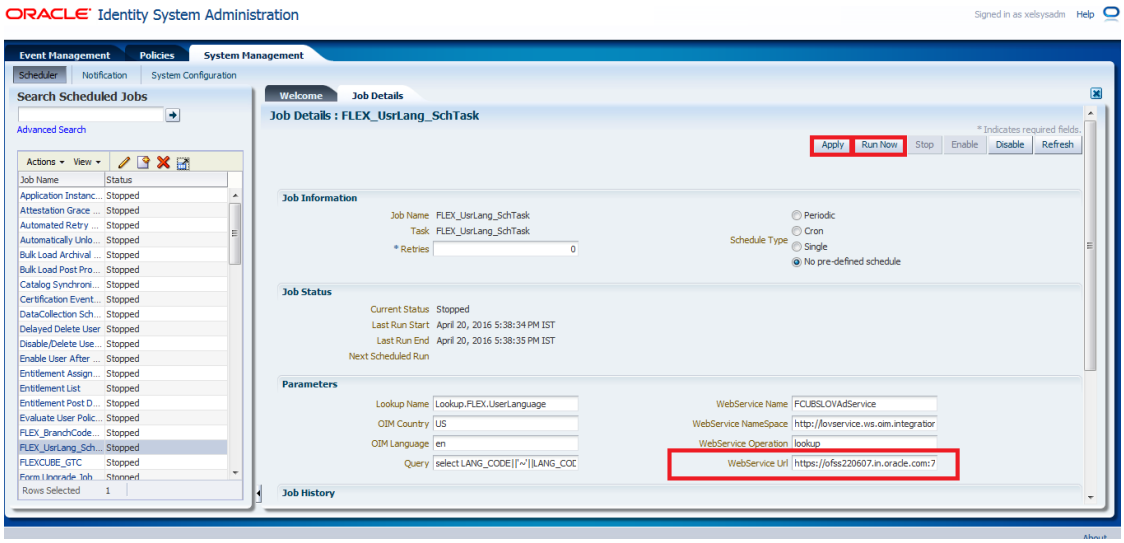


Modify FLEX_UsrLang_SchTask job

- WebService Url : FCUBSLOVAdService deployed in section 5.1.4.2.1

  https://<hostname>:<ssl_port>/FCUBSLOVAdService/FCUBSLOVAdServiceSEI

- Click on Apply and Click on Run.



5.1.7 System Configurations

5.1.7.1 Integration Specific Configurations

5.1.7.1.1 FCUBS Configurations

On FCUBS side following configurations need to be done:

- Maintenance of Maker ID
- Maintenance of External Source

Both configurations can be done using FCJ provided screens.

1. Maintenance of Maker ID

The FCJ screen can be open through Security Maintenance >> Users >> Detailed menu or using the function SMDUSRDF.

2. Maintenance of External Source

For OIM request and response handling, an external source should be maintained in FCUBS database.

The FCJ screen can be open through Gateway >> External System >> Detailed menu or using the function 'GWDEXSYS'.

This external source should be able to do all operations like Create	Modify	Close	Open	View. This can be maintained through function GWDEXFUN or through Gateway >> External System Functions >> Detailed. Required actions and their corresponding details are given as below.

Action	Function	Service Name	Operation Code
NEW	SMGUSRDF	FCUBSSMService	CreateUserMaint
UNLOCK	SMGUSRDF	FCUBSSMService	ModifyUserMaint
DELETE	SMGUSRDF	FCUBSSMService	DeleteUserMaint
CLOSE	SMGUSRDF	FCUBSSMService	CloseUserMaint
REOPEN	SMGUSRDF	FCUBSSMService	ReopenUserMaint
VIEW	SMQUSRDF	FCUBSSMService	QueryUserMaint

Ensure that required maintenance has been done for function CODSORCE (Gateway >> Source>>

Detailed) and for function CODUPLDM (Gateway >> Source Preferences >> Detailed menu).

For maintenance of amendable fields in GWTM_AMEND_NODES and GWTM_AMEND_FIELDS entries can be made using the function STDAMDMT or through Gateway >> Amendment Maintenance >> Detailed. Following table gives the amendable node and fields details that should be maintained.

Field Name	**Value**
Amend Nodes section	
Node Name	SMTB_USER
New Allowed	Checked
Delete Allowed	Checked
All Records	Checked
Amend Fields section	
Field Name	HOME_BRANCH
Field Name	START_DATE
Field Name	TIME_LEVEL
Field Name	USER_LANGUAGE
Field Name	USER_NAME
Field Name	USER_PASSWORD
Field Name	SALT

5.1.7.2 OIM Configurations

5.1.7.2.1 OID Connector Configuration

For FLEXCUBE single sign on mode, the provisioning process consist of user creation in underlying LDAP directory and then provsioining into FLEXCUBE. OIM porvides out of box connectors for LDAP directorires. This connectors provides facility to connect with LDAP and to do the operation through OIM console.

In this integration, the underlying directory for Oracle access manager is Oracle Internet Directory. OIM porvides out of box connector for it that need to be imported as the connector document provided by OIM. After import, following steps should be followed :

Login to the Design Console.

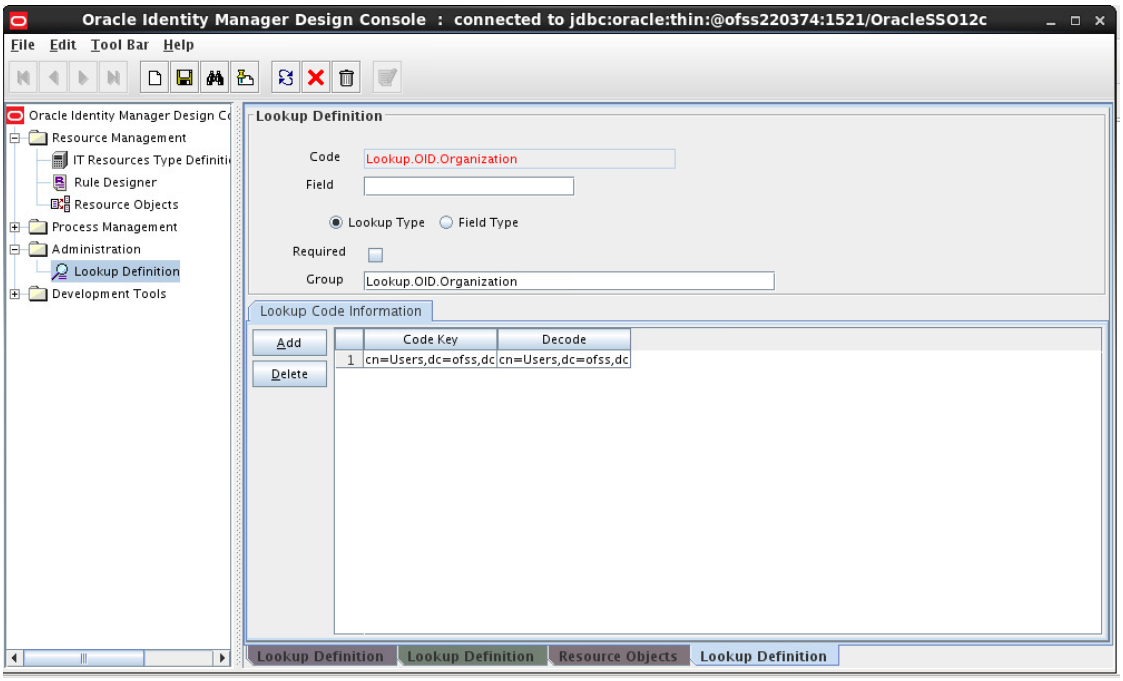
Oracle Identity Manager Design Cons
Welcome To
ORACLE
Oracle Identity Manager
Design Console
User ID
xelsysadm
Password
Version
11.1.2.3.0.0.0
Login
Cancel

Navigate to the Administration>>Lookup Definition menu

a. Enter the below details:

- Code: Lookup.OID.Organization
- Click on **Search** Icon
- Click on **Add** button
- Enter the below details:
- Code Key : cn=Users,dc=in,dc=oracle,dc=com
- Decode : cn=Users,dc=in,dc=oracle,dc=com

b. Click on Save



Navigate to the Administration>>Lookup Definition menu

a. Enter the below details:

- Code: Lookup.OID.UM.ProvAttrMap
- Click on Search Icon
- Modify the Decode value for Code Key Name:
- From : __NAME__="uid=${User_ID},${Container_DN}"
- To : __NAME__="cn=${User_ID},${Container_DN}"

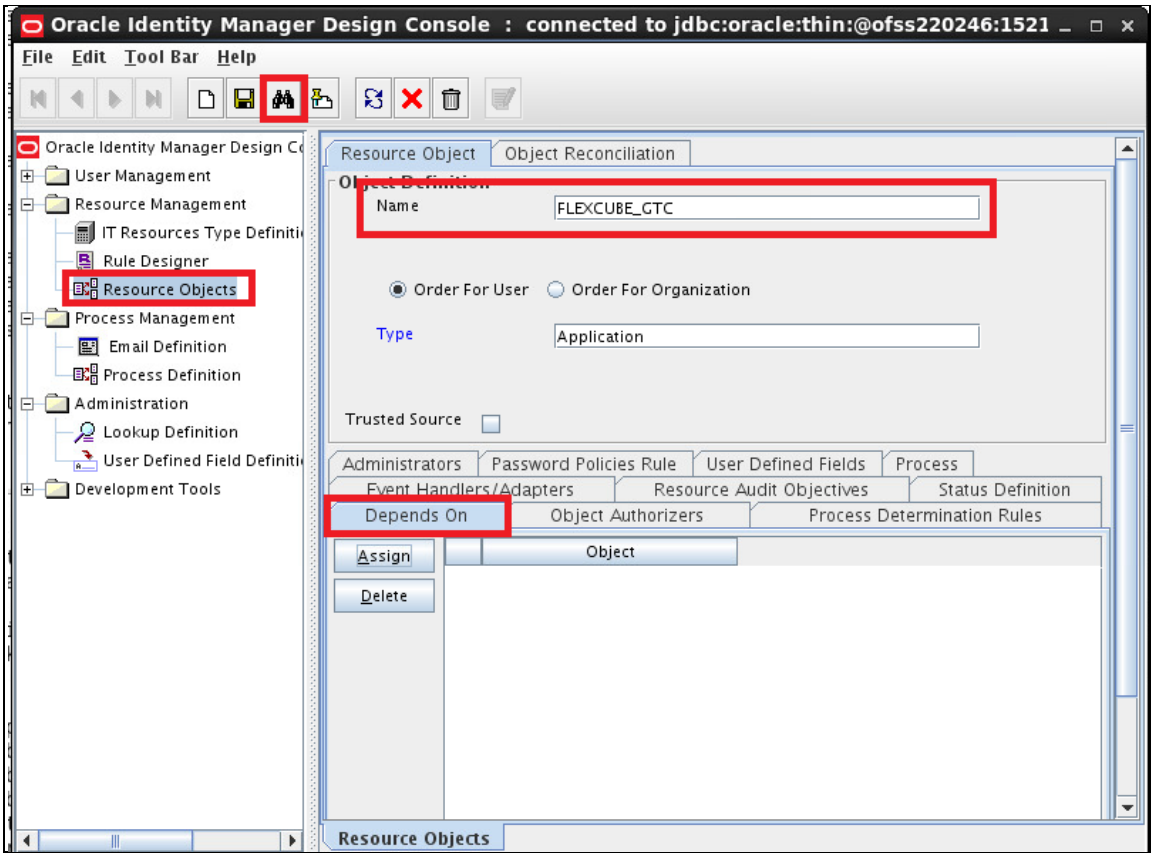
b. Click on Save.

Navigate to the Resource Management>>Resource Objects menu. This will open a blank screen.

a. Enter FLEXCUBE_GTC in Name box.

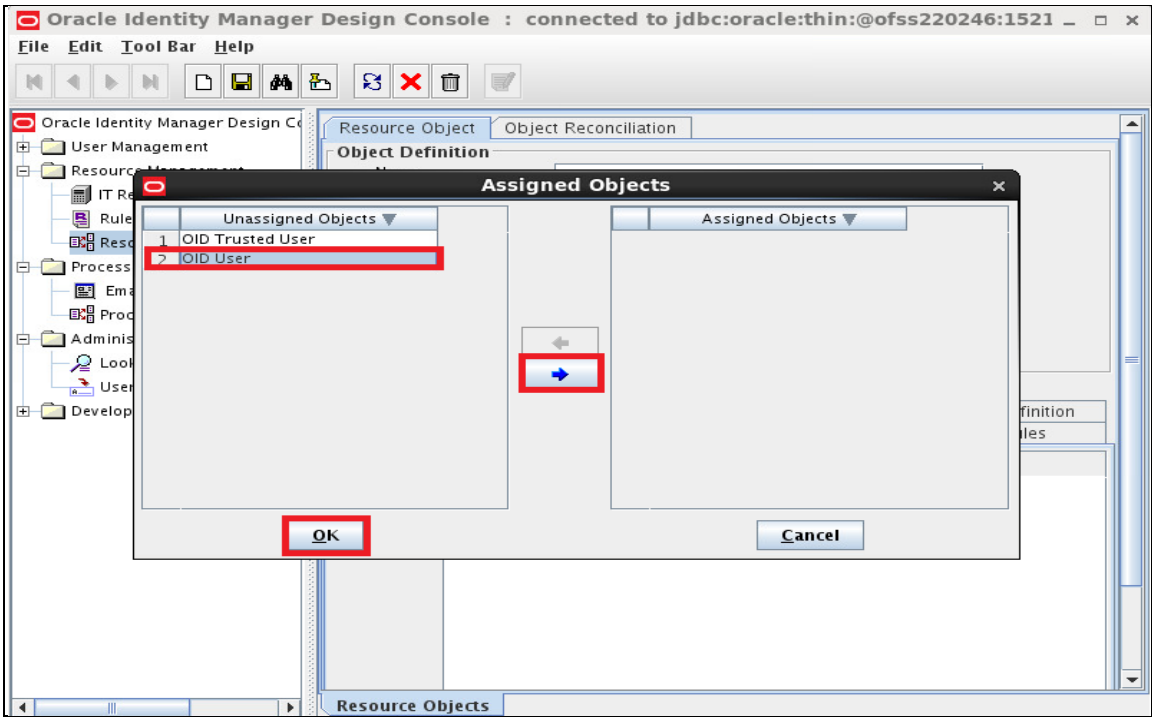
b. Click on Search icon.

c. This will show the definition for resource FLEXCUBE_GTC. Click on Assign button in Depends On tab.



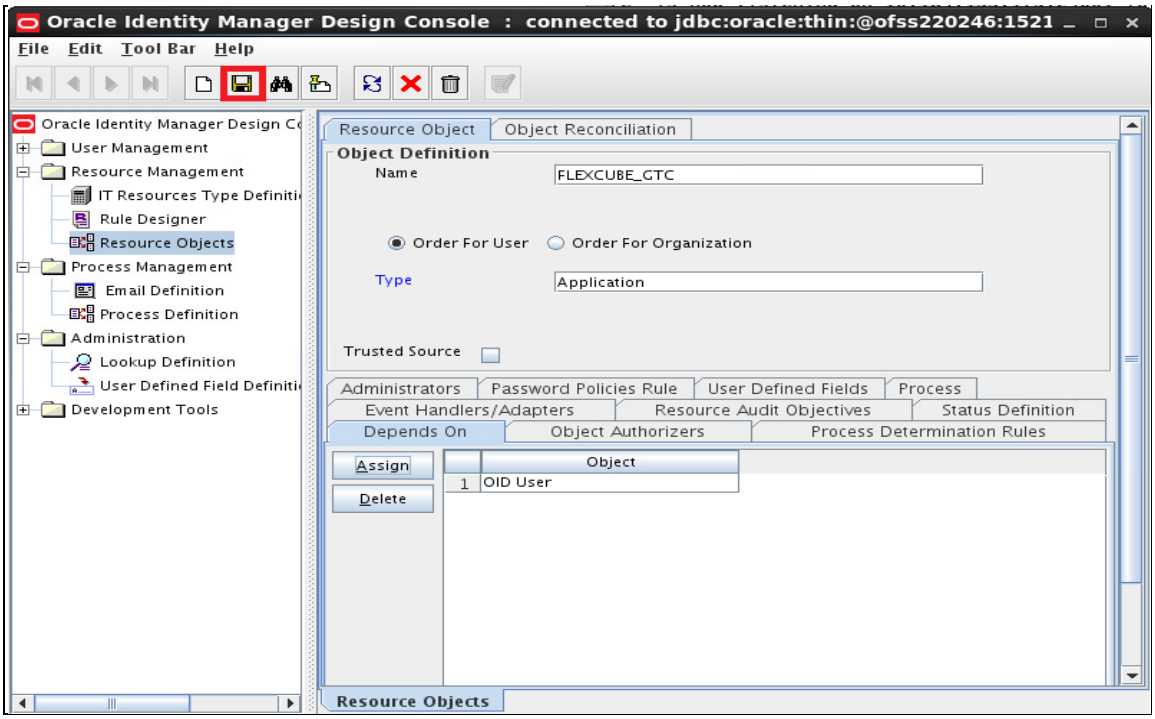
Select the OID User from the Unassigned Objects list. Click on the arrow pointed to Assigend objects.

a. Click on OK.This will move OID user resource to Assigned objects.



Ensure that OID User will be shown under Object.

a. Click on Save.

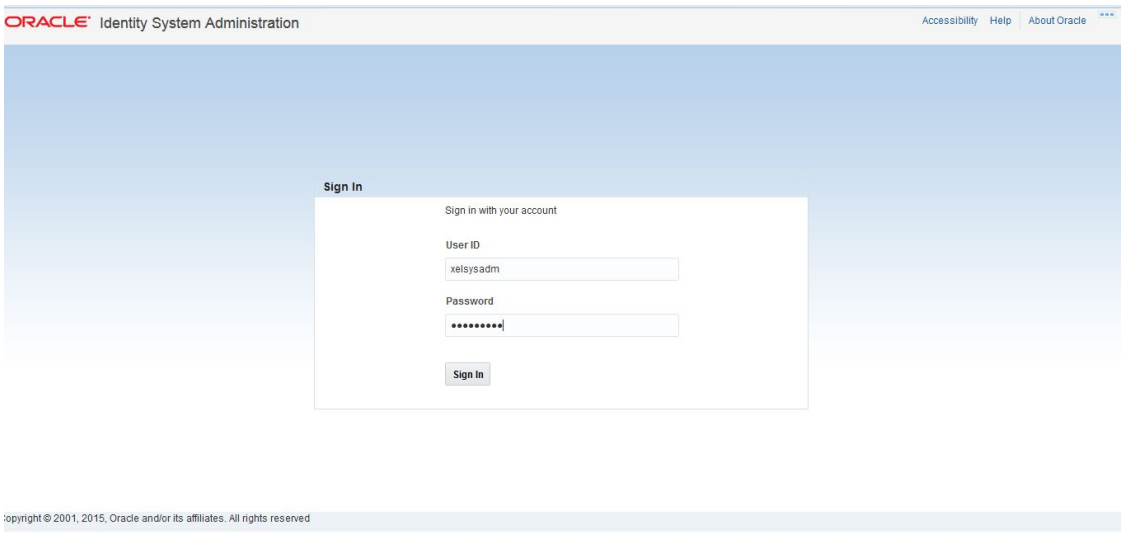


5.1.7.2.2 Access Policy Creation for OID

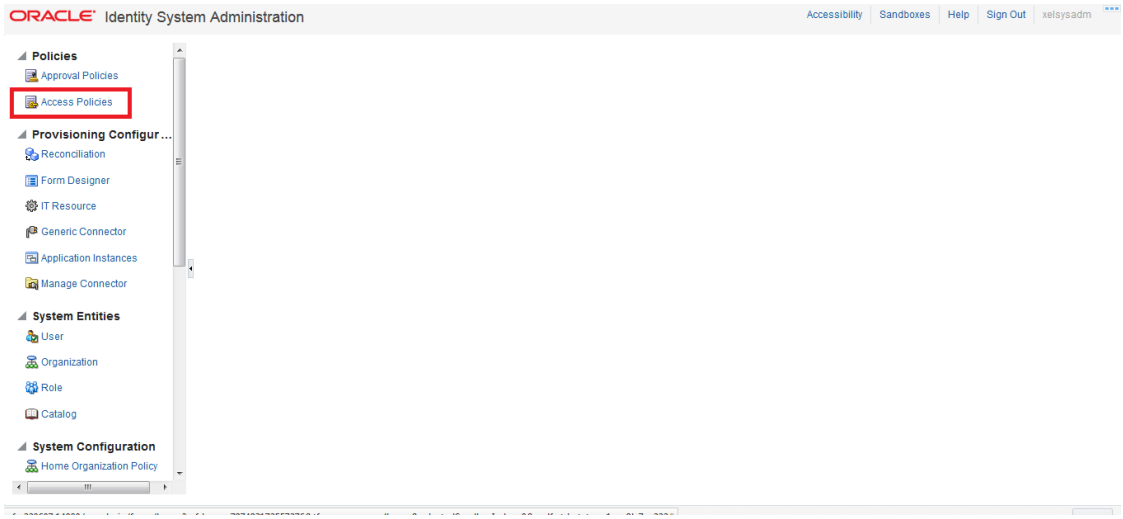
Open the Oracle Identity Manager Administrative console. (Give the following URL in the browser: http://<hostname>:<oimport>/sysadmin)

Login to Administrative Console

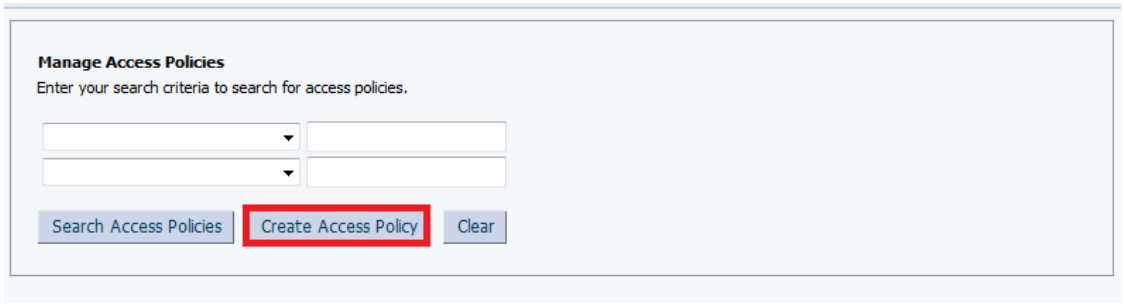
a. Enter OIM administrator username/password and press Sign In.


ORACLE Identity System Administration
Accessibility
Help
About Oracle
Sign In
Sign in with your account
User ID
xelsysadm
Password
Sign In
opyright © 2001, 2015, Oracle and/or its affiliates. All rights reserved

Click on Access Policies under Policies.

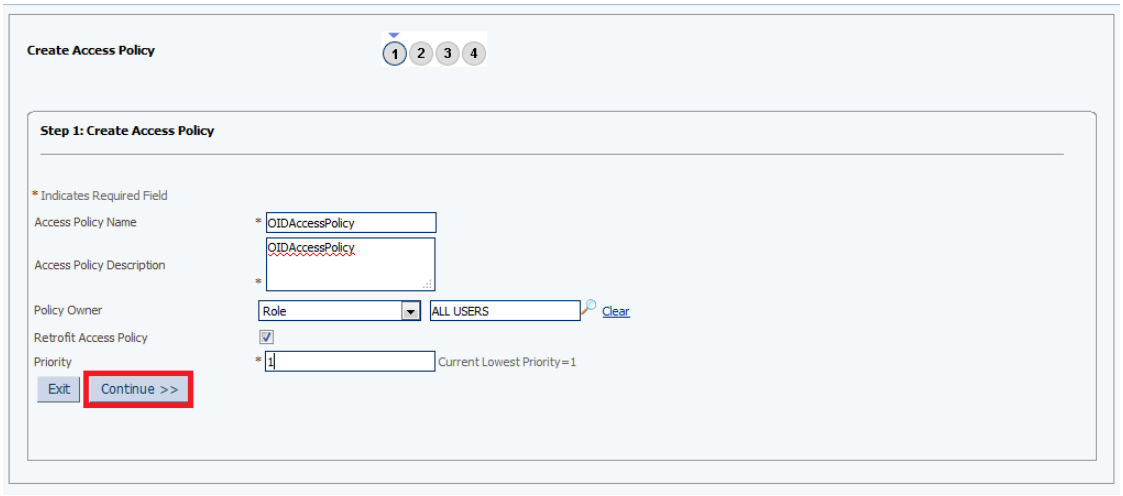


Click on Create Access Policy.



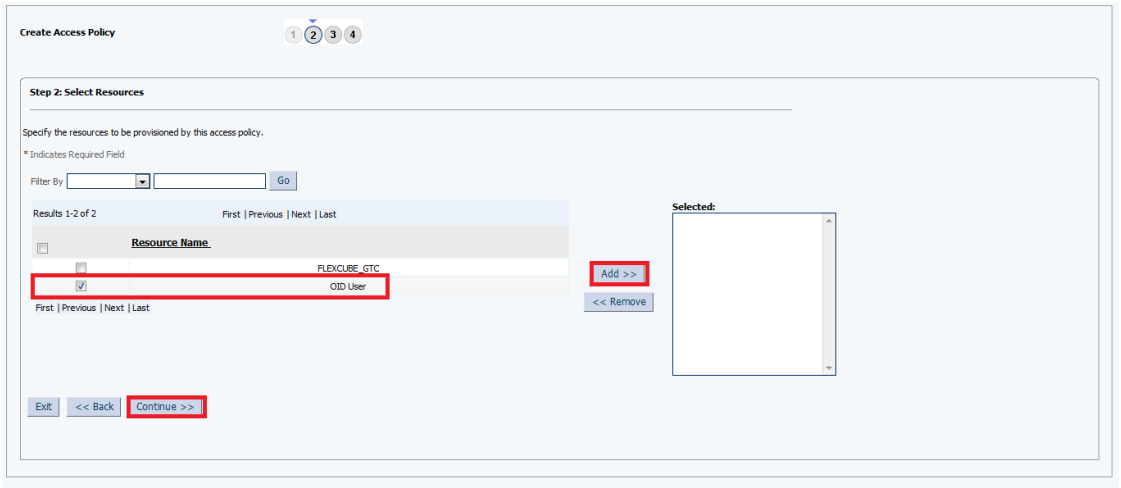
Enter the below details and Click on Continue

- Access Policy Name : OIDAccessPolicy
- Access Policy Description : OIDAccessPolicy
- Policy Owner : ALL USERS
- Retrofit Access Policy : Yes
- Priority : 1



Perform the below mentioned Operations and Click on Continue.

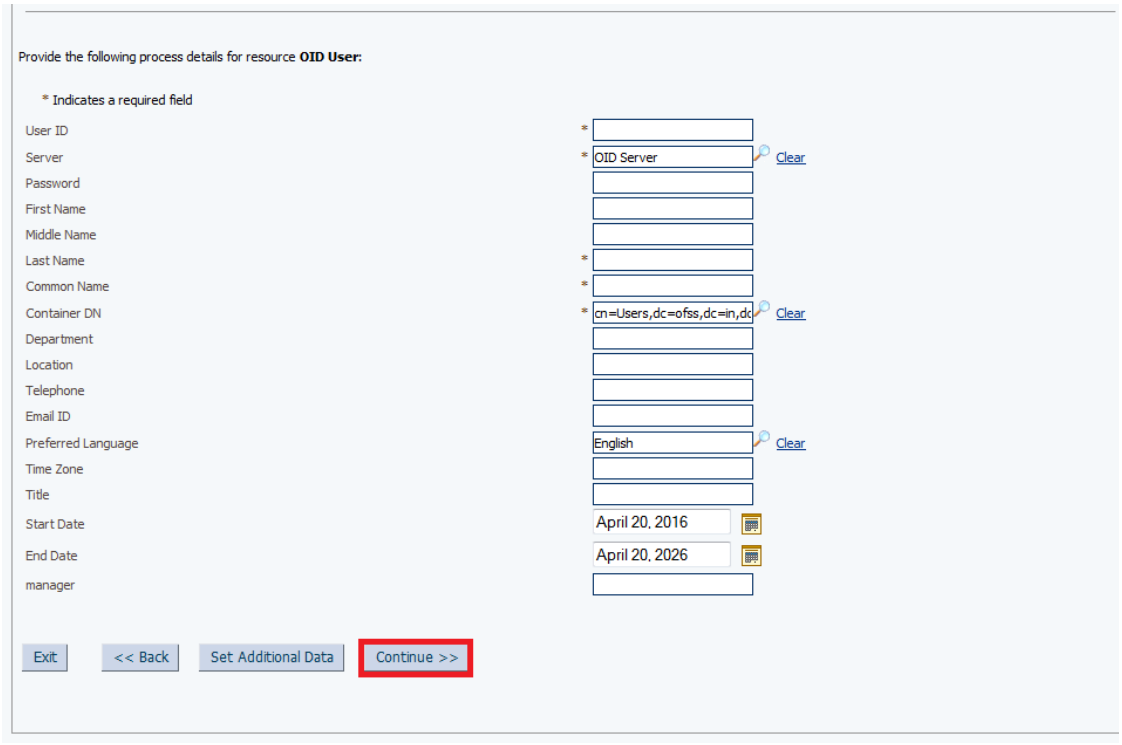
- Select OID User
- Click on Add Button



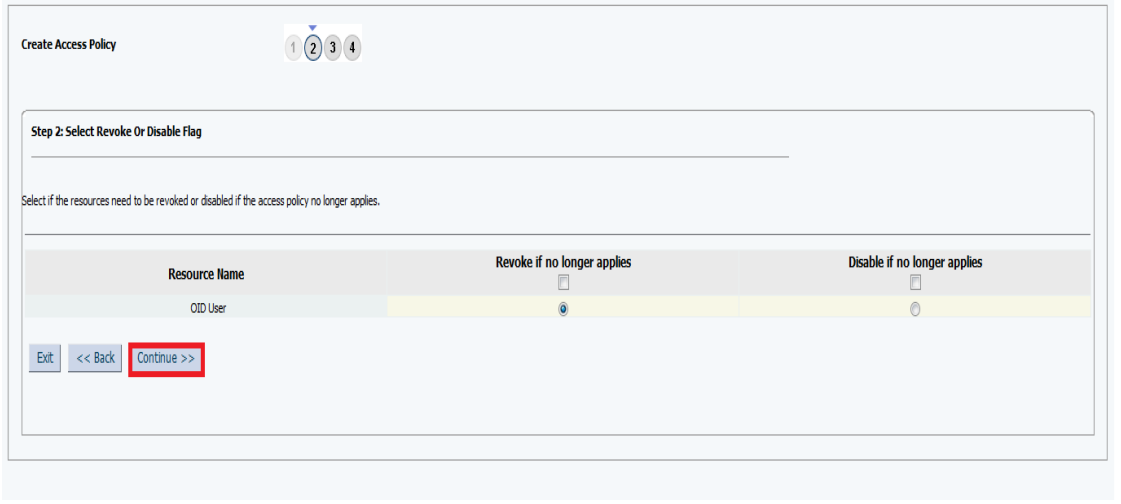
Click on Continue.

Select the below Details and Click on Continue.

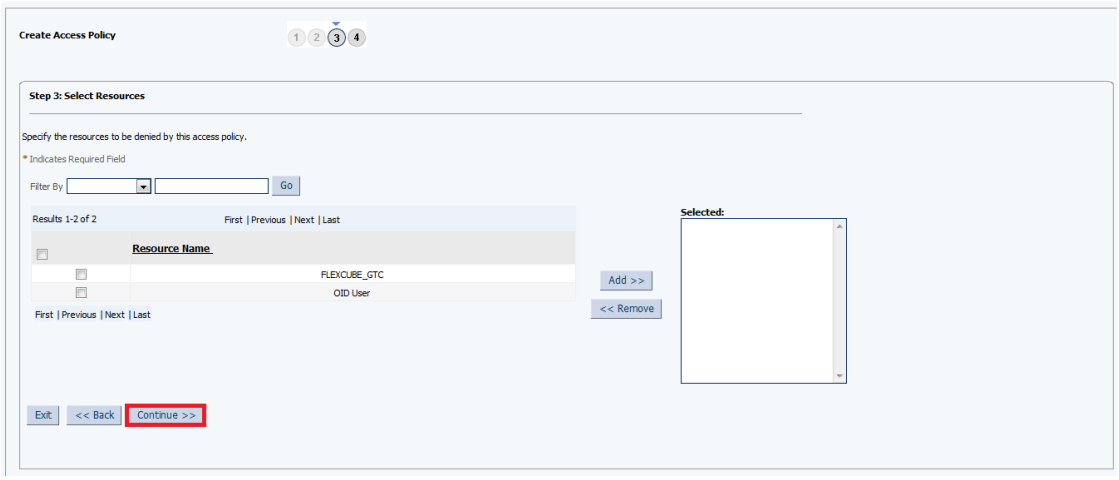
- Server : OID Server
- Container DN : cn=Users,dc=in,dc=oracle,dc=com
- Preferred Language : English
- Start Date : April 20, 2016 (Current Date)
- End Date : April 20, 2026 (End Date)



Click on Continue.

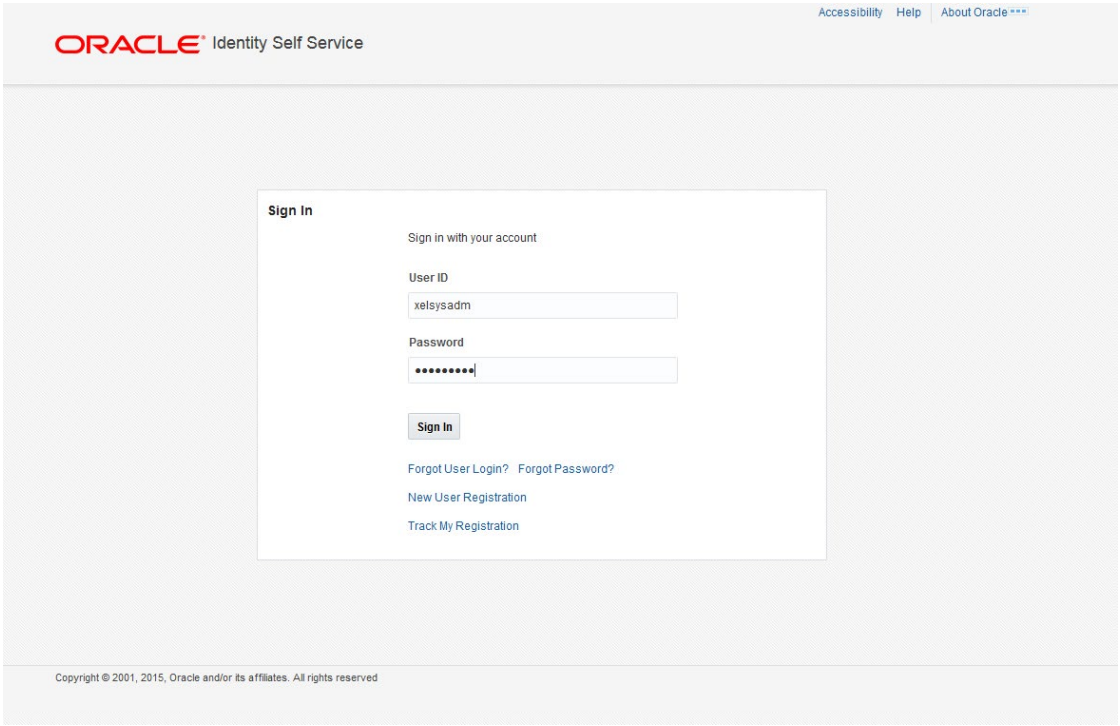


Click on Continue.

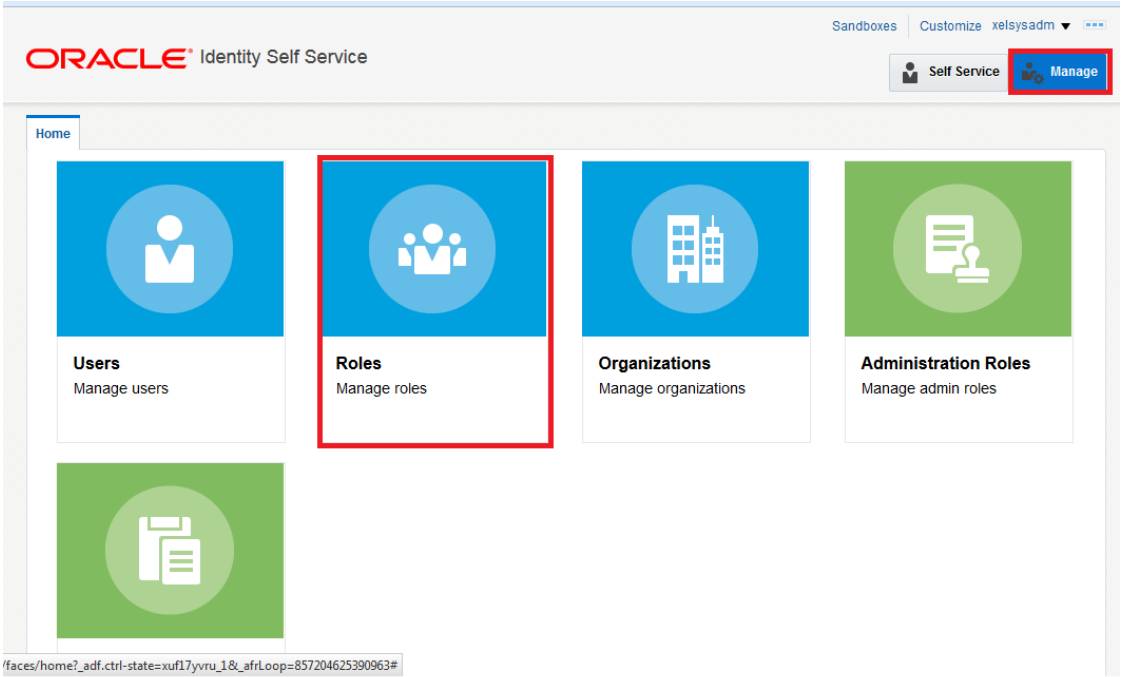


Click on Create Access Policy.

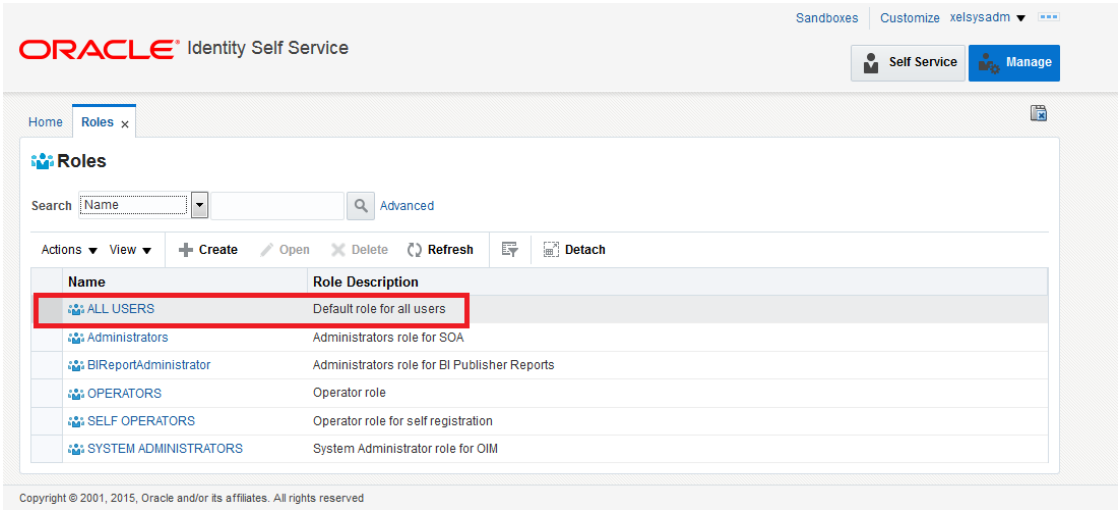
Login to Identity Self Services



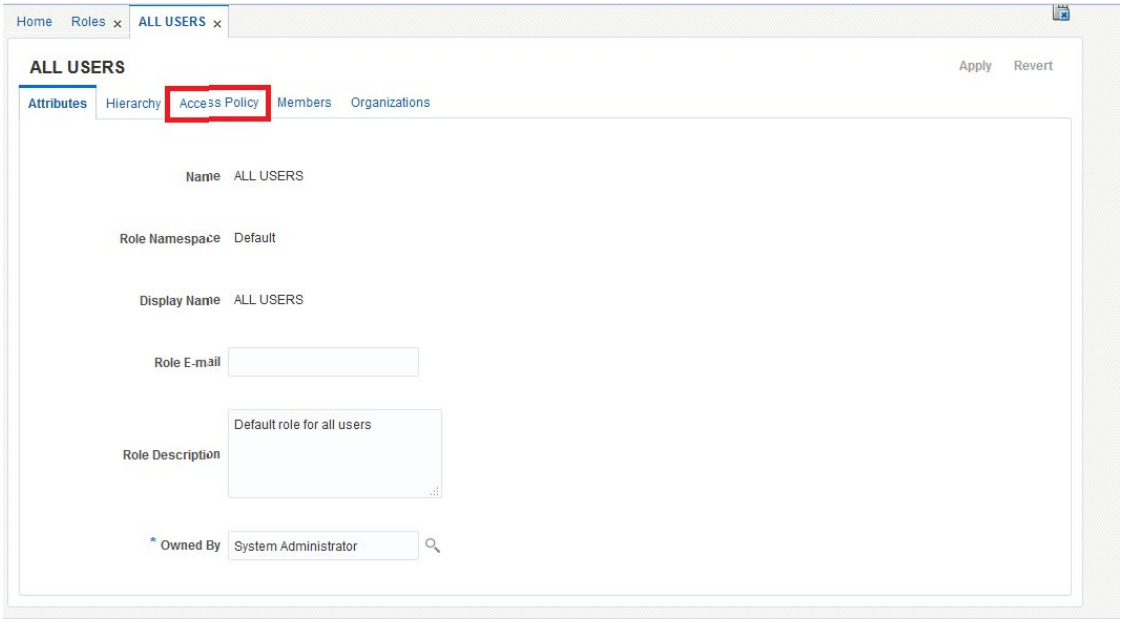
Click on Roles under Manage



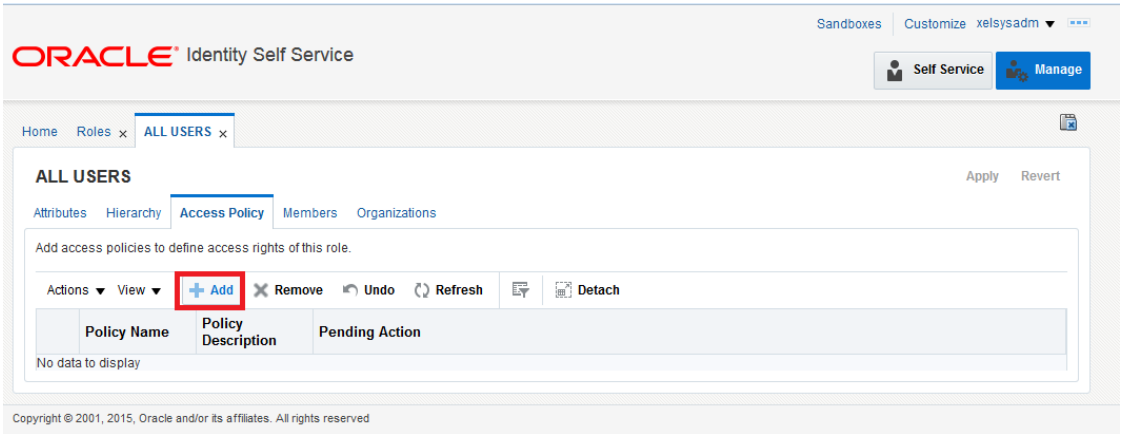
Select ALL USERS to Edit



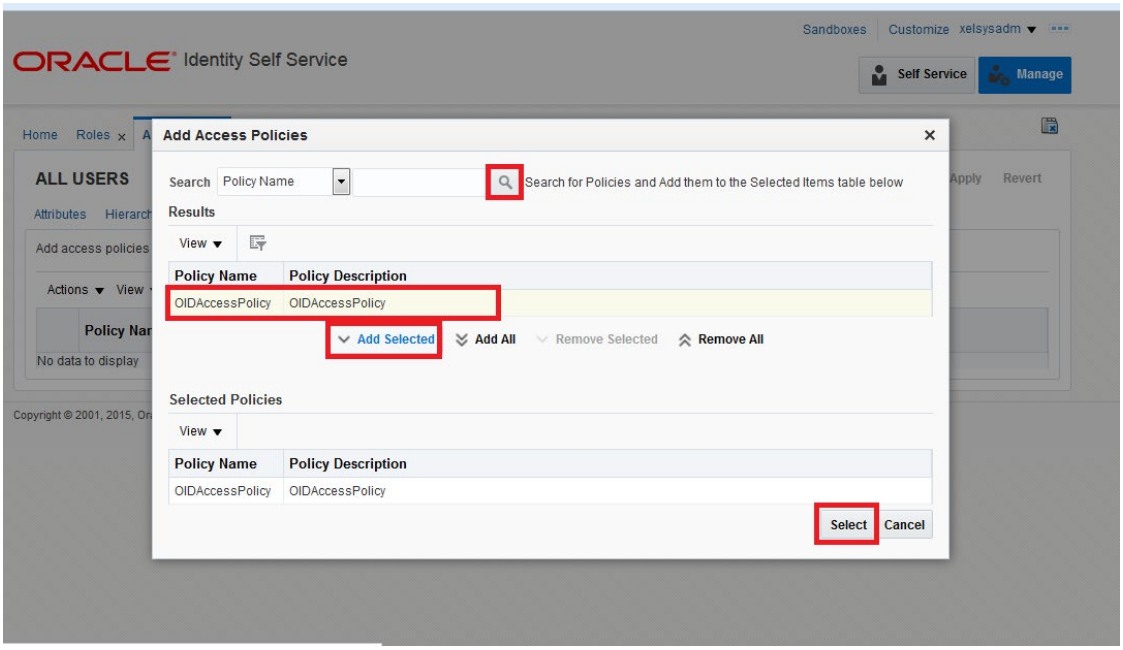
Click on Access Policy



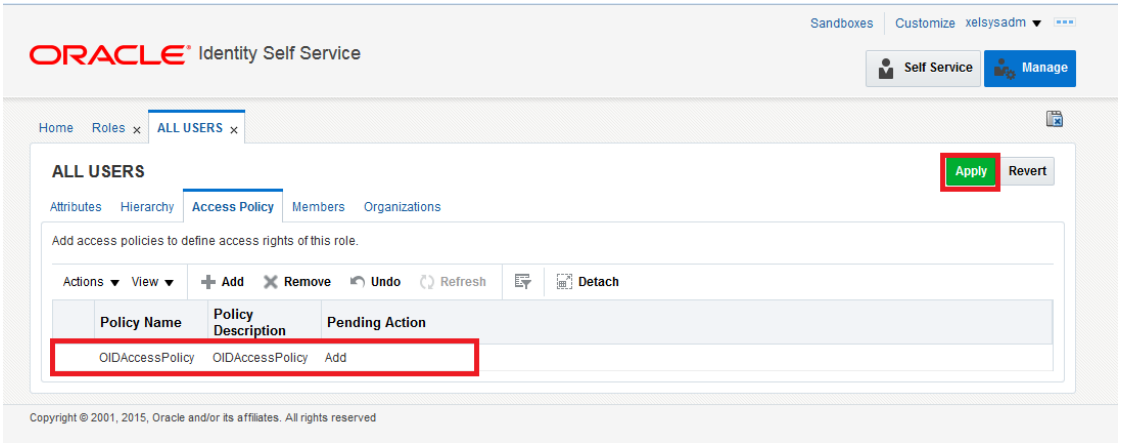
Click on Add to Add Access Policy



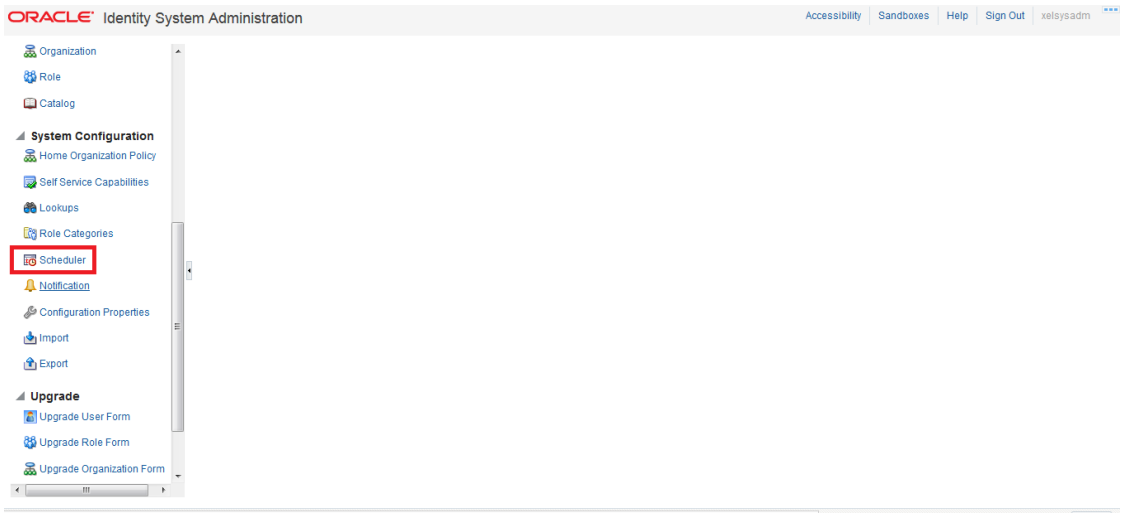
Search for the Access Policy & Select the Access Policy Created



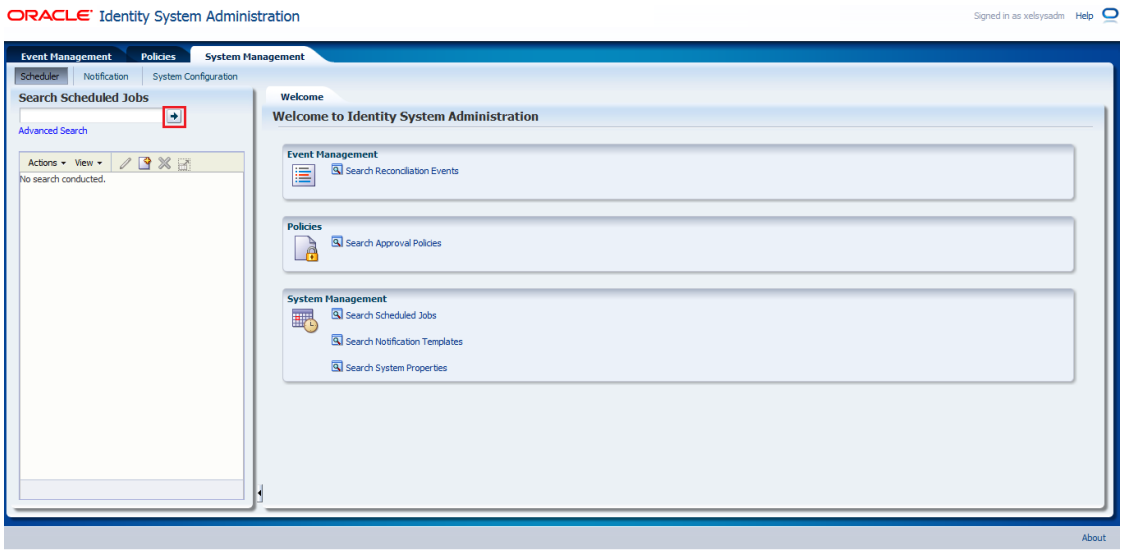
Click on Apply to Save



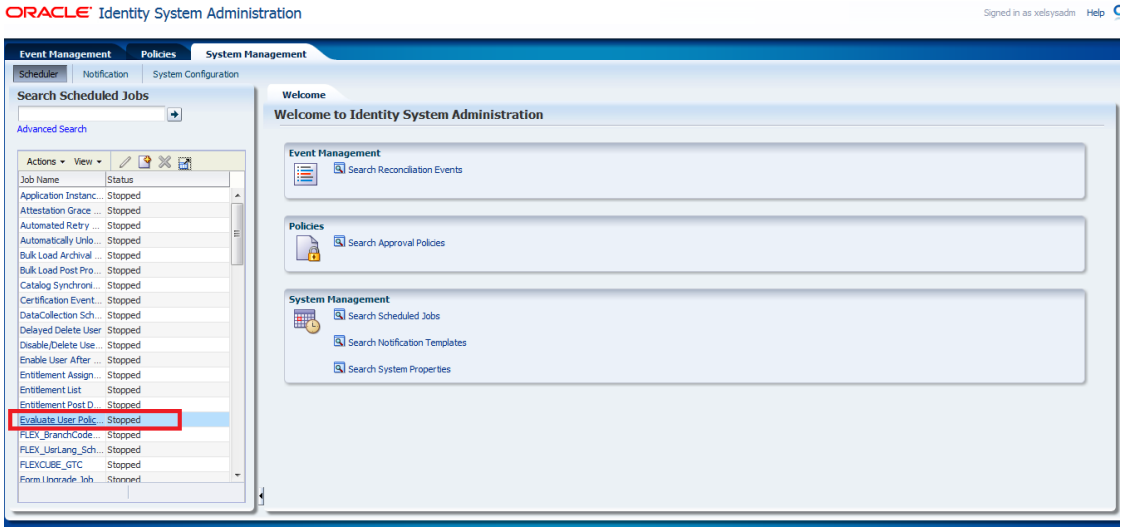
Click on Scheduler under System Configuration.



Click on Search shown below:



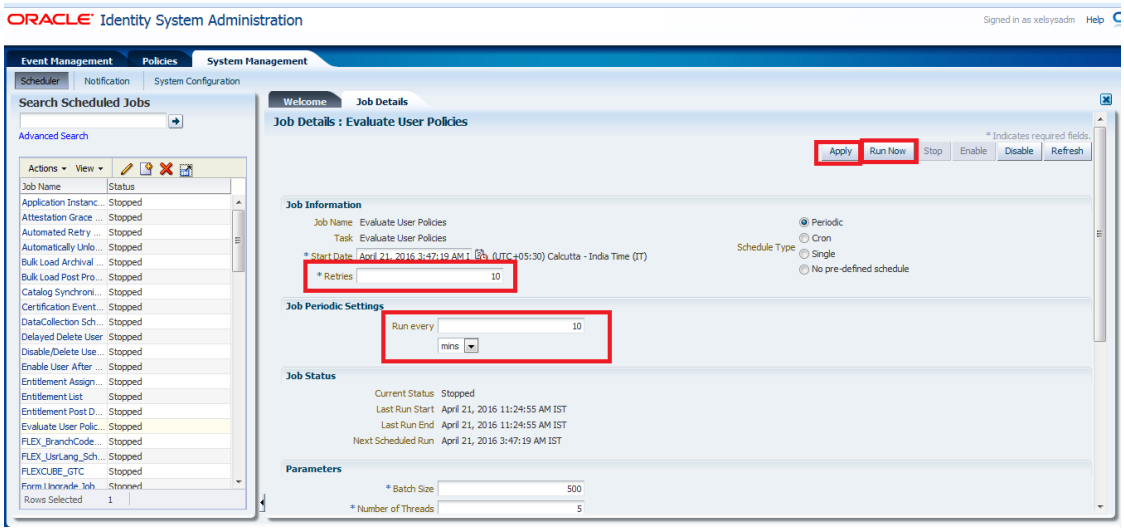
Select Evaluate User Policies.



Change the Schedule Type under Job Information, also change Run Every under Job Periodic Setting.

c. Click on Apply.

Job will be scheduled in a periodic manner and it will evaluate the New User Created in Oracle Identity Management Server against the access policies created. If the new user satisfied by the access policy then it will Provision the user to User Account. In this case it's Oracle Internet Directory.


ORACLE Identity System Administration
Signed in as xelsysadm
Help
Event Management
Policies
System Management
Scheduler
Notification
System Configuration
Search Scheduled Jobs
Advanced Search
Actions
View
Job Name
Status
Application Instanc... Stopped
Attestation Grace ... Stopped
Automated Retry ... Stopped
Automatically Unlo... Stopped
Bulk Load Archival ... Stopped
Bulk Load Post Pro... Stopped
Catalog Synchroni... Stopped
Certification Event... Stopped
DataCollection Sch... Stopped
Delayed Delete User Stopped
Disable/Delete Use... Stopped
Enable User After ... Stopped
Entitlement Assign... Stopped
Entitlement List Stopped
Entitlement Post D... Stopped
Evaluate User Polic... Stopped
FLEX_BranchCode... Stopped
FLEX_UsrLang_Sch... Stopped
FLEXCUBE_GTC Stopped
Rows Selected 1
Welcome
Job Details
Job Details : Evaluate User Policies
* Indicates required fields.
Apply
Run Now
Stop
Enable
Disable
Refresh
Job Information
Job Name Evaluate User Policies
Task Evaluate User Policies
* Start Date April 21, 2016 3:47:19 AM I (UTC+05:30) Calcutta - India Time (IT)
* Retries 10
Schedule Type
Periodic
Cron
Single
No pre-defined schedule
Job Periodic Settings
Run every 10
mins
Job Status
Current Status Stopped
Last Run Start April 21, 2016 11:24:55 AM IST
Last Run End April 21, 2016 11:24:55 AM IST
Next Scheduled Run April 21, 2016 3:47:19 AM IST
Parameters
* Batch Size 500
* Number of Threads 5

6. Solution / Usage Guidelines

6.1 Working with OIM

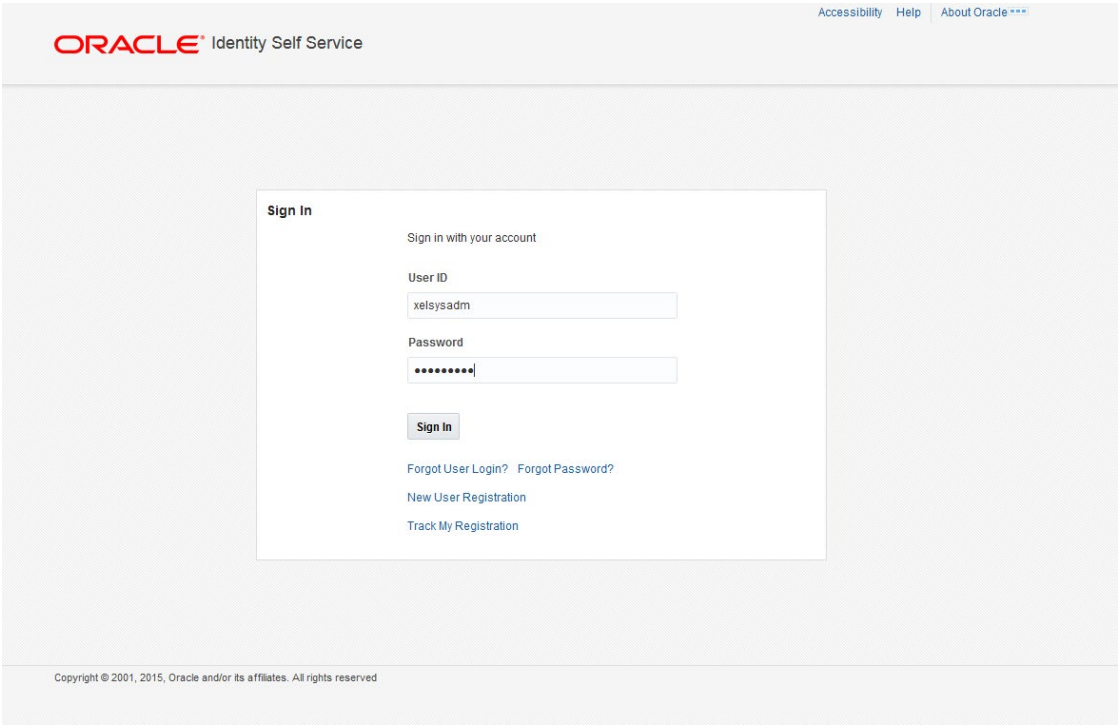
6.1.1 Creating a user in FLEXCUBE through OIM

To create a user in FLEXCUBE through OIM, first a user must be created in OIM itself. After creating a user in OIM, a user can be created in FLEXCUBE by assigning a resource named FLEXCUBE_GTC.

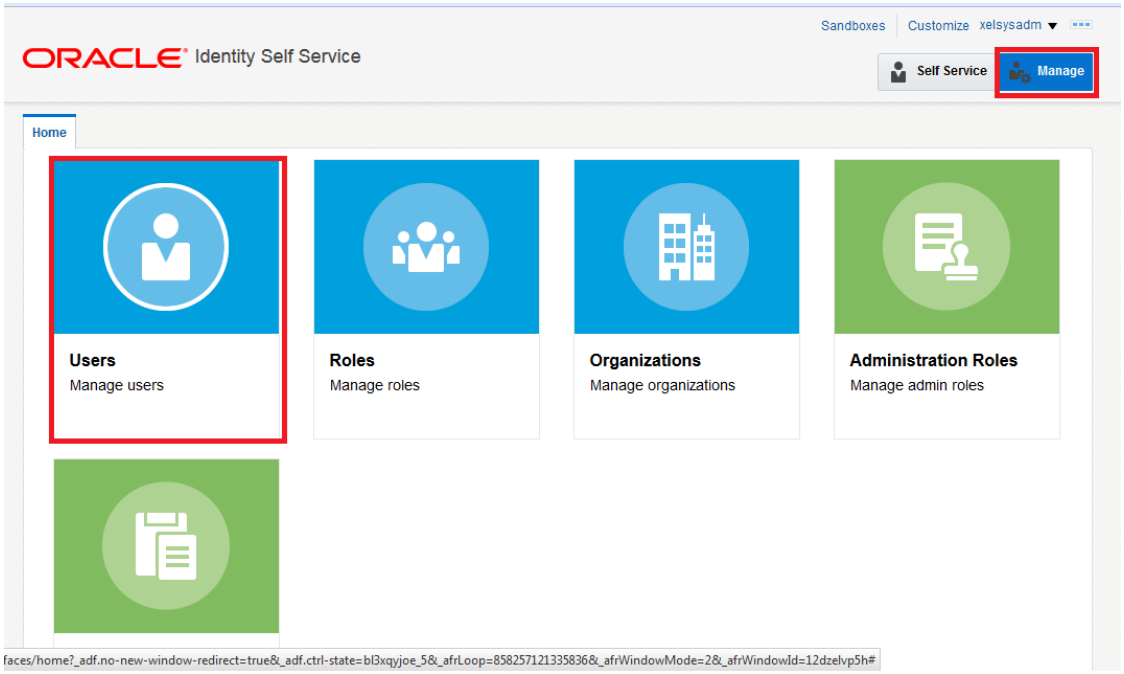
Open the Oracle Identity Manager Administrative console. (Give the following URL in the browser: http://<hostName>:<oimport>/identity)

Login to Administrative Console

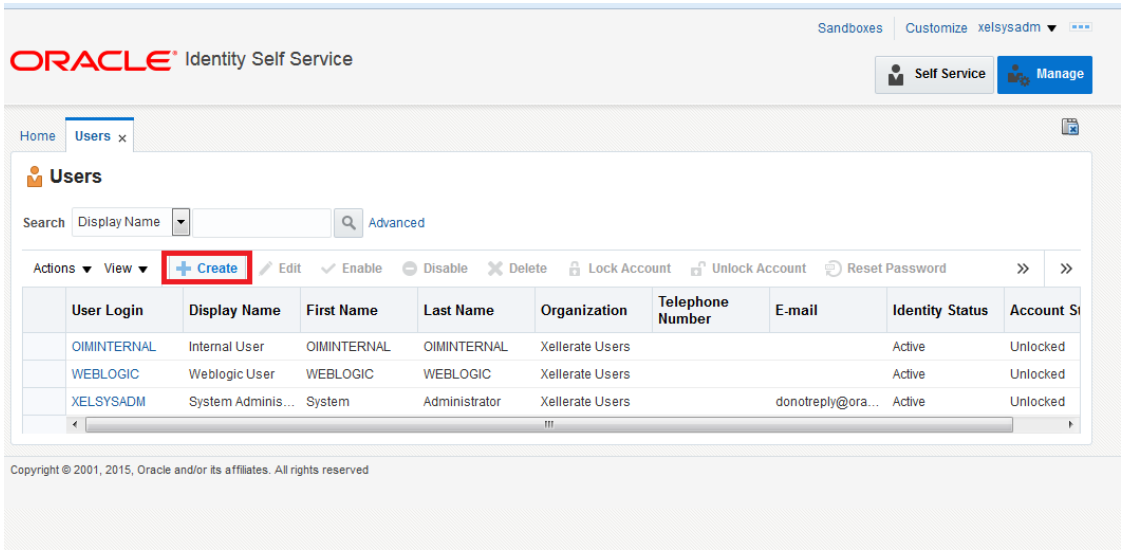
a. Enter OIM administrator username/password and press **Login.**



Click on Users under Manage.



Click on Create.



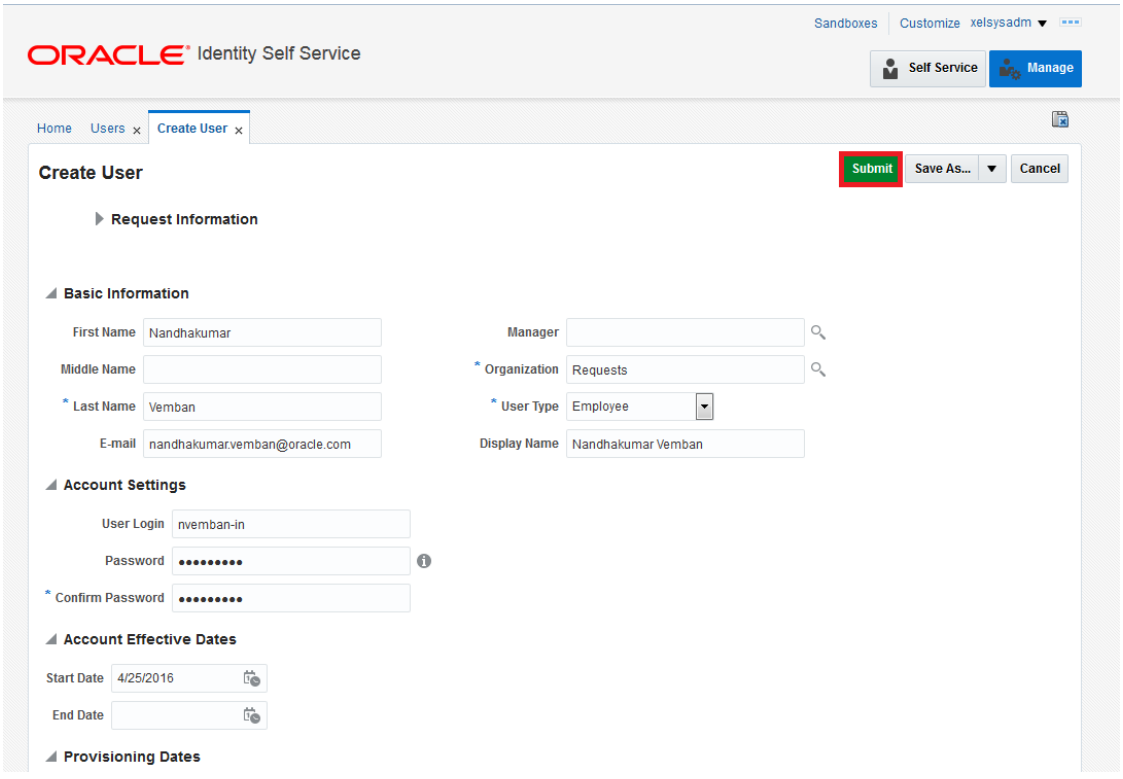
The Create User screen will get displayed.

a. Below are the mandatory fields, which needs to be entered to Create the User in Oracle Identity Manager

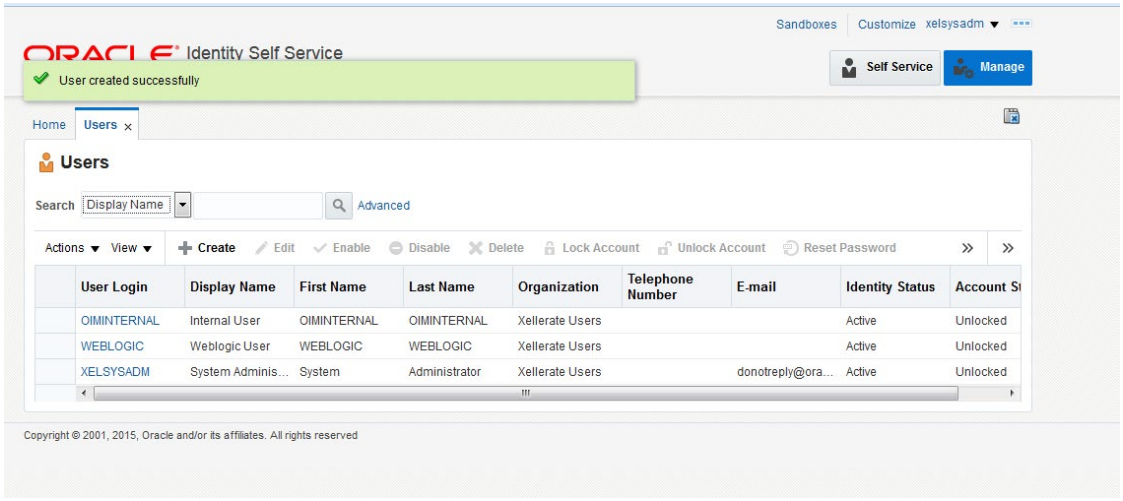
   i. First Name
   ii. Last Name
   iii. Organization
   iv. User Type
   v. E-mail
   vi. Display Name
   vii. User Login
   viii. Password
   ix. Confirm Password
   x. Start Date

   Note: Password & Confirm Password are not entered then System will generate some random password & it will mailed to the email addess entered.

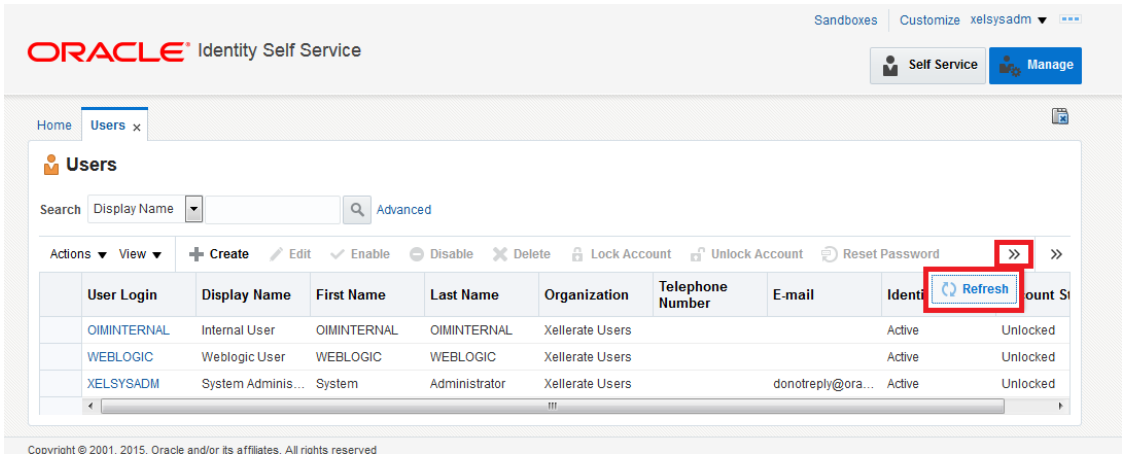
b. Click on Submit.



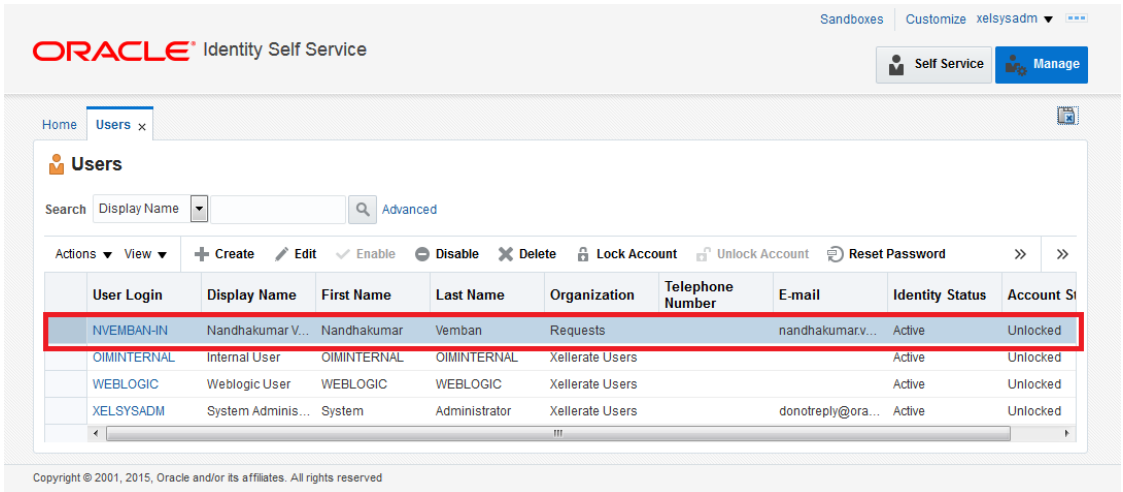
On successful creation of user ”User successfully got created” message will get appeared.



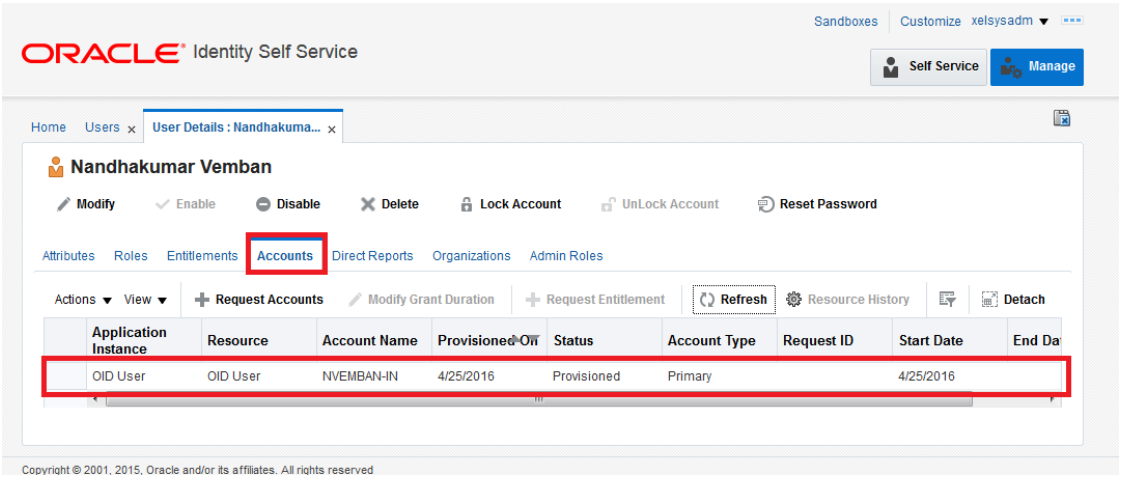
Click on Refresh to fetch the updated user list.



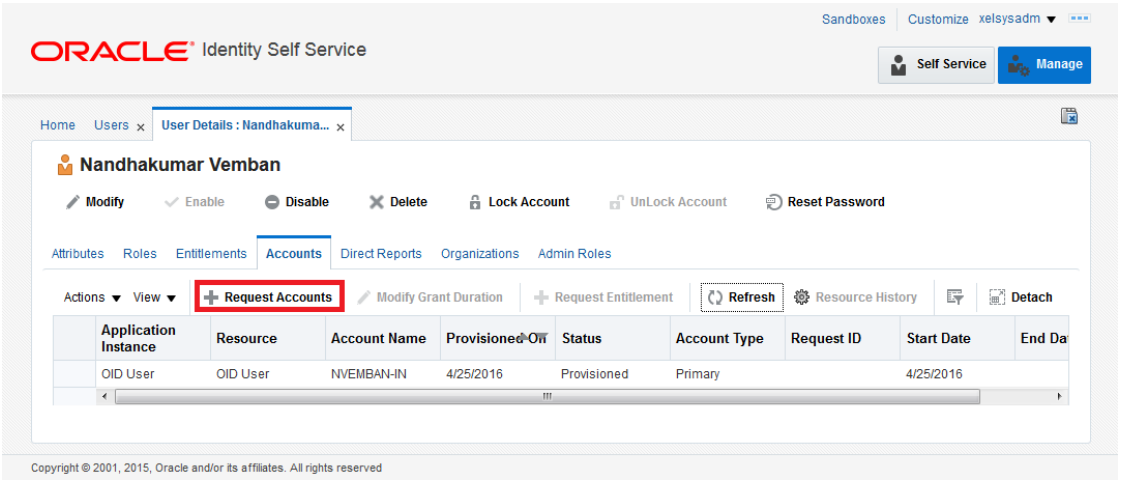
Click on the User created in the step above and Click on Accounts TAB



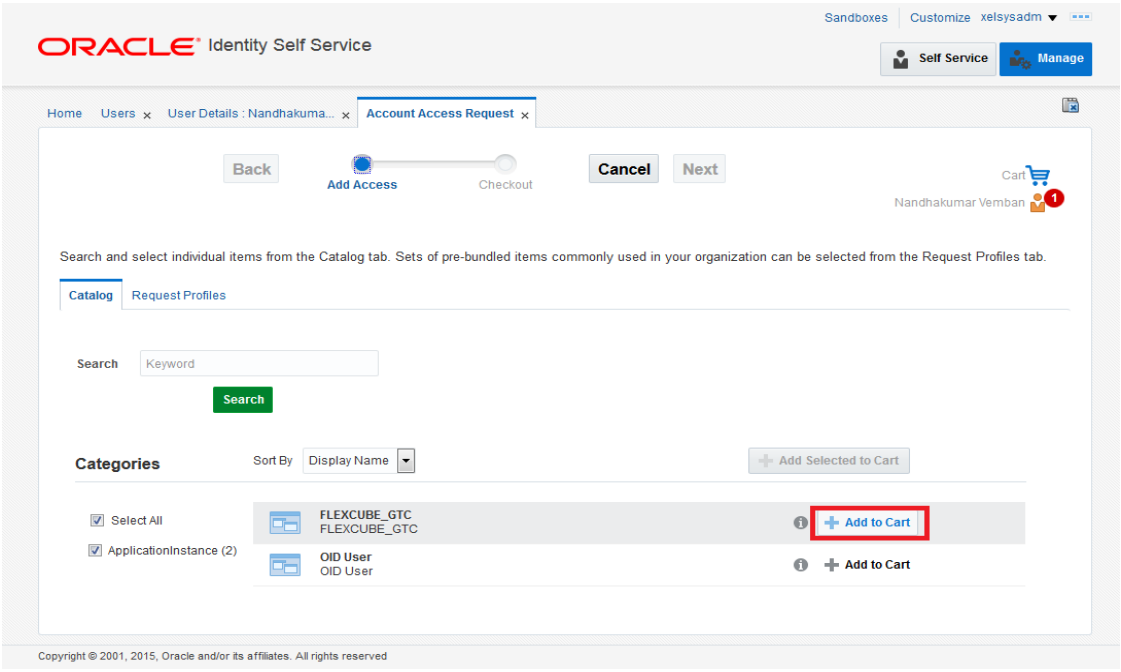
Wait for Time, which has been set to evaluate the user access policy in 5.1.6.2.2.15 and Click on Refresh. In the Accounts TAB, User will be Provisioned with OID User Resource Type.



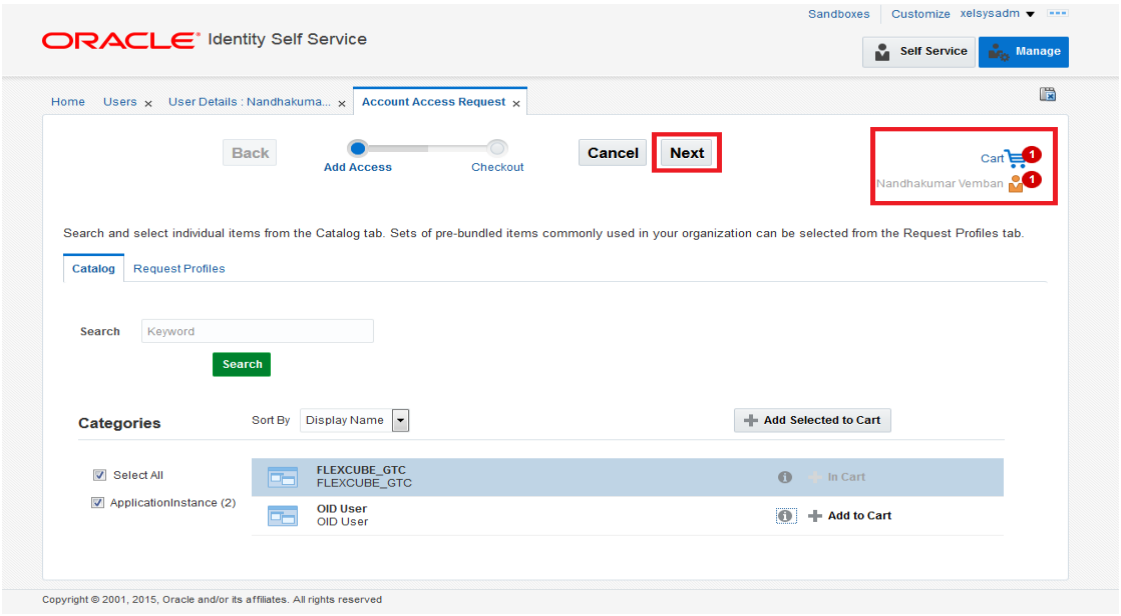
Click on Request Accounts.



Click on Add to Cart against FLEXCUBE_GTC.



Click on Next Button



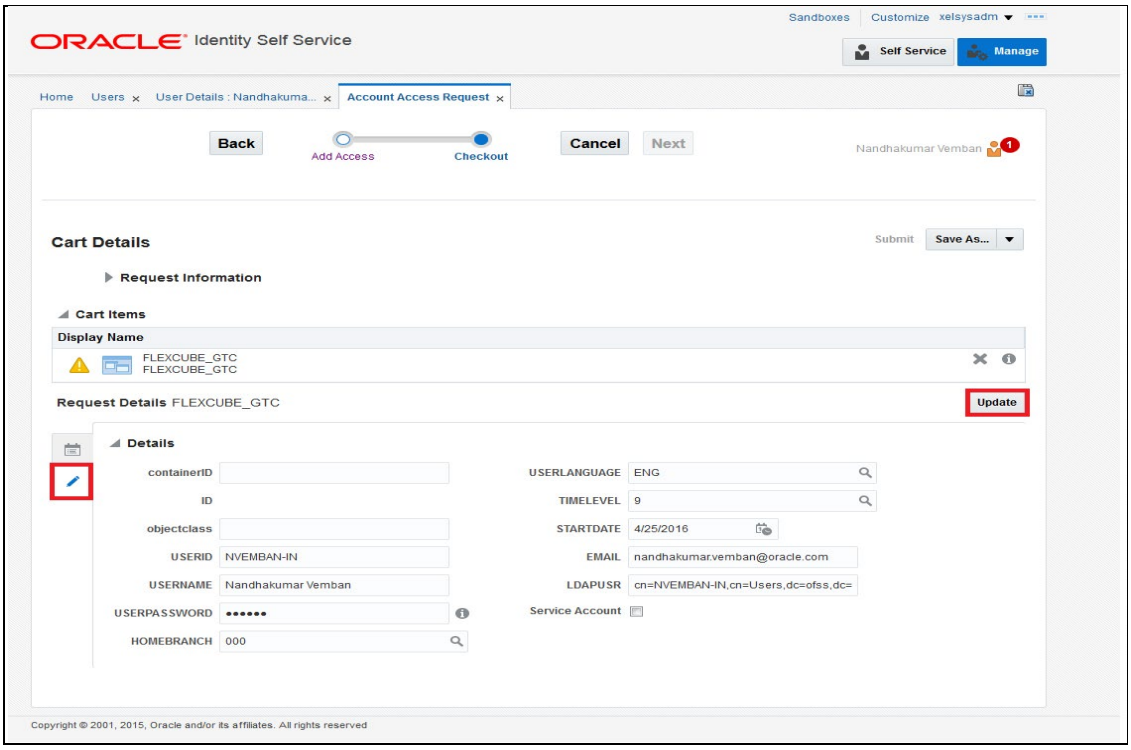
Following screen will appear like below:

d. Click on Details form to edit the user details

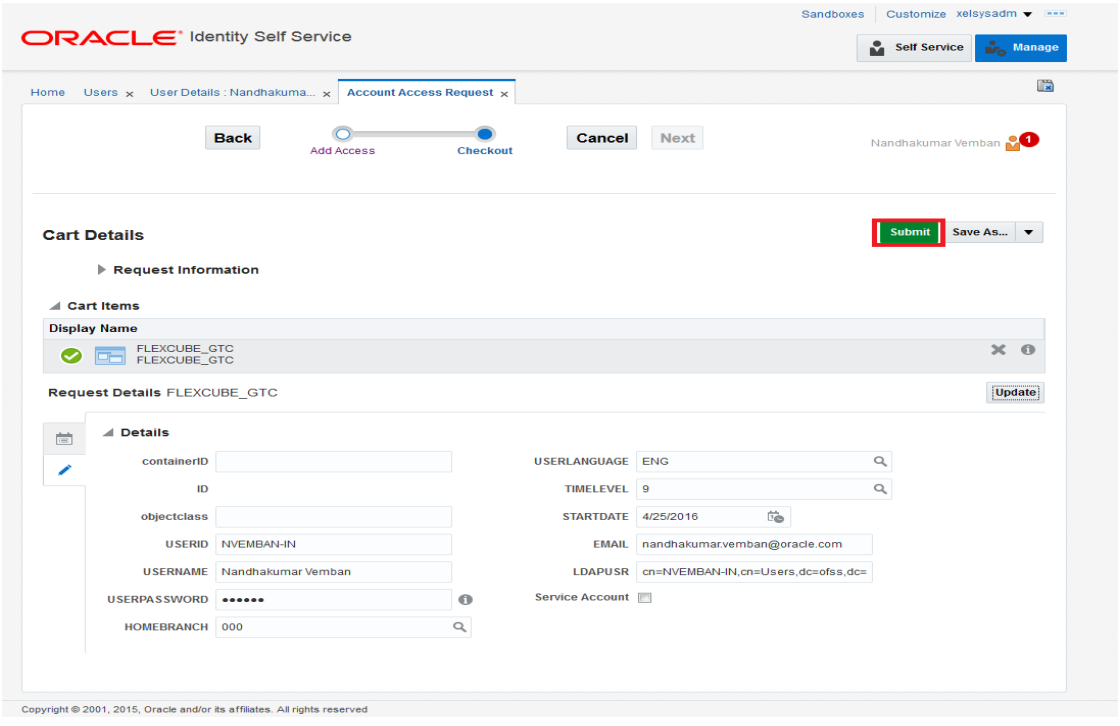
e. Select the Home Branch, User Language, Time Level

f. Click on Update Button

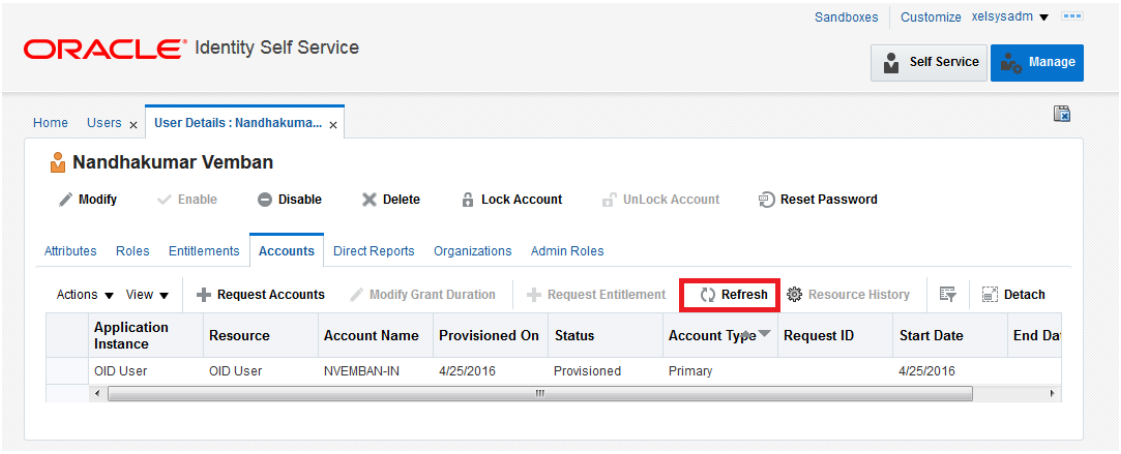
Note: In case like have a different FLEXCUBE USERID populated then it can be modified (only during Request Account in FLEXCUBE), do not modify any other value, which is pre-populated in this screen.



Click on Submit.

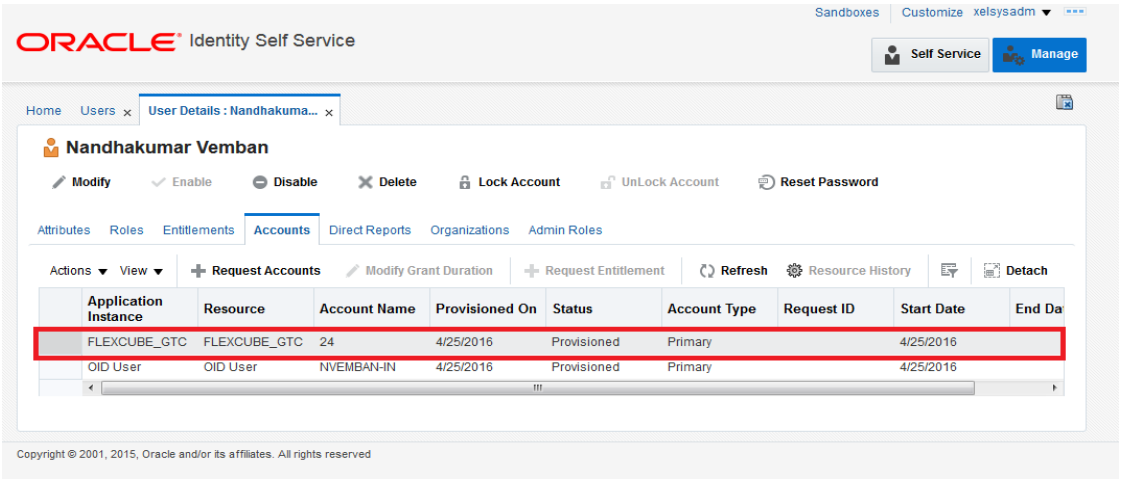


Click on Refresh in Accounts TAB.



It will show the Requested Account and its status.

If the status is provisioned then the User is created in the Target Application.

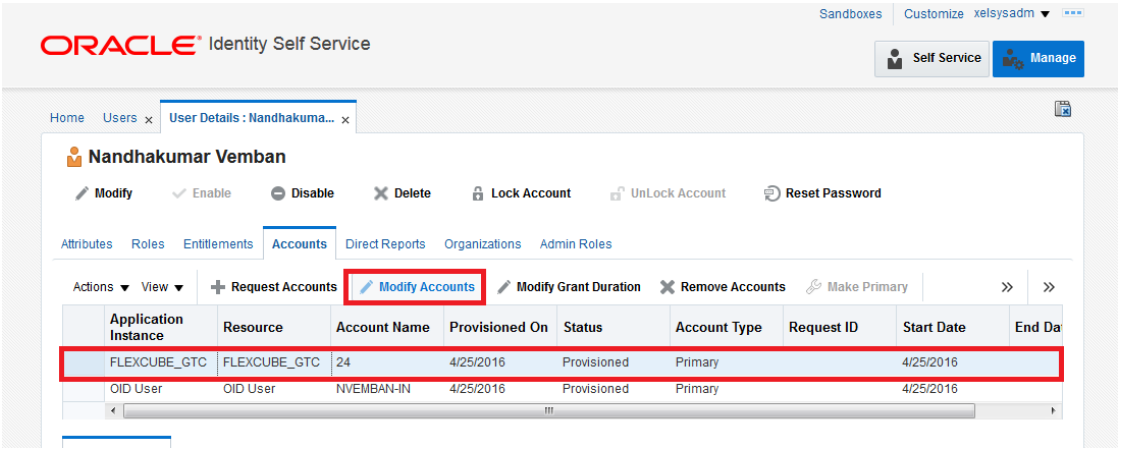


6.1.2 Modifying a user in FCUBS through OIM

Navigate to the Accounts TAB>>Select FLEXCUBE_GTC >> Click on Modify Accounts.

a. After successful provisioning User Details like User Name, User Password, Time Level, User Language and Home Branch can be modified.

b. Email, LDAP User, Start Date should not be modified.

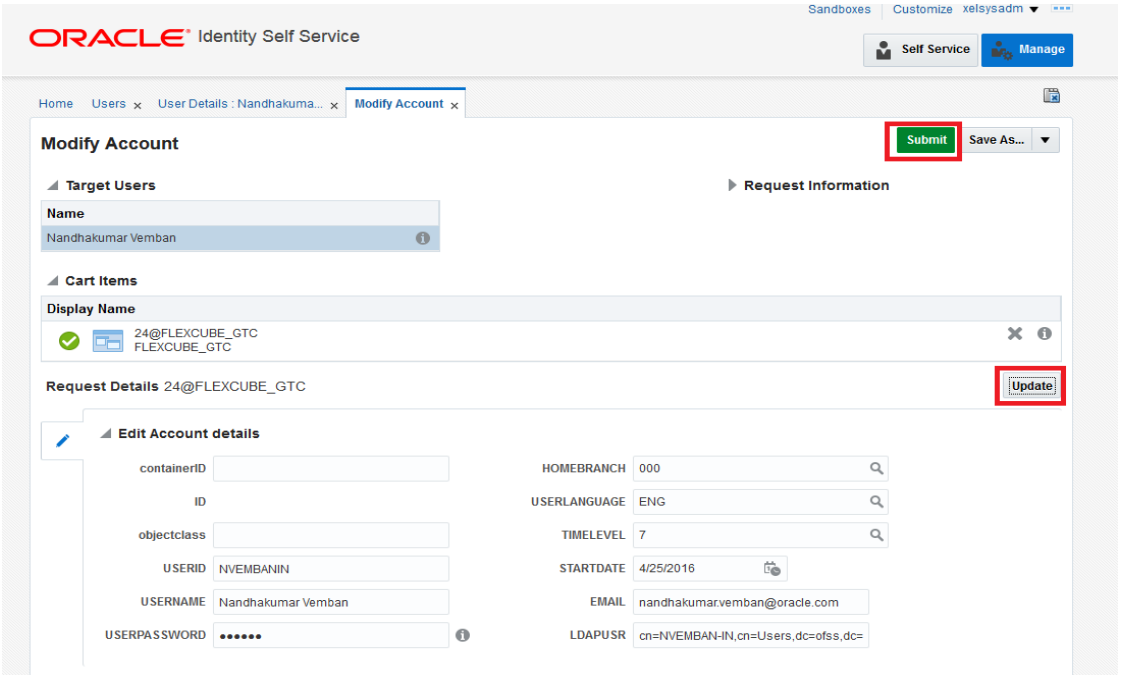


The following screen is displayed.

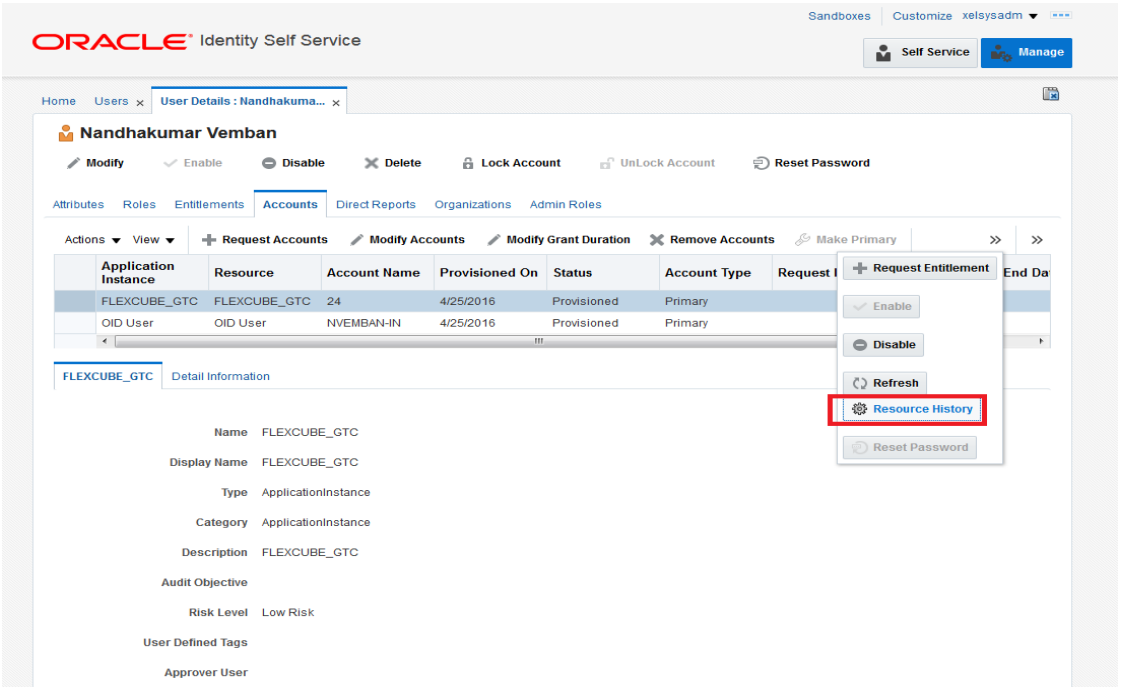
a. Modify the data (Any/All of User Name, User Password, Time Level, Home Branch and User Language).

b. Click on Update Button.

c. Click on Submit.

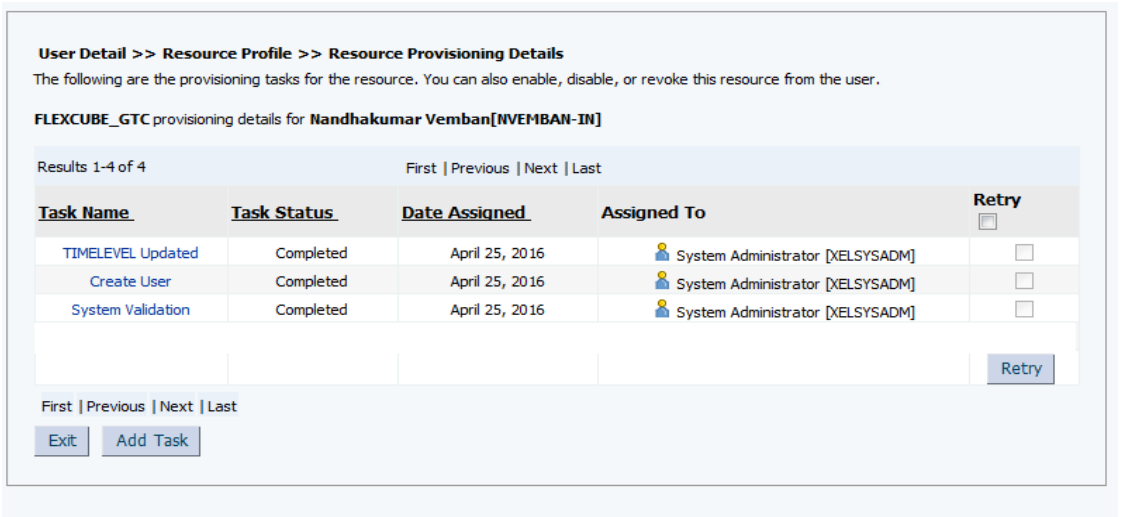


Navigate to the Accounts >> Select FLEXCUBE_GTC >> Resource History



The following screen is displayed.

a. Based on the modification done it will show the individual field change status (In case of more than one field like User Name, User Password changes it will show USERNAME Updated, HOMEBRANCH Updated etc.).

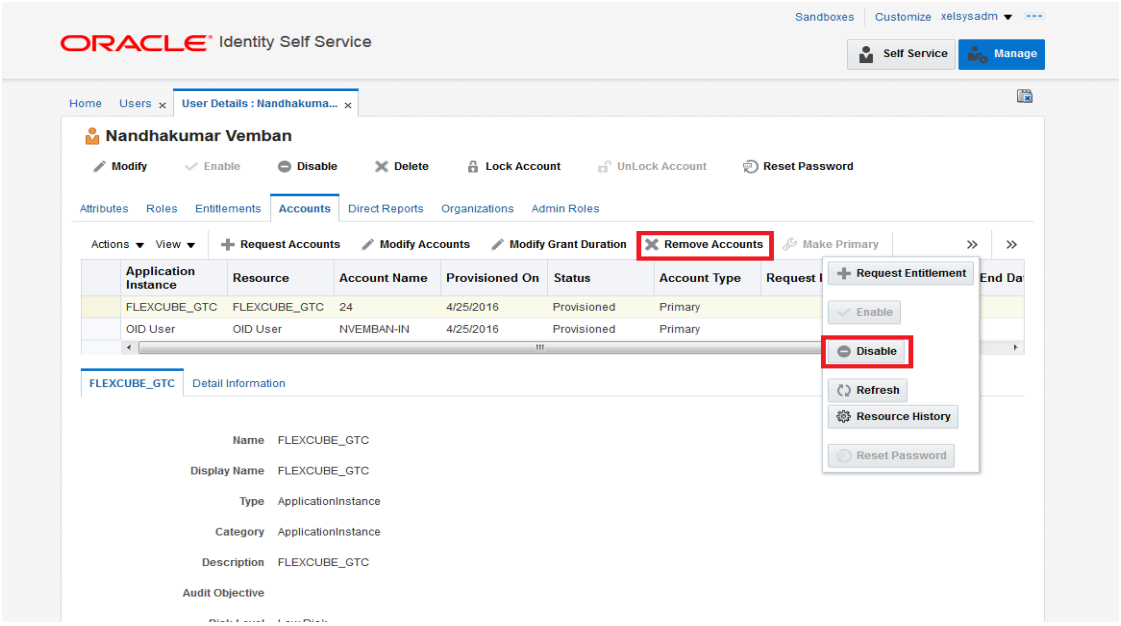


6.1.3 Disable/Remove Accounts in FCUBS through OIM

There is a slight difference between Disable and Remove Accounts option. If the account disabled then the same account can be enabled using the Enable option. If the account is Removed then the account cannot be enabled through OIM. But in FCUBS, both Disable and Remove option will close the existing user record.

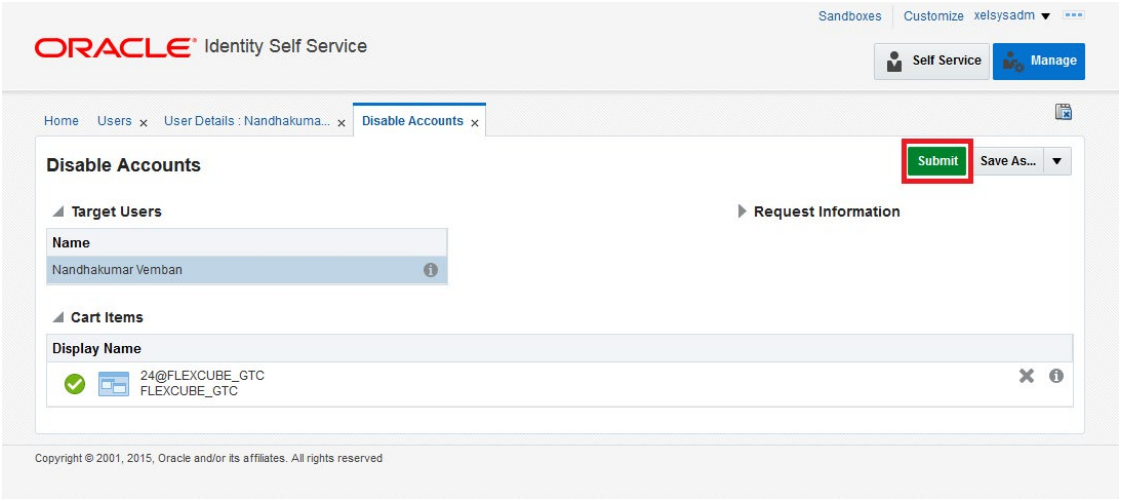
Remove Accounts will show the Last Known Status

Accounts>>Select FLEXCUBE_GTC >>Click on Disable/Remove Accounts



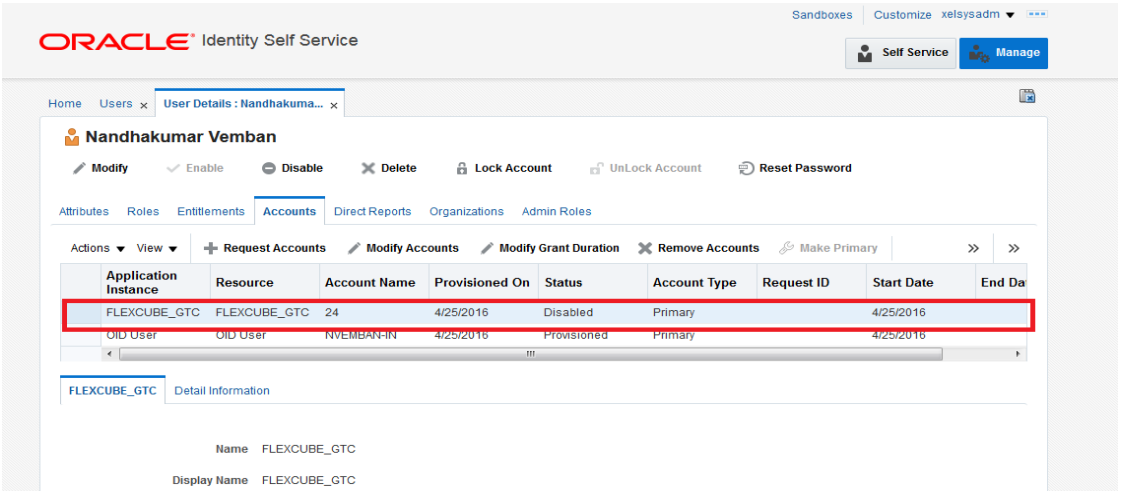
Disable Confirmation Screen will get displayed

b. Click on Submit.



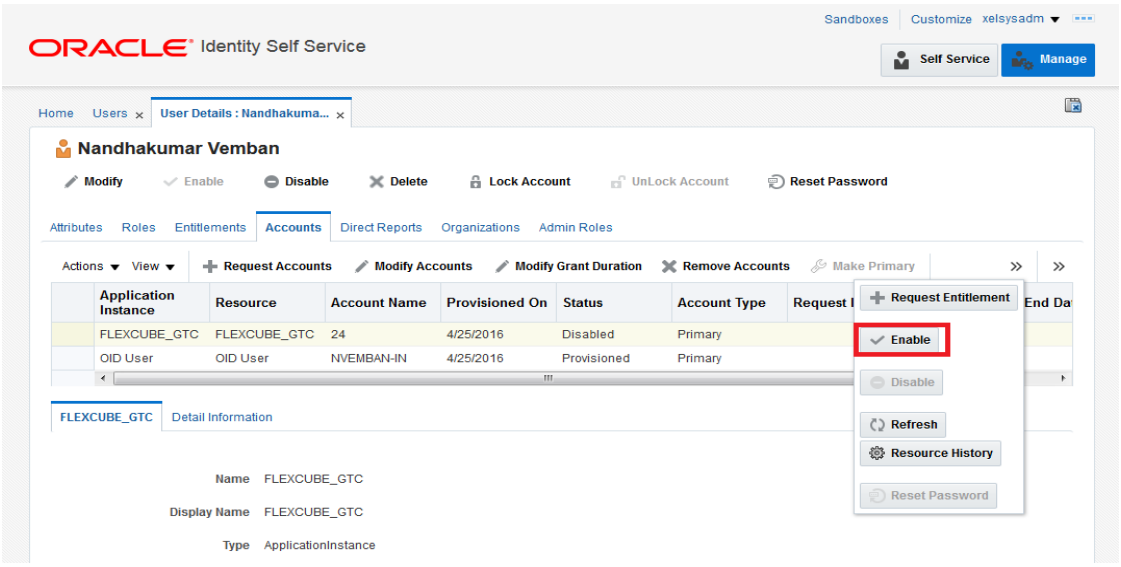
Go to Accounts Tab and Click on Refresh.

a. On successful processing, it will display the FLEXCUBE_GTC status as Disabled.

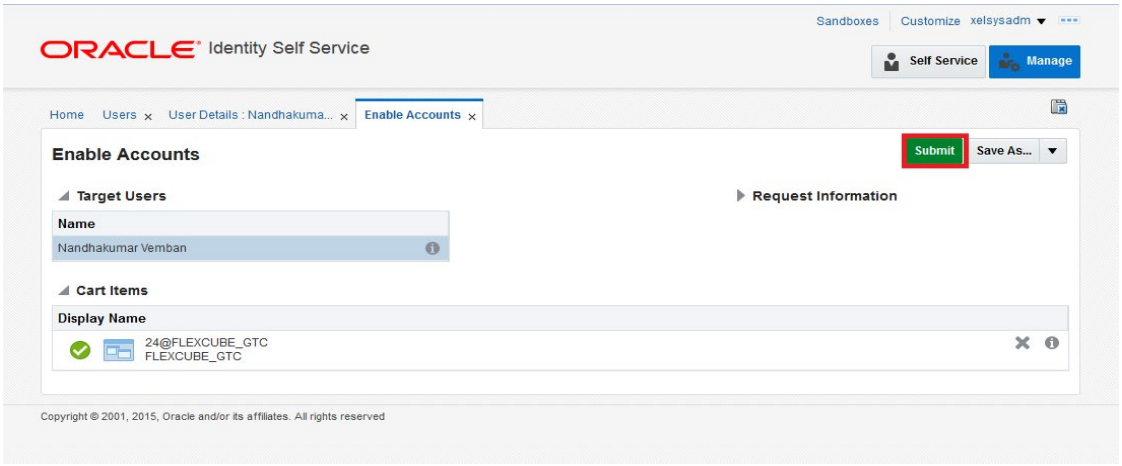


6.1.4 Enabling a Disabled user in FCUBS through OIM

Accounts>>Select FLEXCUBE_GTC >>Click on Enable

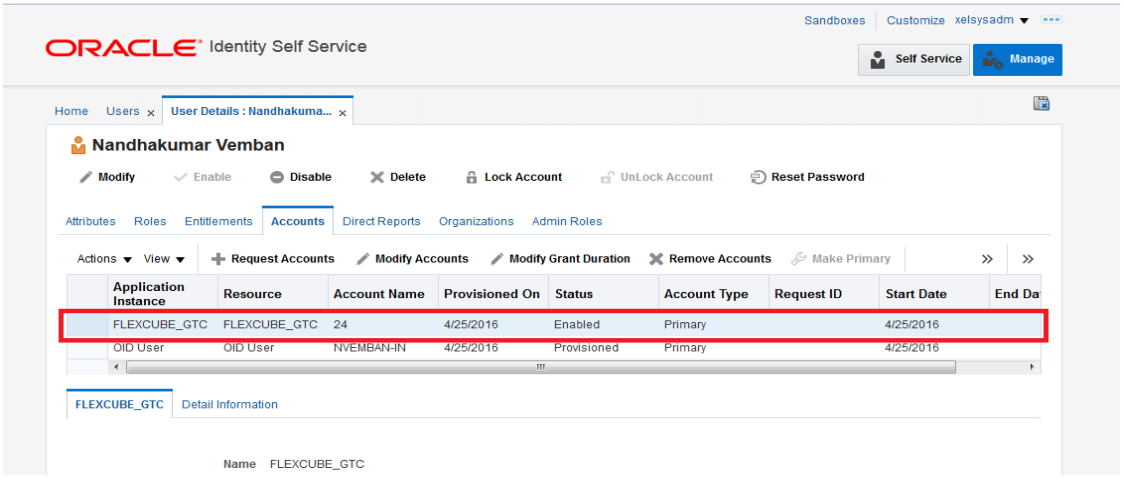


Enable Confirmation Screen will get displayed and Click on Submit



Go to Accounts TAB and Click on Refresh.

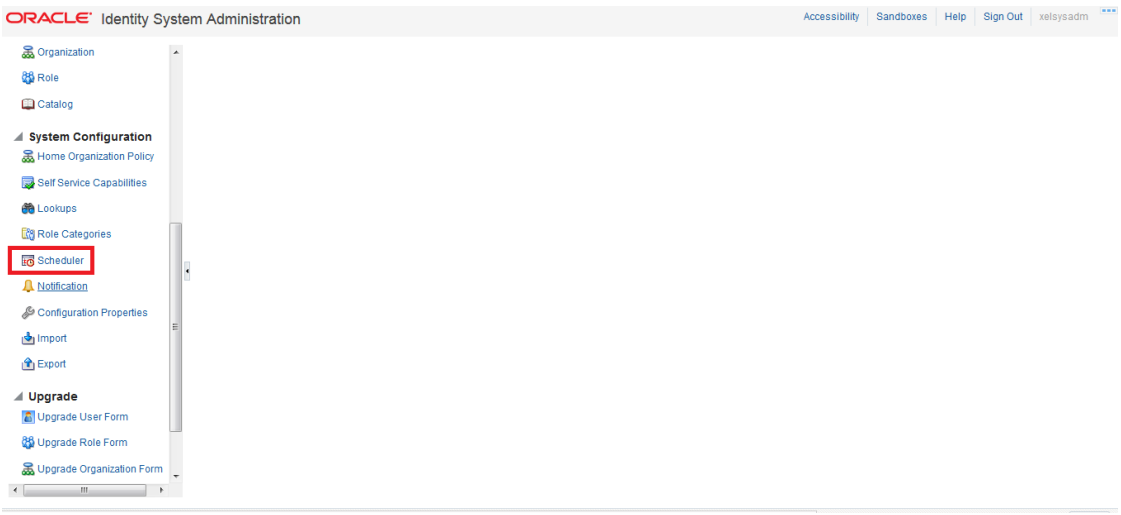
a. On successful processing, it will display the FLEXCUBE_GTC status as Enabled.



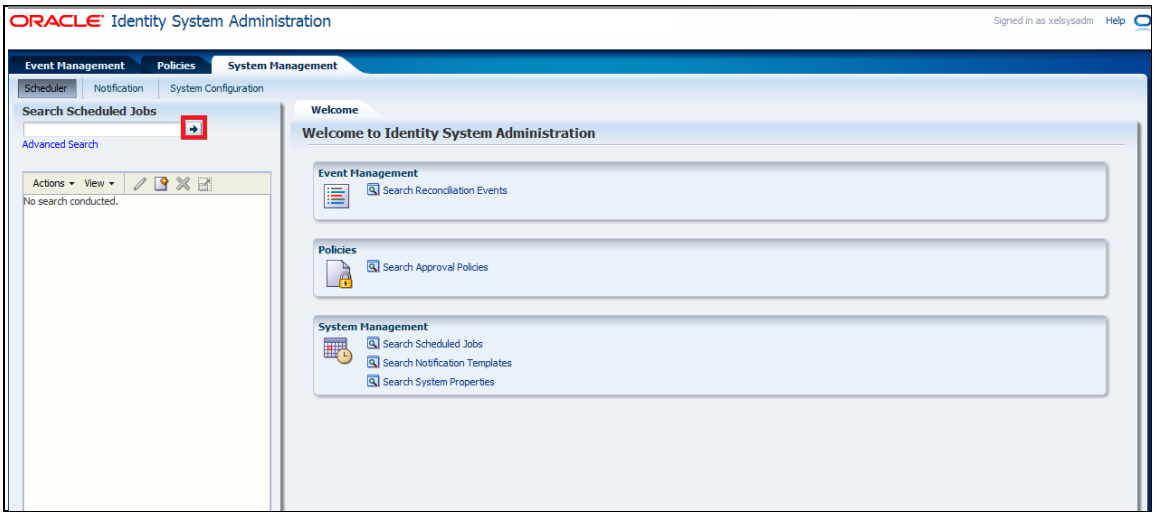
6.1.5 Running Reconciliation in OIM

Copy the reconciliation staging file that is created by function id SMBOIMHF as EOD day activity to the OIM server's staging directory.

Login to OIM Admin Console and Click on Scheduler under System Management.

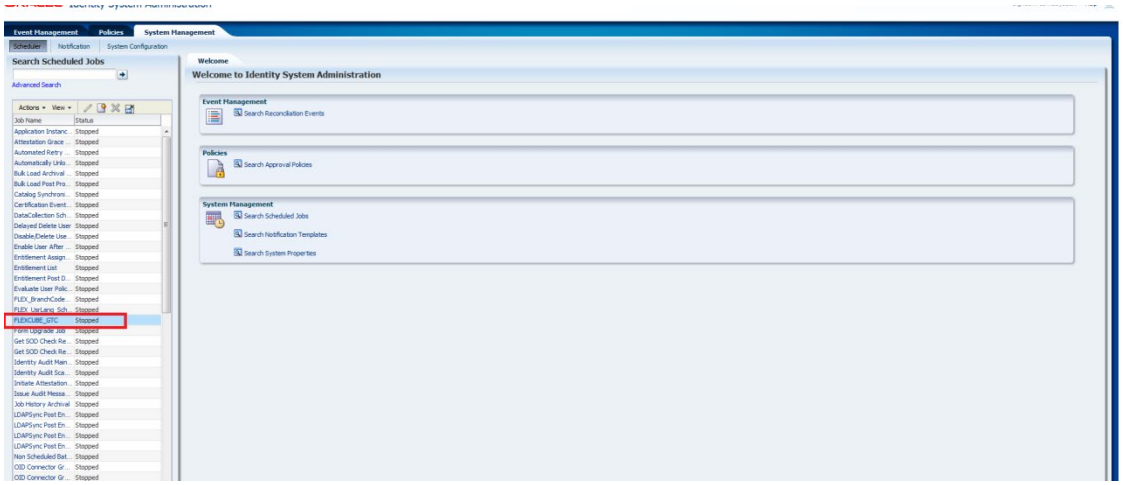


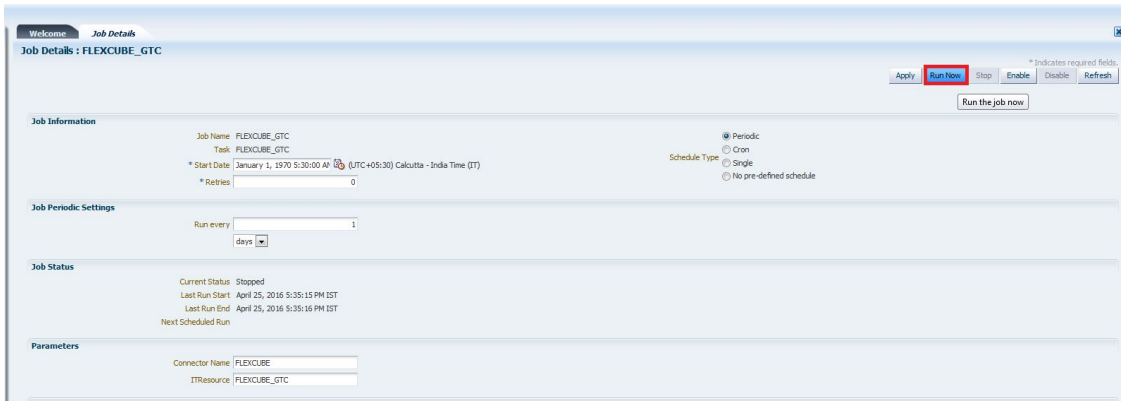
Under System Management tab and search for FLEXCUBE_GTC Scheduled Job by clicking Search Button.

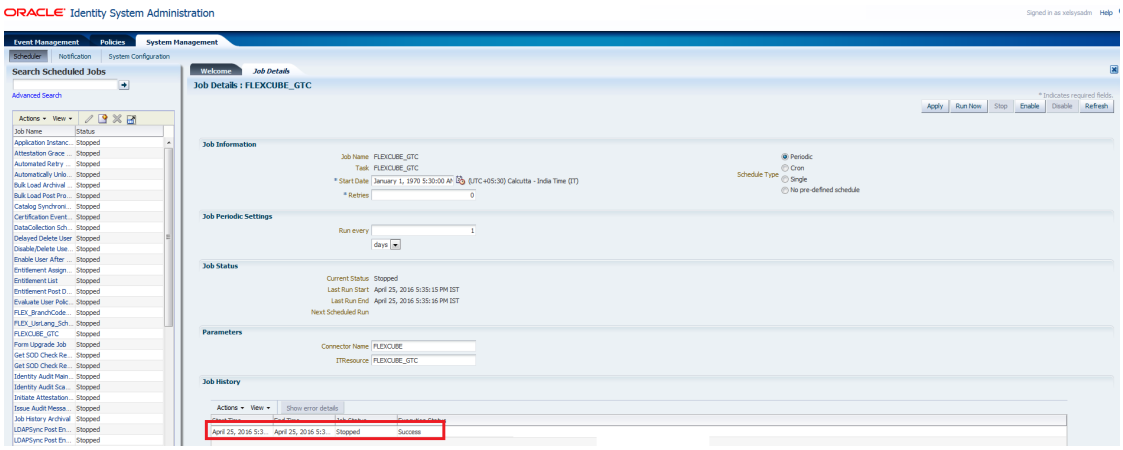


a. If the job is scheduled periodically, based on the frequency and scheduled time, system will automatically process the reconciliation. If it not scheduled, user can manually initiate the reconciliation process by clicking the Run Now button.

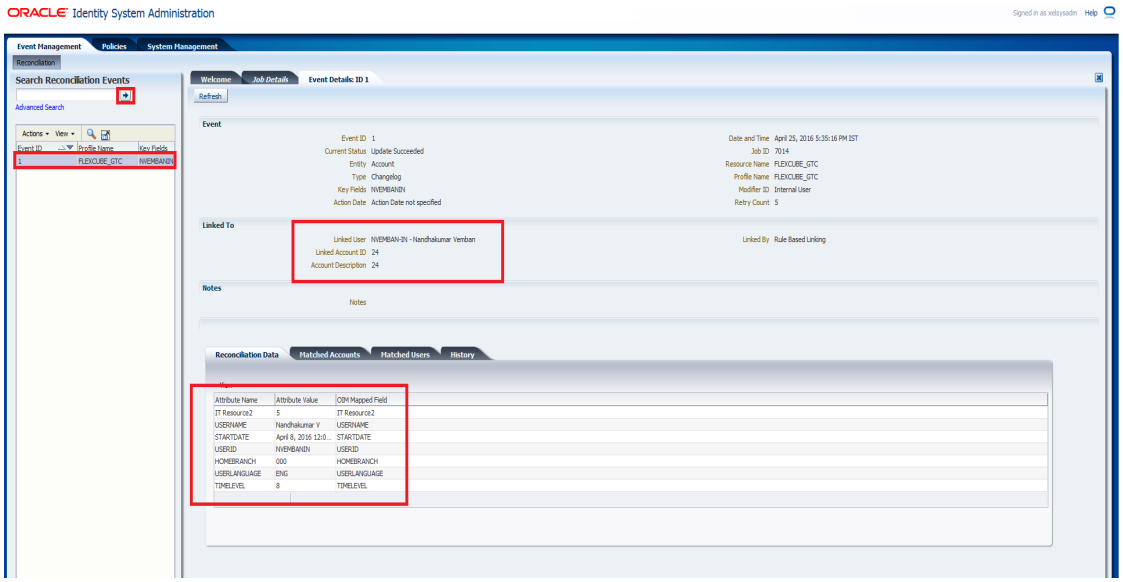
b. After running the process, click Refresh button to view the status of the initiated job. The job history section available in the screen will show whether the job is in progress or it is completed.







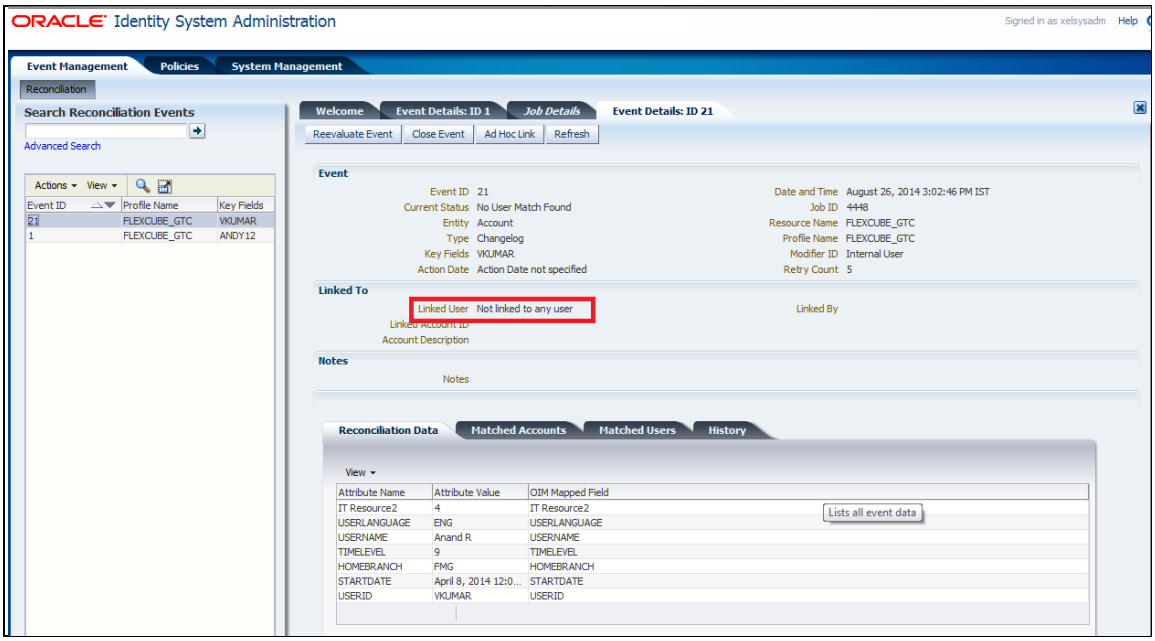
To Check the Status of Reconciliation Process, Click on Event Management Tab and Click the Search button and Click on the Latest Event ID. The screen will show the reconciliation data and the user ID matched for the reconciliation.



In the Event details screen

a. Check the Status: If it is “Update Succeeded” then it means the reconciliation process was able to find a matching user. It also shows the reconciliation data that has been affected.

b. If the Liked User is “Not Licked to any user” then it means the reconciliation process was not able to find a matching user.


ORACLE Identity System Administration
Signed in as xelsysadm
Help
Event Management
Policies
System Management
Reconciliation
Search Reconciliation Events
Advanced Search
Actions
View
Event ID
Profile Name
Key Fields
21
FLEXCUBE_GTC
VKUMAR
1
FLEXCUBE_GTC
ANDY12
Welcome
Event Details: ID 1
Job Details
Event Details: ID 21
Reevaluate Event
Close Event
Ad Hoc Link
Refresh
Event
Event ID 21
Current Status No User Match Found
Entity Account
Type Changelog
Key Fields VKUMAR
Action Date Action Date not specified
Date and Time August 26, 2014 3:02:46 PM IST
Job ID 4448
Resource Name FLEXCUBE_GTC
Profile Name FLEXCUBE_GTC
Modifier ID Internal User
Retry Count 5
Linked To
Linked User Not linked to any user
Linked By
Linked Account ID
Account Description
Notes
Notes
Reconciliation Data
Matched Accounts
Matched Users
History
View
Attribute Name
Attribute Value
OIM Mapped Field
IT Resource2
4
IT Resource2
USERLANGUAGE
ENG
USERLANGUAGE
USERNAME
Anand R
USERNAME
TIMELEVEL
9
TIMELEVEL
HOMEBRANCH
FMG
HOMEBRANCH
STARTDATE
April 8, 2014 12:0...
STARTDATE
USERID
VKUMAR
USERID
Lists all event data

7. Reference

Document Number	Title
1	Oracle Identity Manager Document.
2	SPML specification Document.

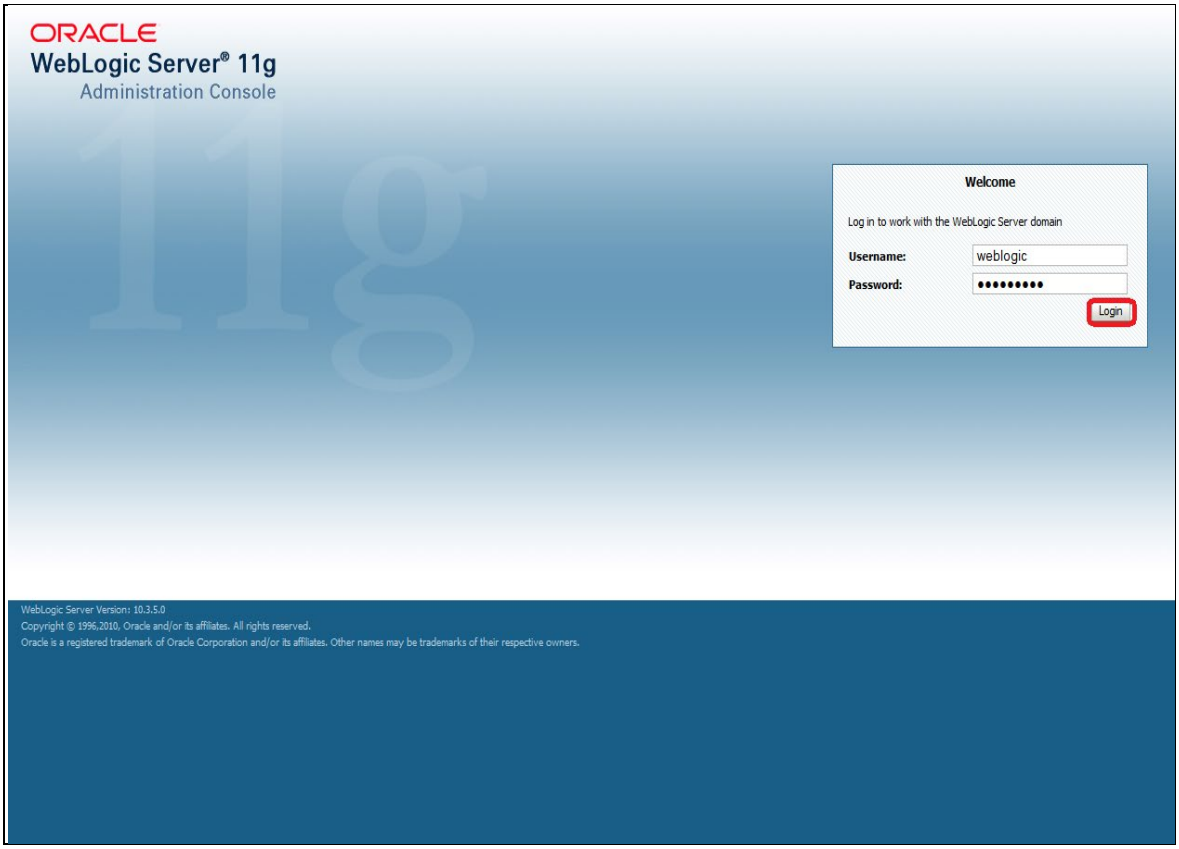
8. Appendix

8.1 Data Source Creation

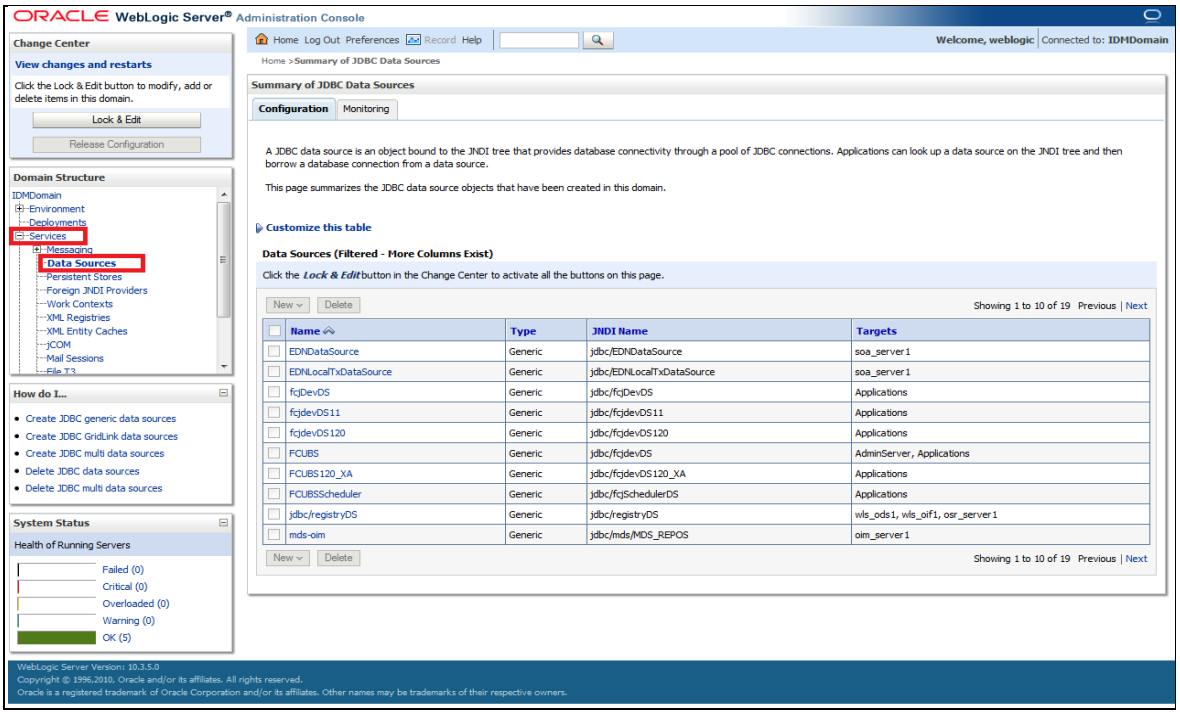
1. Open the application server console in the browser by typing Console URL of Weblogic application server

   http://<hostname>:<port>/console/

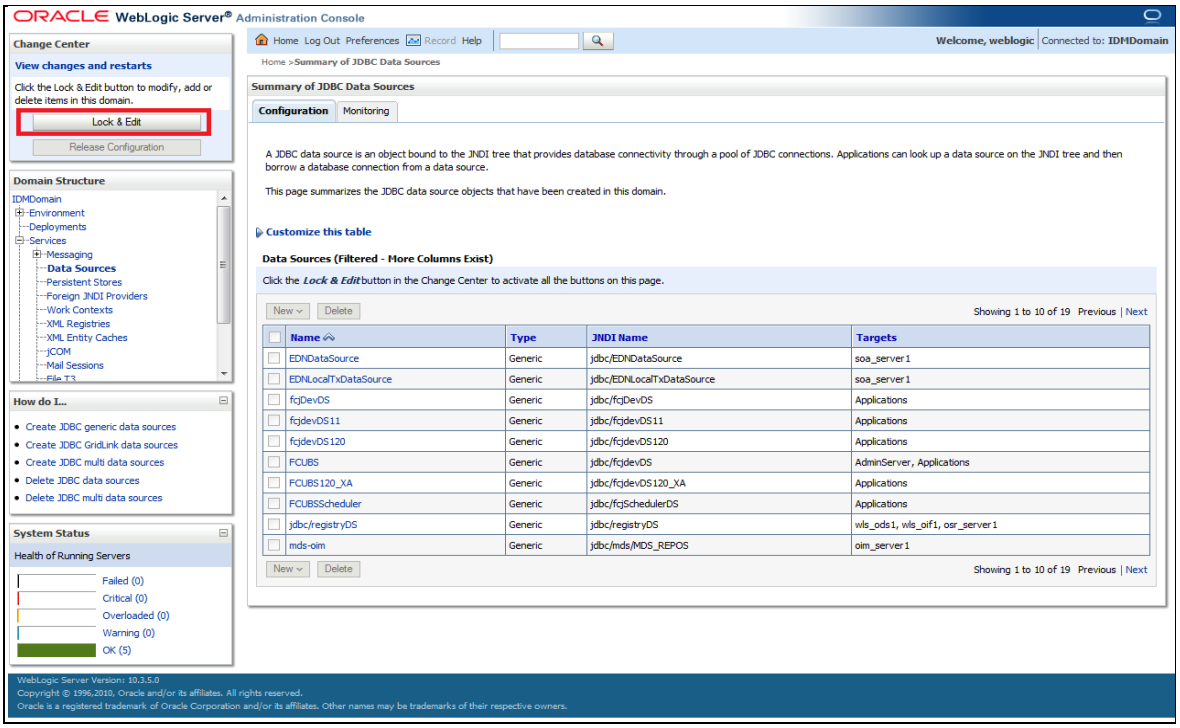
2. Login to Administrative Console
3. Enter Weblogic administrator username/password and press Login.



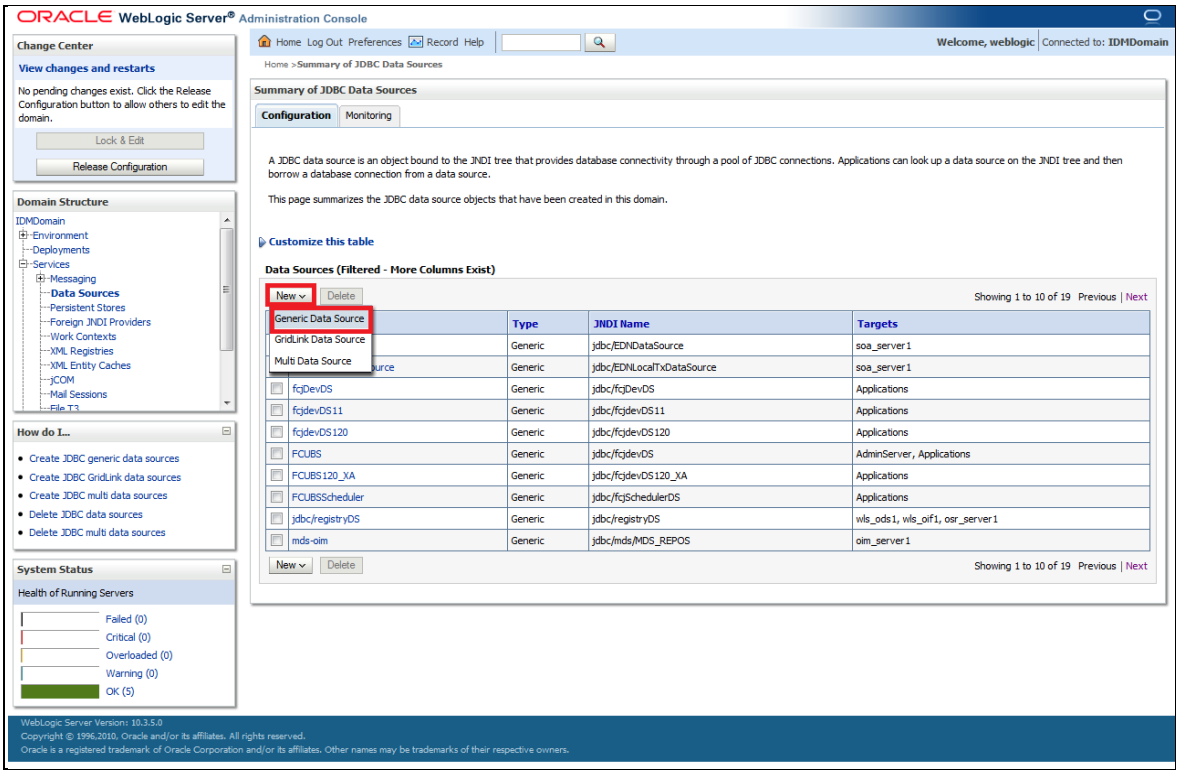
4. Expand Services and click on Data Sources as shown in below screen:



5. Click on Lock & Edit as shown below.



6. Expand New and click on Generic Data Source.

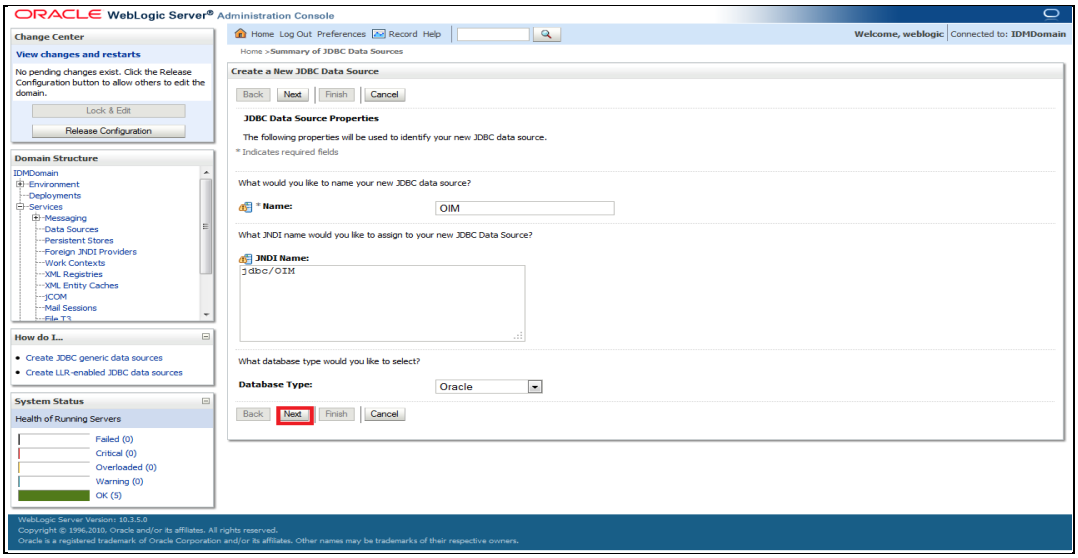


The following screen will get displayed.

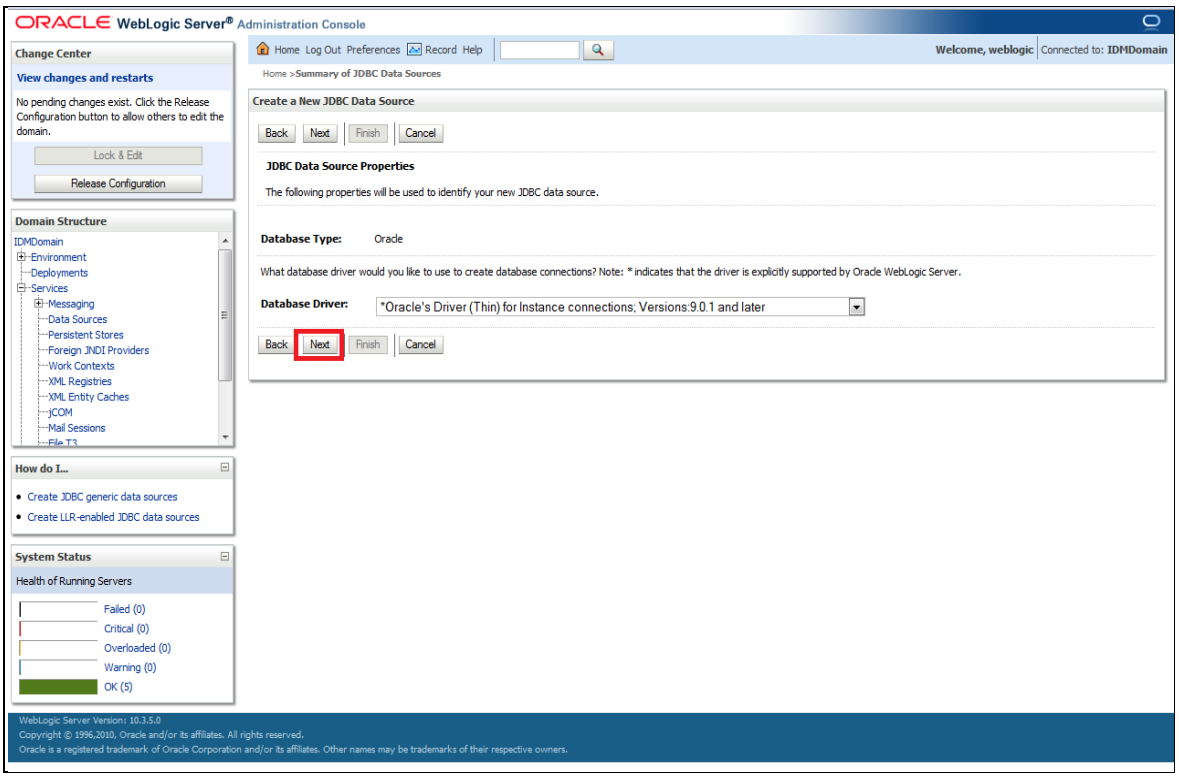
Enter the Data Source Name and JNDI Name as mentioned in the <FCUBS Release Name>\ADAPTERS\OIM\FCUBSLOVAdService\config\lookup_prop.xml → value of the key FCUBS_CON_POOLNAME.

For example value of the key FCUBS_CON_POOLNAME is OIM then:

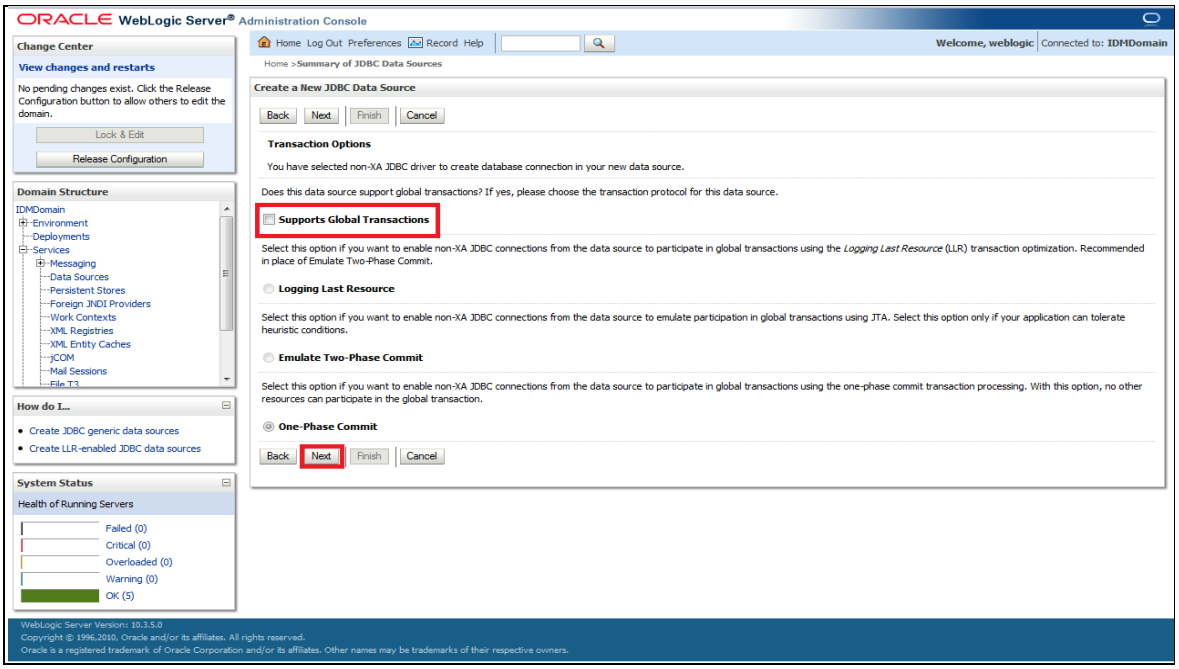
Name	OIM
JNDI Name	jdbc/OIM
Database Type	Oracle



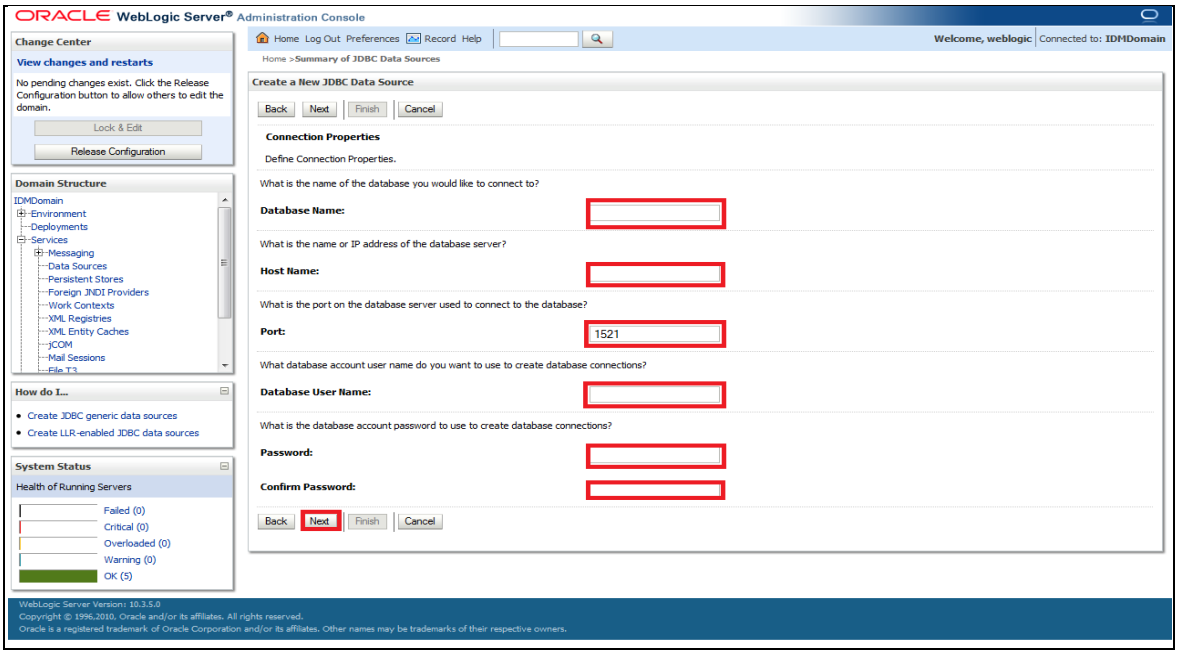
The following screen will get displayed. Select Database Driver as Oracle's Driver (Thin) for Instance connections: Versions 9.0.1 and later. Click on Next.



We get the following screen in which un-check Supports Global Transactions and click on Next.

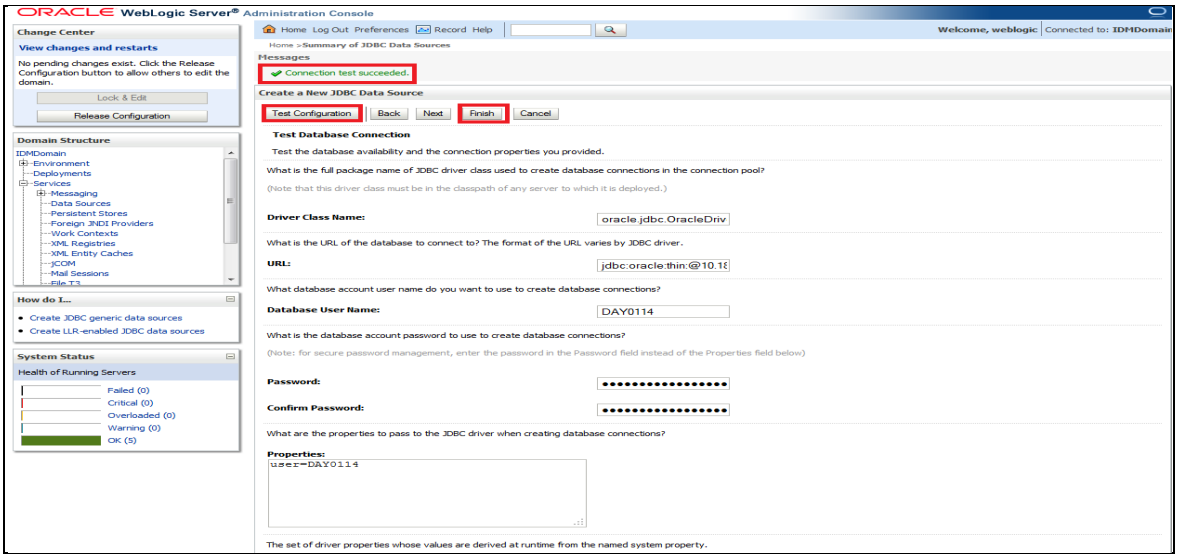


The following screen will get displayed. Enter the Database Name, Host Name, Port, Database User Name, Password and Confirm Password. Click on Next.

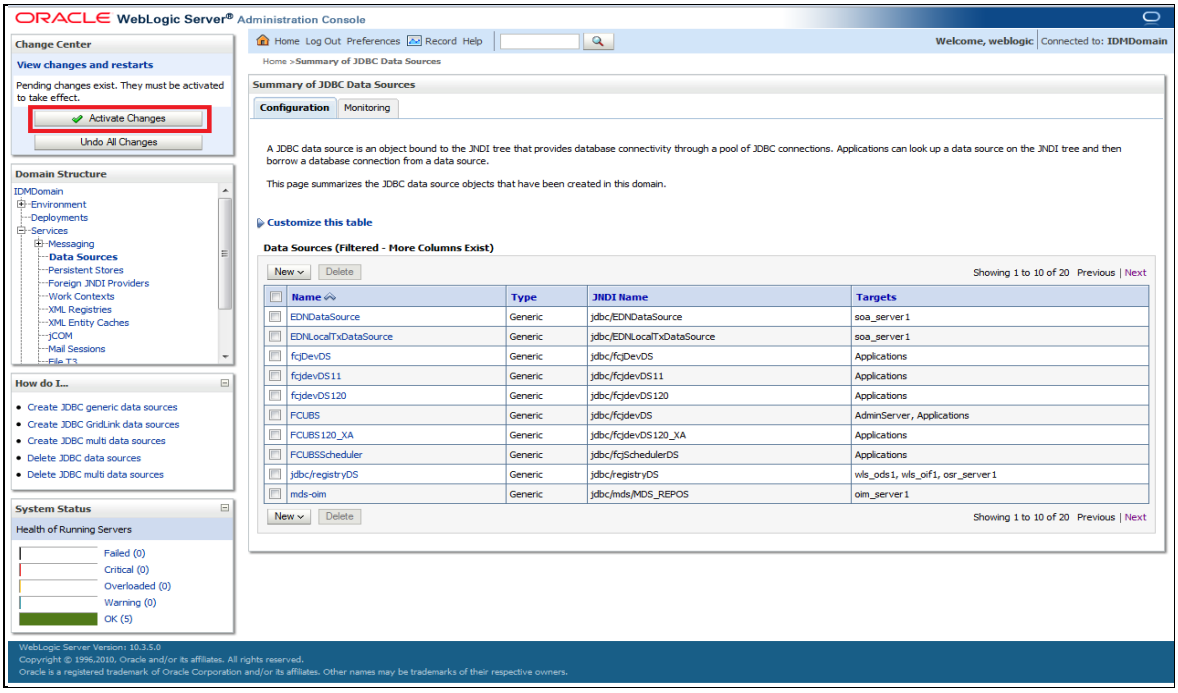


The following screen will get displayed. Click on ‘Test Configuration’.

It will display “Connection test succeeded” as shown below. If it is not getting displayed then verify the correctness of all data source properties entered. Click on Finish button.



The following screen will get displayed. Click on Activate Changes.



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