Oracle Utilities Customer Self Service

Installation Guide

Release 2.2.0.0

E78231-01

August 2016
(Updated January 2022)

ORACLE

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Table of Contents

Chapter 1

Overview

This guide describes the installation steps that must be completed to use Oracle Utilities Customer Self Service integrated with Oracle Utilities Customer Care and Billing and Oracle Utilities Meter Data Management.

Additional Resources

For more information on products related to OUCSS installation, see the following documents:

Resource	Location
Oracle WebCenter Portal documentation	http://www.oracle.com/technetwork/middleware/webcenter/portal/documentation/index.html http://docs.oracle.com/cd/E29542_01/webportal.htm#webcenter
Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Meter Data Management Release 12.1.1 Media Pack Install Guide and Implementation Guide	Refer to Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Meter Data Management Release 12.1.1 Media Pack documentation located on the Oracle Software Delivery Cloud.
Oracle Utilities Meter Data Management Installation Guide for Release v2.1.0.3	Refer to Oracle Utilities Meter Data Management installation documentation located on the Oracle Software Delivery Cloud.
Oracle Utilities Customer Care and Billing Installation Guide for Release v2.4.0.3	Refer to Oracle Utilities Customer Care and Billing installation documentation located on the Oracle Software Delivery Cloud.
Oracle Utilities Network Management System Installation Guide for Release v1.12.0.2	Refer to NMS installation documentation located on the Oracle Software Delivery Cloud.
Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Network Management System Release 12.1.1 Media Pack with latest patch level.	Refer to Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Network Management System Release 12.1.1 Media Pack documentation located on the Oracle Software Delivery Cloud.

Oracle SOA Suite documentation	http://www.oracle.com/technetwork/middleware/soasuite/documentation/soa11gdoc-2212842.html
Oracle MapViewer documentation	http://www.oracle.com/technetwork/middleware/mapviewer/documentation/index.html
Whitepaper: Installing Custom Managed Server for OUCSS Portal	Available for download in the Oracle Utilities Customer Self Service section of the Oracle Utilities Documentation area on the Oracle Technology Network (OTN) web site (http://docs.oracle.com/cd/E72219_01/documentation.html).
Web Services Security	For more information about Web services security using Oracle Fusion Middleware 12c refer to https://docs.oracle.com/middleware/12211/cross/webservicestasks.htm.

Note: This document and the documentation mentioned above is subject to revision and updating. For the most recent version of this and related documentation, as well as information on functionality and known issues for other Oracle products that may be required for installation and proper functionality of this product, check the Oracle Utilities Documentation area on the Oracle Technology Network (OTN) web site (http://docs.oracle.com/cd/E72219_01/documentation.html, then choose the Oracle Utilities Customer Self Service link).

Abbreviations

OUCSS	Oracle Utilities Customer Self Service
CCB	Oracle Utilities Customer Care and Billing
MDM	Oracle Utilities Meter Data Management
NMS	Oracle Utilities Network Management System
DDL	Data Definition Language
MDS	Metadata Services
OUI	Oracle Universal Installer
RCU	Repository Creation Utility
EAR	Enterprise Archive
WC	WebCenter
WLS	WebLogic Server
OUCSS Portal	OUCSS Self Service Portal build on WebCenter Portal Framework

Chapter 2

Installation

Software Requirements

The following software must be installed and configured prior to installation of Oracle Utilities Customer Self Service:

- Oracle WebCenter release 12.2.1 on WebLogic server 12.2.1.
- Oracle Utilities Customer Care and Billing release 2.5.0 Service Pack 2.

If integrating Oracle Utilities Meter Data Management:

- Oracle Utilities Meter Data Management release 2.1.0 Service Pack 3.
- Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Meter Data Management Release 12.1.1 Media Pack with latest patch level.

If you integration with Oracle Utilities Network Management System:

- Oracle Utilities Network Management System – Application version v1.12 Service Pack 2.
- Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Network Management System Release 12.1.1 Media Pack with latest patch level.
- See other requirements in the CCB-MDM Integrated Flows and CCB-NMS Integrated Flows section of this guide.
- Oracle MapViewer 11.1.1.7.2 on WebLogic service 10.3.6 for Outage Map.

Pre-Installation Tasks

Configuring Edge Applications

To configure edge applications, see the configuration information in the *Oracle Utilities Customer Care and Billing Implementation Guide*, including the sections related to Oracle Utilities Meter Data Management (if integrating that product).

Domain Topology

Oracle recommends separate WebLogic domains for portal applications in which the OUCSS Portal application and OUCSS Inbound Services can be deployed (e.g., **portal_domain**, as well as a separate domain for installation of CSS BPEL flows and OUNC Flows, e.g., **soa_domain)**.

Installation on SSL-Enabled Servers

The Admin server port in the installation properties can be specified with either the unsecured port or the SSL listening port. If the Admin server is enabled and the same is specified in the installation properties file, the installation will be carried out with the SSL port of the Admin server using the **t3s** (t3+SSL) protocol.

Cluster Install

1. Choose your enterprise topology and perform installation of WebCenter in a clustered environment per Oracle WebCenter installation guidelines (https://docs.oracle.com/middleware/1221/core/CMEDG/toc.htm).
   - Ensure that Custom Portal managed servers for clusters are created using the portal template as described in the *Installing a Managed Server for Custom Portals Whitepaper*, available for download in the Oracle Utilities Customer Self Service section of the Oracle Utilities Documentation area on the Oracle Technology Network (OTN) web site (http://www.oracle.com/technetwork/apps-tech/utilities/documentation/index.html).

   Note: Operating System User for installation of OUCSS: Depending upon your operating system you can perform installation of OUCSS with any user having permission to execute Middleware scripts. It is recommended not to use root/administrator user for OUCSS and WebCenter installations .Its suggested to maintain a separate user for these installations.
2. Make sure the load balancer is installed on a separate managed server to route the requests between nodes of the cluster.
3. Verify that the following properties are set in InstallProperties.xml found under <<OUCSS_PRODUCT_HOME>>/config folder.
   - Property <clusterOrServer> is set to “Cluster” in for <oucssApplication><oucssPortal> configuration. (This is optional property but needs to be set for Cluster Install.)
   - Property <clusterOrServerName> is set to Cluster Name (instead of managed server name) for <oucssApplication><oucssPortal> configuration.
4. Ensure that Admin Server and managed servers in Portal cluster are up and running.
5. Continue with verification by following steps 2 to 7 in the next topic, Standalone Install.

Standalone Install

1. Ensure that Portal managed servers are up and running (AdminServer, WC_Portal).. To install and setup WebCenter Portal 12c, please see Fusion Middleware Installing and Configuring Oracle WebCenter Portal document available on Oracle Technology Network (OTN) website (http://docs.oracle.com/middleware/12211/lcm/INSWC/toc.htm#INSWC).

   Note: Operating System User for installation of OUCSS: Depending upon your operating system you can perform installation of OUCSS with any user having permission to execute Middleware scripts. It is recommended not to use root/administrator user for OUCSS and WebCenter installations and maintain a separate user.

2. Ensure that required edge applications (CCB, MDM,NMS etc) are installed and configured.

   Note: The installation script performs the detokenization of the URLs according to edge application installed in your environment.

3. Configure InstallProperites.xml for the Offers Web Service connection,

   - Configure properties under /oucssApplication/oucssInbound in InstallProperties.xml if OUCSS Inbound Service will be installed to use OTB Offers Web Service.

   Note: OUCSS Inbound Services application needs to install separately. See Installing OUCSS Inbound Services section for more details.

   - Configure ExternalOfferService_URL with the custom Offers Web Service WSDL if OUCSS Inbound Service will not be installed or OTB Offer Service is not used.

4. Node Manager must be running to start and stop administration servers and managed servers through the Fusion Middleware Control or the Oracle WebLogic Server Administration Console.

   Where `$MW_HOME` refers to the directory in which WebCenter is installed.

   To start the Node Manager (subsequent starts), navigate to the domain home/bin for example WL_HOME/user_projects/domains/portal_domain/bin, and then run the the following command based on the OS:

   On UNIX/Linux:

   ```
   ./startNodeManager.sh
   ```

   On Windows:

   ```
   ./startNodeManager.cmd
   ```

5. Before starting OUCSS deployment, verify that the Admin and Portal Managed Servers are up and running from the WebLogic admin URL `http://<WLSAdminHost>:<WLSAdminServerPort>/console`

6. Optional: *[Required only if Outage functionality is enabled]* Install and Configure MapViewer for Outage Map. For more details on MapViewer installation see the appendix Installing and Configuring Oracle MapViewer section of this document.

Installing OUCSS Portal

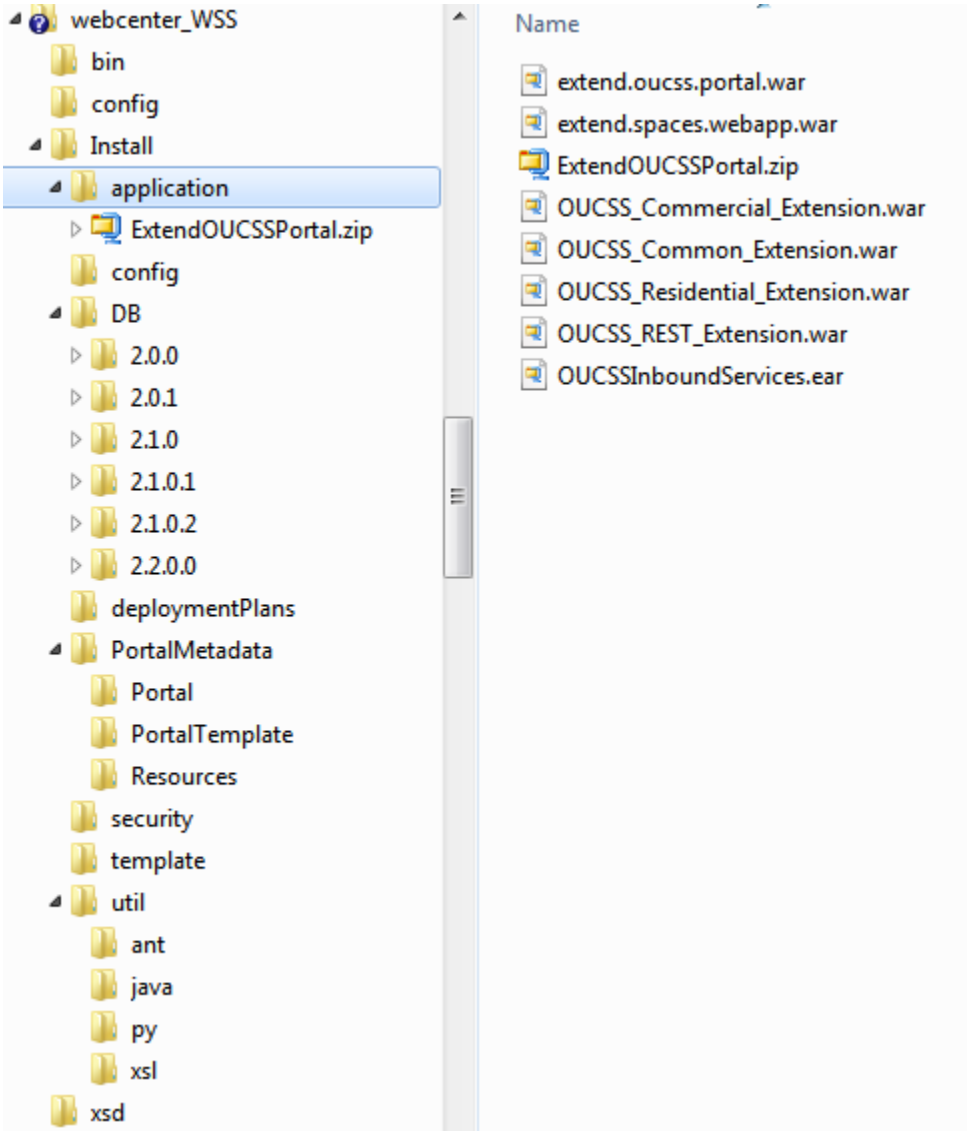
Install Steps

This procedure describes the default installation method for OUCSS Portal solution that extends WebCenter Portal 12c with OUCSS taskflows.

To perform the default OUCSS installation:

1. Download <OUCSS-PortalInstall>.zip from the Oracle Software Delivery Cloud (edelivery.oracle.com) and extract into a target installation directory (e.g., `/u01/Oracle/Products/OUCSS` on Linux or `D:\Oracle\Products\OUCSS` on Windows).
2. Locate *webcenter_WSS.zip* in the installation folder and unzip the contents to <<MW_HOME>>/<<OUCSS_Product_Home>> subfolder.

   Note: Contents of the webcenter_WSS.zip can be extracted to any target location, but the <<OUCSS_Product_Home>> directory should not be deleted after installation. The <<OUCSS_Product_Home>> folder contains your OUCSS applications, configuration, and installation folders and files (/bin, /config, /Install).



3. Open a terminal/cmd window and set the MW_HOME to middleware home and PRODUCT_HOME to <<OUCSS_Product_Home>>:

   Windows example:

```
SET MW_HOME=D:\Oracle\Middleware
```

```
SET PRODUCT_HOME=D:\Oracle\Middleware\OUCSS22
```

```
echo %PRODUCT_HOME%
```

Echo should return PRODUCT_HOME as `D:\Oracle\Middleware\OUCSS22`

Linux example:

```
export MW_HOME=/u01/Oracle/Middleware
```

```
export PRODUCT_HOME=/u01/Oracle/Middleware/OUCSS22
```

```
echo $PRODUCT_HOME
```

Echo should return PRODUCT_HOME as `/u01/Oracle/Middleware/OUCSS22`

4 Set the WebLogic environment by running the *setWLSEnv.cmd* script (on Windows) or *setWLSEnv.sh* script (on Linux) depending upon your environment shell. The scripts *setWLSEnv.sh* or *setWLSEnv.cmd* are located in `<<MW_HOME>>\wlserver\server\bin` (where MW_HOME is the directory in which WebLogic and WebCenter components are installed). After running the script *setWLSEnv*, verify that the **wlserver** environment is set in your **classpath** and **path** environment variables.

On Windows:

```
call %MW_HOME%\wlserver\server\bin\setWLSEnv.cmd
```

On UNIX/Linux:

```
source $MW_HOME/wlserver/server/bin/setWLSEnv.sh
```

Note: Depending upon your environment shell make sure to execute the appropriate command to execute *setWLSEnv.sh*.

5 Execute the following command to change directory to PRODUCT_HOME/bin:

On Windows:

```
cd %PRODUCT_HOME%\bin
```

On UNIX/Linux:

```
cd $PRODUCT_HOME/bin
```

6 Update the `<PRODUCT_HOME>/config/InstallProperties.xml` file and configure values appropriate to your environment

See Appendix B for a sample *InstallProperties.xml* file and an explanation of the properties and elements available in the file.

7 Verify that Admin and WC_Portal servers are up and running before proceeding.

8 Run the DB installation command to create the OUCSS DB Schema and Data Source.

Ensure that the tablespace exists with “USERS” on the DB prior to executing this step. If the “USERS” tablespace is not available, create the tablespace with the following query:

```
CREATE TABLESPACE USERS
DATAFILE '/<<DB_TABLESPACE_PATH>>/USERS.dat'
SIZE 100M
REUSE
AUTOEXTEND ON NEXT 10M MAXSIZE 2000M;
```

Note: OUCSS DB Schema and required tables are created in the database only if the /oucssInstall/oucssApplication/oucssPortal/database/createDB property set to **true** in InstallProperties.xml.

On Windows:

```
ant -f InstallBuild.xml DBInstallPortal -
DInstallProperties=%PRODUCT_HOME%\config\InstallProperties.xml -l DBInstallPortal.log
```

On UNIX/Linux:

```
ant -f InstallBuild.xml DBInstallPortal -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml | tee DBInstallPortal.log
```

Note: After running above command, verify that the DBInstallPortal.log does not contain any errors. Fix any errors in the log and rerun the command.

9 Run the following command to import default OUCSS users and groups into the WebLogic embedded LDAP.

Note: This command is valid only if you are using a WebLogic embedded LDAP. On other LDAP, manually create the seeded groups (WSSAdminGroup and WSSCSRGroup) and users (WSSAdmin and WSSCSR).

On Windows:

```
ant -f InstallBuild.xml importUsersAndGroups -
DInstallProperties=%PRODUCT_HOME%\config\InstallProperties.xml -l
importUsersAndGroups.log
```

On UNIX/Linux:

```
ant -f InstallBuild.xml importUsersAndGroups -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml | tee
importUsersAndGroups.log
```

Note: After running above command, verify that the importUsersAndGroups.log does not contain any errors. Fix any errors and rerun the command.

10 Verify user and group creation by logging in to the Oracle WebLogic Server console as WebLogic Administrator.

Select portal_domain > Security Realms > myrealm > Users and Groups.

Verify that the users WSSAdmin and WSSCSR were created. Change the password of WSSAdmin and WSSCSR users. See the post-install section for more details on how to reset password.

Verify that the groups WSSAdminGroup and WSSCSRGroup were created.

11 Run the installation command to deploy the following OUCSS artifacts:

- Security Credentials (CSF Keys)
- *OUCSS_Common_Extension.war, OUCSS_Residential_Extension.war, OUCSS_Commercial_Extension.war and extend.oucss.portal.war, extend.spaces.webapp.war* as shared libraries in WebLogic. These libraries are required.
- Configure Portal Web Service Connections as per the edge application details configured in InstallProperties.xml.
- Create Mail Session.
- Create Datasource

On Windows:

```
ant -f InstallBuild.xml installOUCSS -
DInstallProperties=%PRODUCT_HOME%\config\InstallProperties.xml -l InstallPortal.log
```

On UNIX/Linux:

```
ant -f InstallBuild.xml installOUCSS -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml | tee InstallPortal.log
```

Note: After running above command, verify that the InstallPortal.log does not contain any errors. Fix any errors in the log and rerun InstallPortal command.

12 If the application is deployed on the Cluster:

A Shut down all the managed servers under this cluster and the admin server.

B Copy the `<Domain Home>/user_projects/domains/portal_domain/servers/AdminServer/upload/extend.spaces.webapp/2.0@12.2.1.0.1/app/extend.spaces.webapp.war` from the first node on which the Admin server is active to the Admin server folder on all other machines.

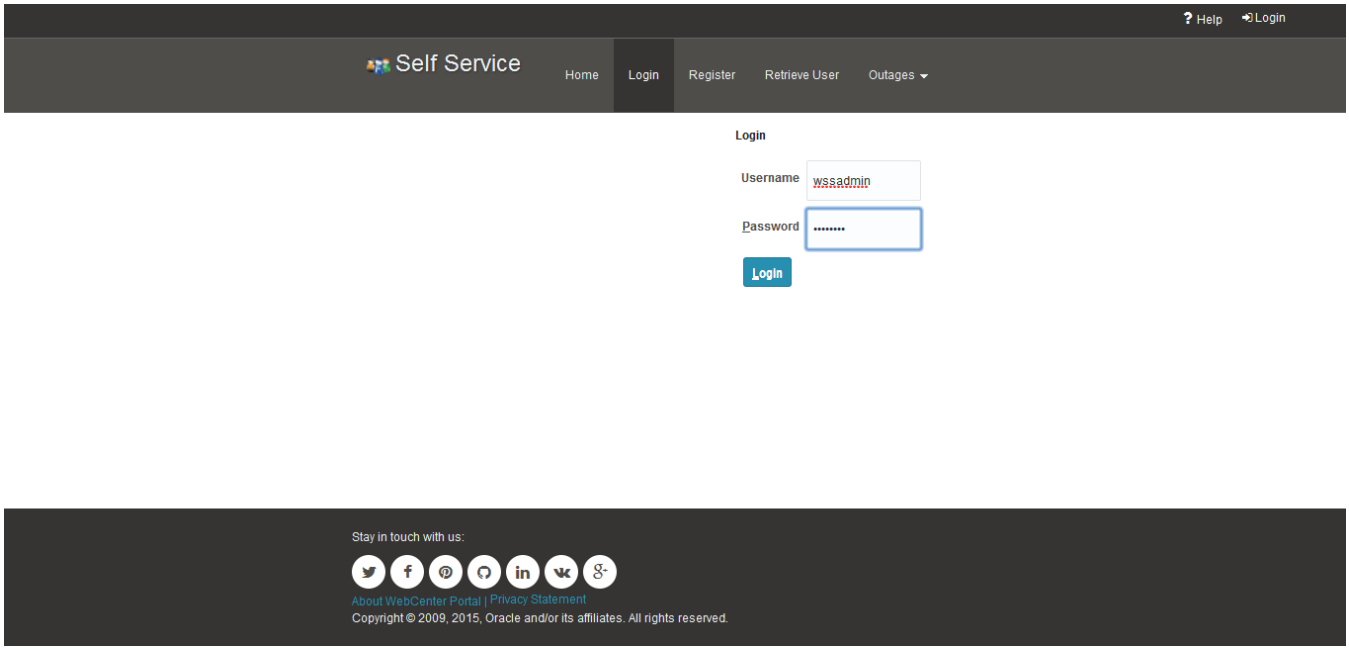
```
cp <Domain Home where Admin Server is running>/user_projects/domains/portal_domain/servers/AdminServer/upload/extend.spaces.webapp/2.0@12.2.1.0.1/app/extend.spaces.webapp.war <Domain Home of other nodes>/user_projects/domains/portal_domain/servers/AdminServer/upload/extend.spaces.webapp/2.0@12.2.1.0.1/app
```

C Restart the Admin and all managed servers under this node.

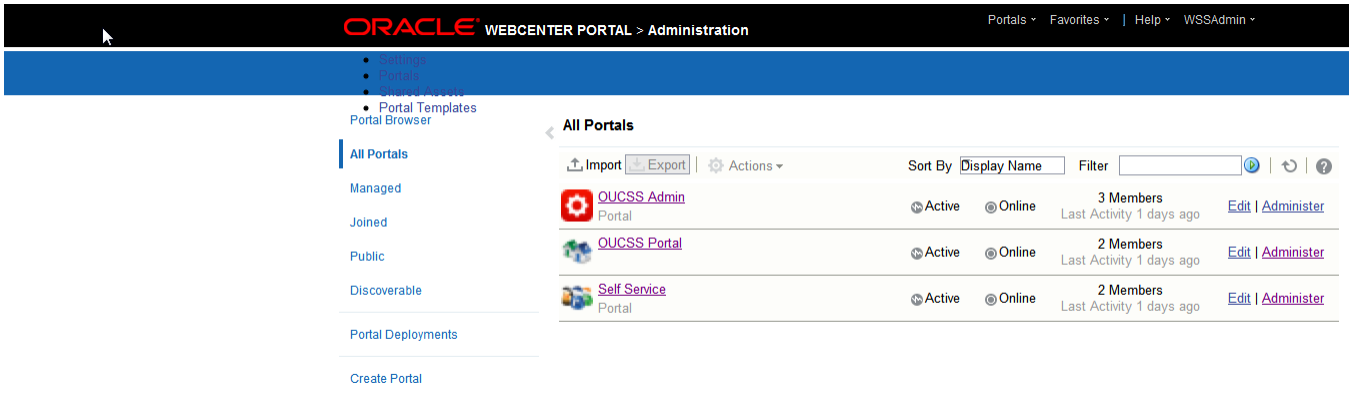
13 The portal can be accessed using the URL format http://<PortalHost>:<PortalPort>/webcenter. Replace <PortalHost> and <PortalPort> with values configured in InstallProperties.xml.

14 When the Installation of OUCSS Portal is successful, the follwing steps must be performed to bring the OUCSS Portal Online:

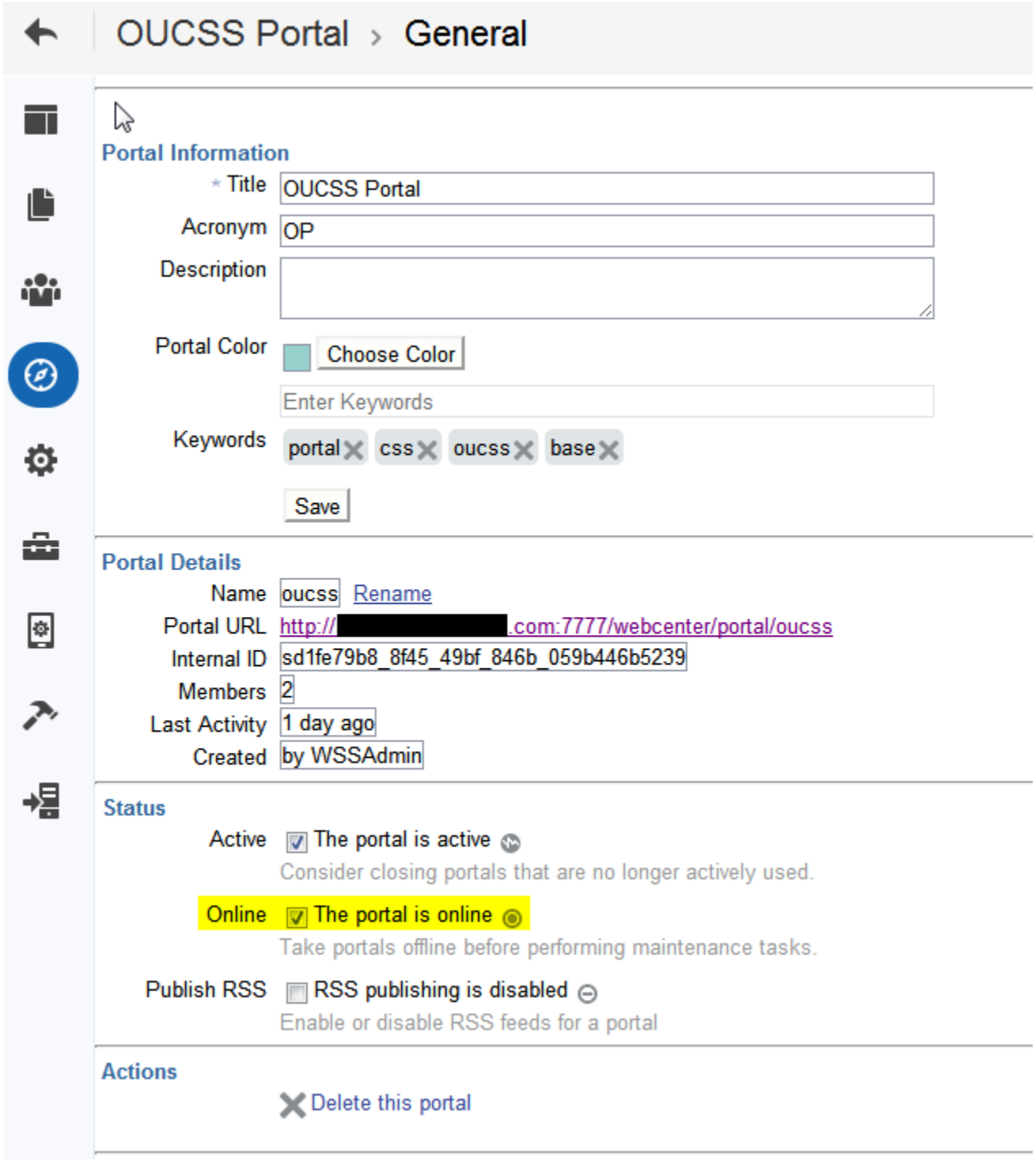
A Login with the wssadmin user.



B After logging in, enter the URL to the Portal Administration page (http://<PortalHost>:<PortalPort>/webcenter/portal/admin/portals).



C Click on the **Administer** link to change the selected portal from offline to online.



D Repeat the process to set all portals online.

Post-Installation Checklist

Use the following checklist to verify that OUCSS is correctly installed.

Verify the OUCSS Schema Tables

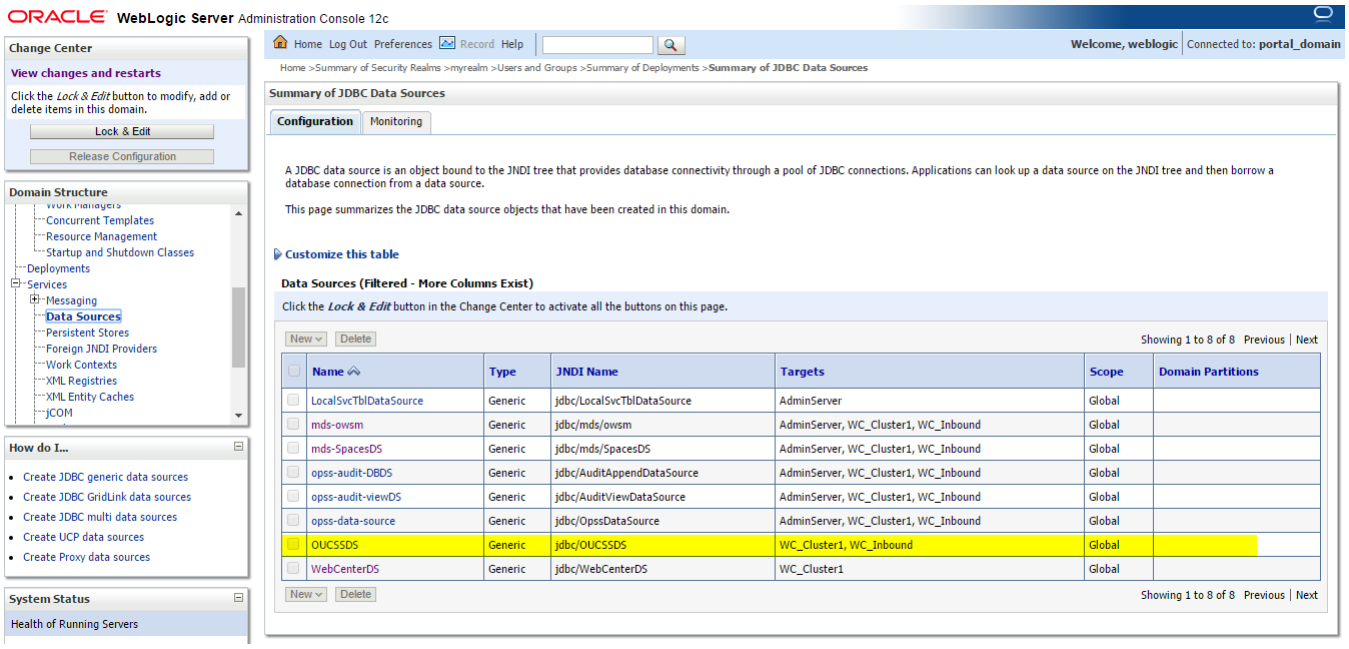
1. Login into the database with the OUCSS dbuser/passwd credentials that you created during the installation process.
2. Verify that the following tables exist by executing the query `select Count(*) from tab`. Should return **37** tables excluding PS_TXN table.
   - SS_ACCESS_ROLE
   - SS_ACCESS_ROLE_L
   - SS_CONFIGURATION
   - SS_EDGE_APPLICATION
   - SS_EDGE_APPLICATION_L
   - SS_KEYS
   - SS_LABEL
   - SS_LABEL_L
   - SS_LANGUAGE
   - SS_LINE_OF_BUSINESS
   - SS_LINE_OF_BUSINESS_L
   - SS_LOB_ACCESS_ROLE
   - SS_LOB_ACCESS_ROLE_PORTLET
   - SS_LOB_ACCROLE_PRTLT_ACTION
   - SS_LOOKUP
   - SS_LOOKUP_L
   - SS_LOOKUP_VAL
   - SS_LOOKUP_VAL_L
   - SS_MESSAGE
   - SS_MESSAGE_L
   - SS_OFFER
   - SS_OFFER_LANGUAGE
   - SS_OFFER_SET
   - SS_OFFER_SET_L
   - SS_PORTLET
   - SS_PORTLET_ACTION
   - SS_PORTLET_L
   - SS_RESOURCE

- SS_RESOURCE_L
- SS_SET
- SS_SET_ACCESS
- SS_SET_USERS
- SS_TRAIN
- SS_TRAIN_L
- SS_TRAIN_PORTLET
- SS_USER
- SS_USER_LOB_ACCESS_ROLE

Verify the OUCSS Data Source

1. Log in to the Oracle WebLogic Server console at `http://<WLSAdminHost>:<WLSAdminServerPort>/console` as WLS Admin.
2. Select the **<portal_domain_name>**, then expand Services and click Data Sources.

   The list of data sources should include the OUCSS data source **OUCSSDS**, as shown in the following image:



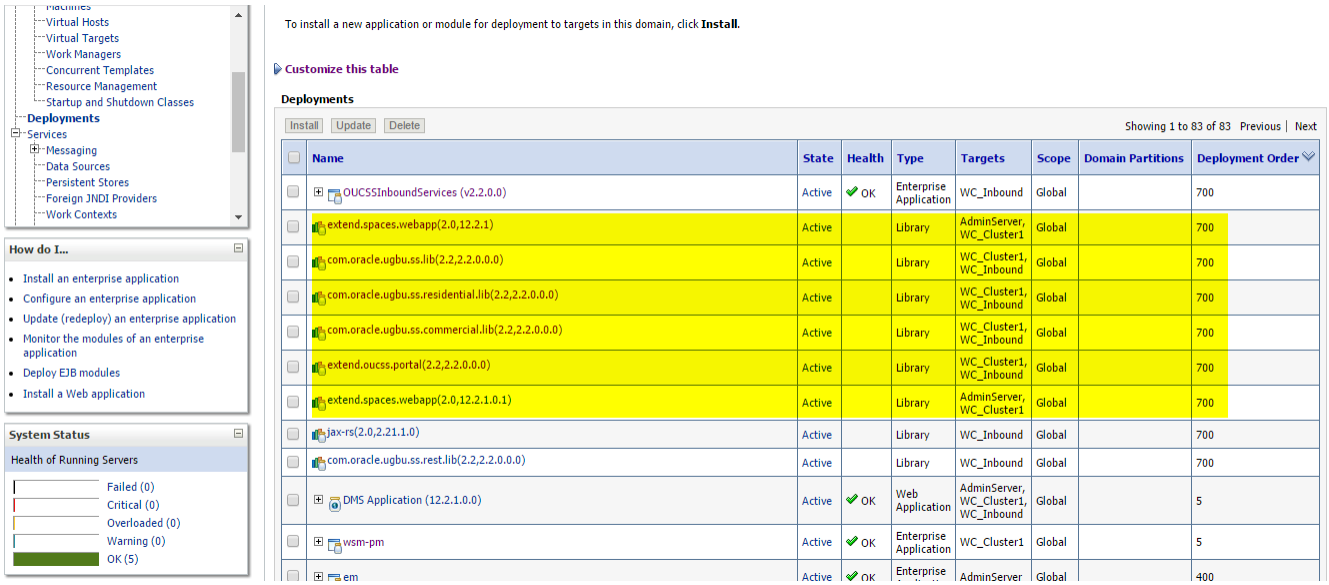
Verify Deployments

To verify OUCSS shared library deployment:

1. Login in to the Oracle WebLogic Server console as WLS Admin.
2. Navigate to <<portal_*domain_name*>> Deployments.
3. Click on the Deployment Order Column Header twice to sort by descending order. You would see the OUCSS Applications and OUCSS Libraries with Deployment Order 700

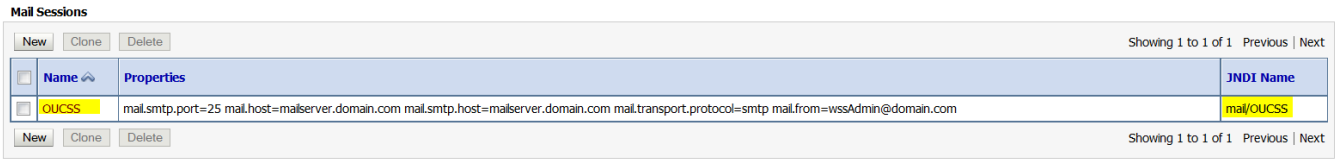
4 The following deployments should be listed:

- com.oracle.ugbu.ss.lib (2.2, 2.2.0.0.0) [as “Library” deployment]
- com.oracle.ugbu.ss.commercial.lib (2.2, 2.2.0.0.0) [as “Library” deployment]
- com.oracle.ugbu.ss.residential.lib (2.2, 2.2.0.0.0) [as “Library” deployment]
- extend.oucss.portal (2.2, 2.2.0.0.0) [as “Library” deployment]
- extend.spaces.webapp(2.0,12.2.1) [as “Library” deployment]
- extend.spaces.webapp(2.0,12.2.1.0.1) [as “Library” deployment]



Verify the OUCSS Mail Session

Go to **Services > MailSessions** and under **Summary of Mail Sessions** verify that OUCSS is created as shown below. The properties column will reflect the values configured in `InstallProperties.xml`.

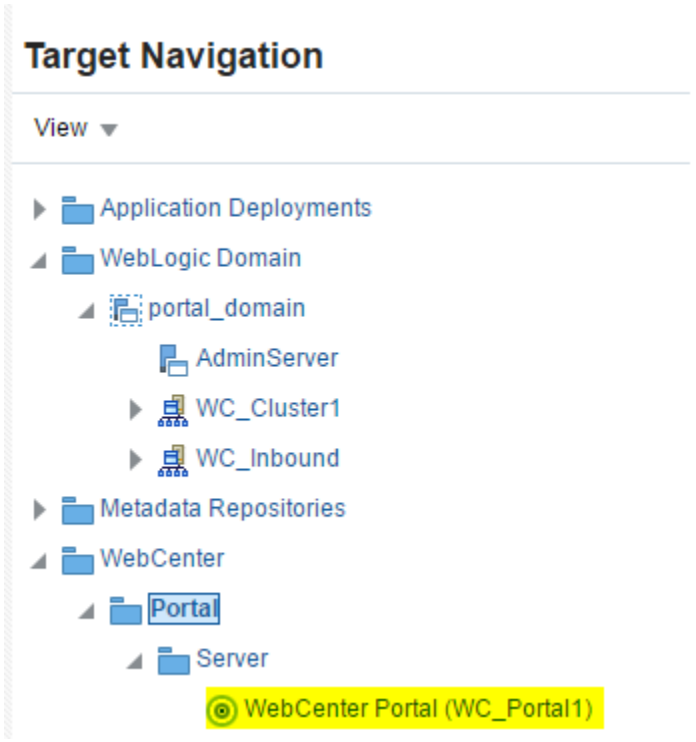


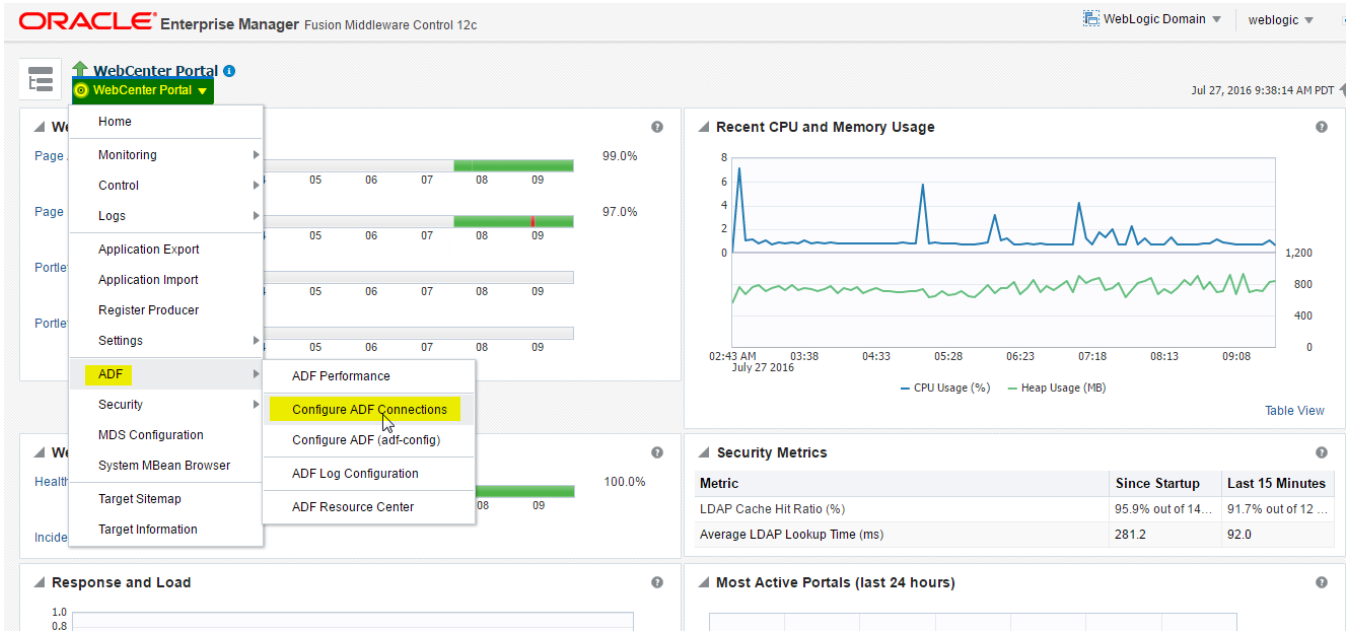
Verify Connections

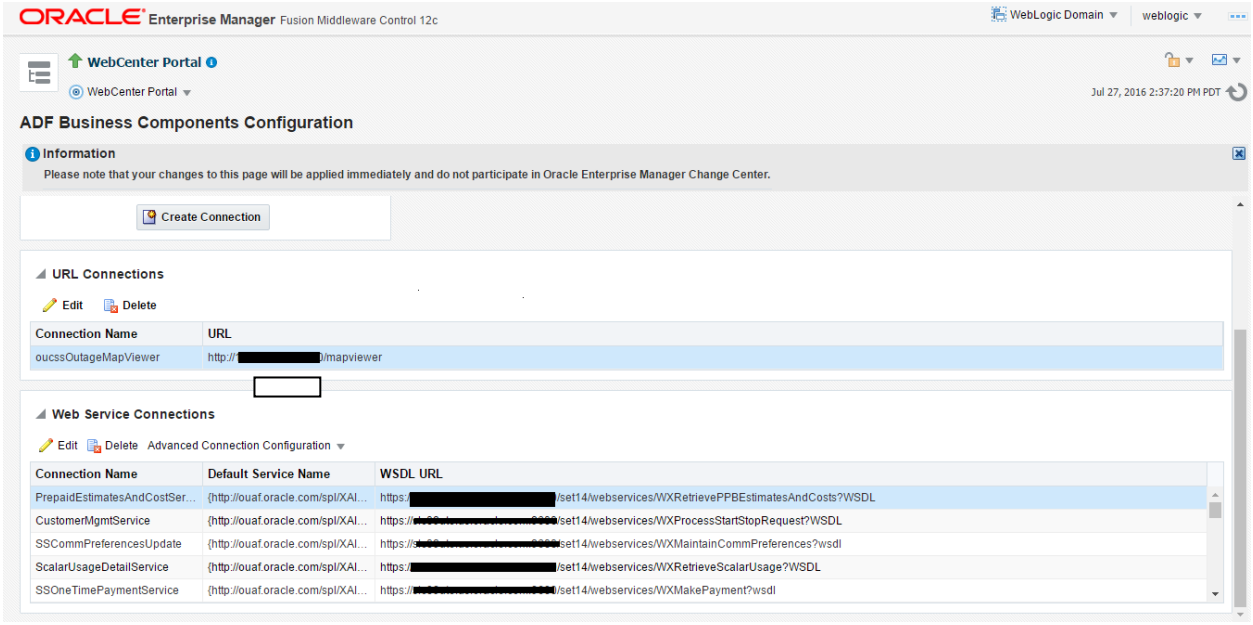
To verify that the CCB edge application *wsdl* is correctly tokenized:

1 Login into the Oracle Enterprise Manager console at `http://<WLSAdminHost>:<WLSAdminServerPort>/em` as WLS Admin.

2 Click the Target Navigation icon and Navigate to the WebCenter > Portal > Server > WebCenter Portal:


Target Navigation
View
Application Deployments
WebLogic Domain
portal_domain
AdminServer
WC_Cluster1
WC_Inbound
Metadata Repositories
WebCenter
Portal
Server
WebCenter Portal (WC_Portal1)


ORACLE Enterprise Manager Fusion Middleware Control 12c
WebLogic Domain
weblogic
WebCenter Portal
WebCenter Portal
Jul 27, 2016 9:38:14 AM PDT
Home
Monitoring
Control
Logs
Application Export
Application Import
Register Producer
Settings
ADF
Security
MDS Configuration
System MBean Browser
Target Sitemap
Target Information
ADF Performance
Configure ADF Connections
Configure ADF (adf-config)
ADF Log Configuration
ADF Resource Center
99.0%
97.0%
100.0%
Recent CPU and Memory Usage
CPU Usage (%)
Heap Usage (MB)
Table View
Security Metrics
Metric
Since Startup
Last 15 Minutes
LDAP Cache Hit Ratio (%)
95.9% out of 14...
91.7% out of 12 ...
Average LDAP Lookup Time (ms)
281.2
92.0
Response and Load
Most Active Portals (last 24 hours)

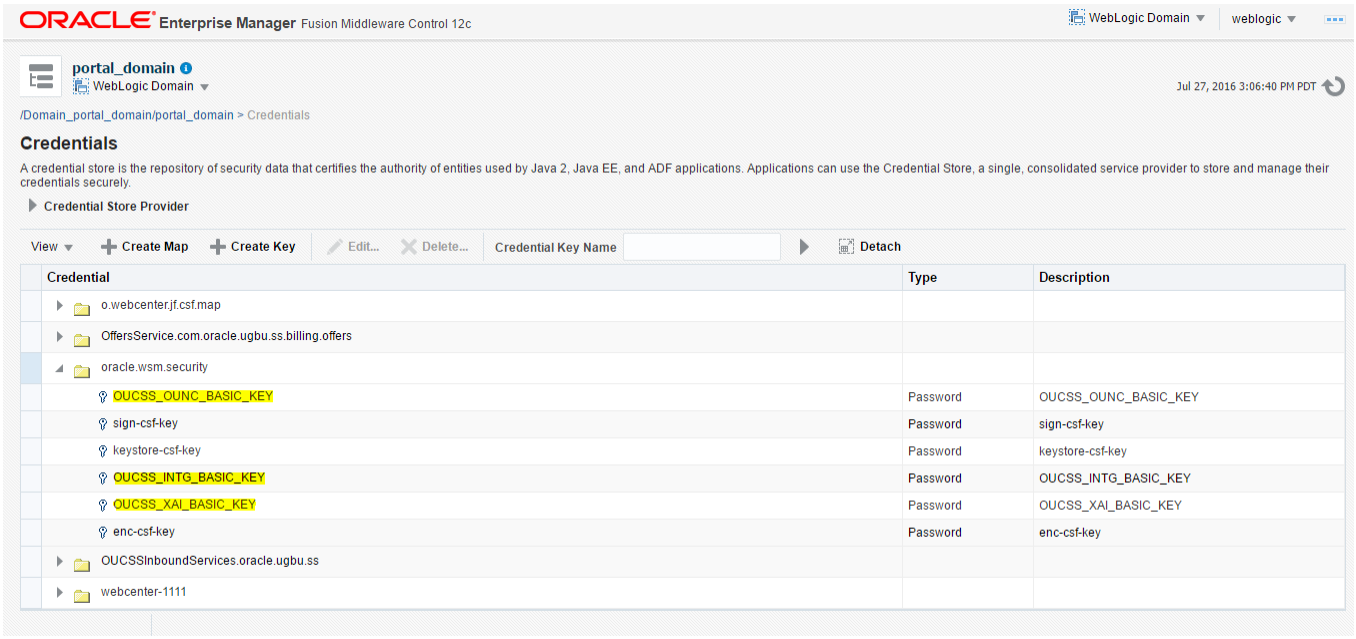


3. Under **Web Service Connections**, each connection name has a corresponding CCB WSDL URL. Click on any connection name (e.g., **AccountSummaryService**), click **Edit**, and select **WSDL URL**. The connection URL (e.g., `http://ccbhostname:portno/spl/XAIApp/xaiserver/WXAccountChargesSummaryRetriever?WSDL`) should open in your browser.
4. Repeat Step 3 for all remaining connections including **oucssOutageMapviewer** (if present) to confirm that connections are detokenized with connections configured in InstallProperties.xml.

Verify the OUCSS Security Credential

To verify that the Security Credential **OUCSS_XAI_BASIC_KEY**, **OUCSS_INTG_BASIC_KEY**, and **OUCSS_OUNC_BASIC_KEY** were successfully created:

1. Log in into the Oracle Enterprise Manager console http://<WLSAdminHost>:<WLSAdminServerPort>/em as WLS Admin.
2. Select **Weblogic_Domain**, then **<portal_domain_name>**.
3. Click **<portal_domain_name>**, then choose **Security** > **Credentials**
4. Under Credentials select and expand oracle.wsm.security. **OUCSS_XAI_BASIC_KEY**, **OUCSS_INTG_BASIC_KEY**, and **OUCSS_OUNC_BASIC_KEY** should be present.


ORACLE Enterprise Manager Fusion Middleware Control 12c
WebLogic Domain
weblogic
portal_domain
WebLogic Domain
Jul 27, 2016 3:06:40 PM PDT
/Domain_portal_domain/portal_domain > Credentials
Credentials
A credential store is the repository of security data that certifies the authority of entities used by Java 2, Java EE, and ADF applications. Applications can use the Credential Store, a single, consolidated service provider to store and manage their credentials securely.
Credential Store Provider
View
Create Map
Create Key
Edit...
Delete...
Credential Key Name
Detach
Credential
Type
Description
o.webcenter.jf.csf.map
OffersService.com.oracle.ugbu.ss.billing.offers
oracle.wsm.security
OUCSS_OUNC_BASIC_KEY
Password
OUCSS_OUNC_BASIC_KEY
sign-csf-key
Password
sign-csf-key
keystore-csf-key
Password
keystore-csf-key
OUCSS_INTG_BASIC_KEY
Password
OUCSS_INTG_BASIC_KEY
OUCSS_XAI_BASIC_KEY
Password
OUCSS_XAI_BASIC_KEY
enc-csf-key
Password
enc-csf-key
OUCSSInboundServices.oracle.ugbu.ss
webcenter-1111

Post-Installation Steps

Reset the WSSAdmin and WSSCSR User Password

Random password is generated when creating WSSAdmin and WSSCSR users using importUsersAndGroups task. The passwords need to be changed in order to use these users.

> **Note**: This step is needed for the users WSSAdmin and WSSCSR those come with this installation. Skip this step otherwise.

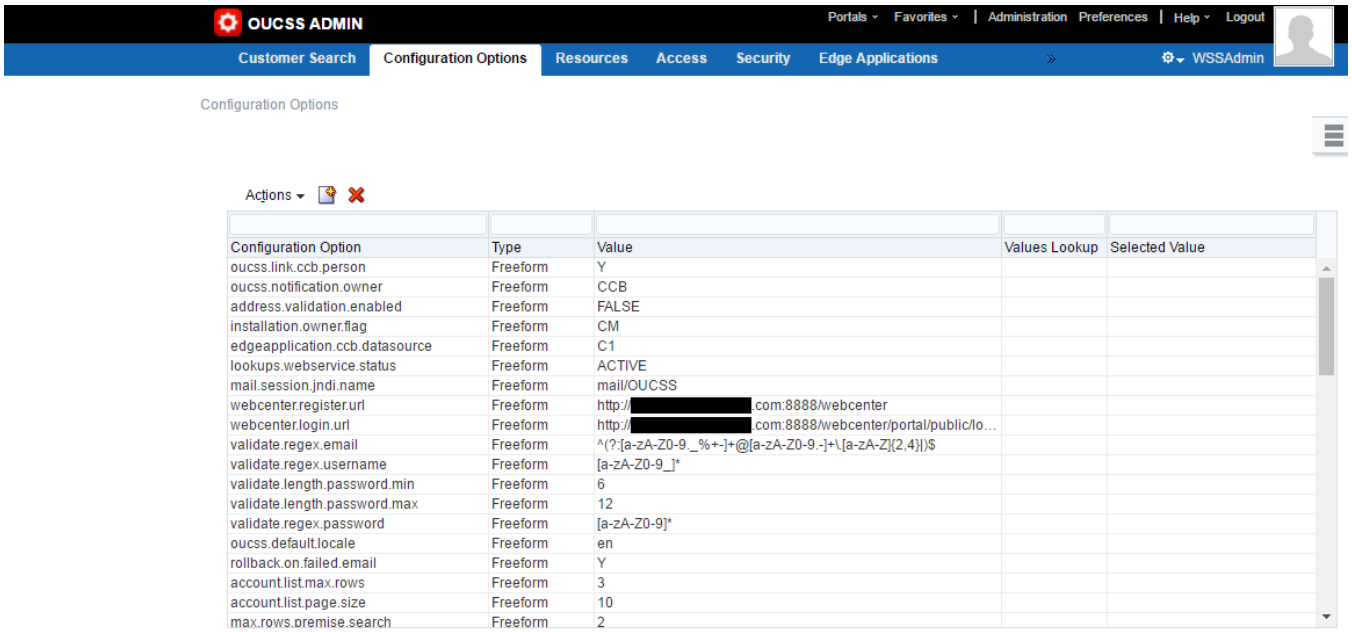
To reset the password:

1. Log into the WLS Admin Console.
2. Navigate to Security Realm > myrealm > Users and Groups tab.
3. Click on the User name (WSSAdmin or WSSCSR) to update the password.
4. Update the passwords from the the Passwords tab.

Update the System Configuration Properties

To modify the values:

1. Login to the OUCSS Portal as WSSAdmin.
2. Go to the Admin > Configuration Options page.



3. Modify the properties (listed in the following table) to match your environment.

Property	Description	Default Value
current.oucss.version	This property tracks the current OUCSS version. Please do not change this property.	2.2.0.0

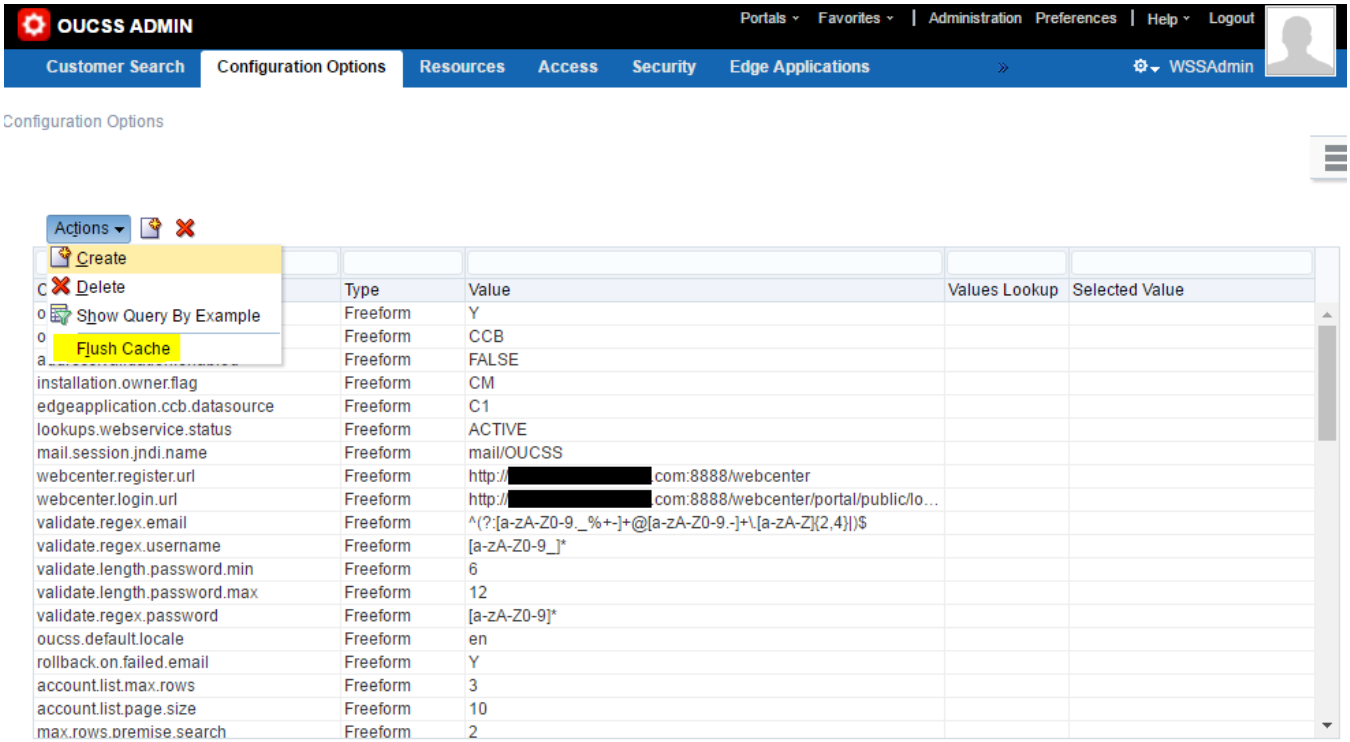
installation.owner.flag	This is the current installation owner flag. When the product will be shipped this property should be CM.	CM
oucss.default.locale	Default Locale of OUCSS Application.	en
oucss.link.ccb.person	Flag to indicate if the CSS user needs to be linked to a CCB person. N or Y	N
address.validation.enabled	Flag will indicate if address validation is installed.	true
edgeapplication.ccb.datasource	This is the edge application code (e.g., C1, M1, etc.) from where the data is pulled.	C1
lookups.webservice.status	Status of the Lookup Value inserted using this service. Only allowed values are ACTIVE, INACTIVE.	ACTIVE
validate.regex.email	Regular expression to validate email address in OUCSS UI.	`^(?:[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,4}|)$`
validate.regex.username	Regular expression to validate a valid user name that can be used when registering.	[a-zA-Z0-9_]*
validate.regex.password	Regular expression to validate the password pattern that can be used when registering or changing user password. Valid examples for this are: A password which may contain “small and capital letters, numbers or _” : [a-zA-Z0-9_]* A password which must contain “both letters and numbers”: ^(?=.*[A-Za-z])(?=.*[0-9])[A-Za-z0-9]+$	[a-zA-Z0-9_]*
validate.length.password.min	Integer value for minimum length of the password that should accept when registering or changing password.	6
validate.length.password.max	Integer value to allow maximum length of the password when registering or changing password.	12
mail.session.jndi.name	JNDI of Mail Session to send emails.	mail/OUCSS
webcenter.register.url	This will be used in the registration email which is sent to the user with the registration key and a URL. User shall click on this link in the email to complete the OUCSS registration.	http://<PortalHost>:<PortalPort>/<PortalContextRoot>?regKey=
webcenter.login.url	This property will be used in email messages to send the user the login URL.	http://<PortalHost>:<PortalPort>/<PortalContextRoot>
outage.map.color.theme.buckets	Match the number to number of colors configured in outage.map.color.theme.colors property	4
outage.table.page.size	Number of records that can be displayed at a time on the Outage Table screen	10

outage.map.base.map	This property is used to setup BASE MAP configured in the MapViewer. This property will be used to display the Outage Summary Map.	Value configured in InstallProperties.xml
outage.map.color.theme	This property is used to color code Outages in Outage Summary.	Value configured in InstallProperties.xml
outage.map.color.theme.loc	This property is the Area Column from the Color Theme configured above.	Value configured in InstallProperties.xml
outage.map.srid	This property is SRID of the Coordinate system used by Base Map and Theme configured above.	Value configured in InstallProperties.xml /8307
outage.map.color.theme.colors	This property is configured to set the number of buckets to aggregate the Outages as well as the respective color of each bucket.	#00FF00;#EEEE00;#FF7F00; #FF0000 (Green, Yellow, Orange and Red)
outage.area.nms.config	This property represents the Area configured to aggregate Outages in NMS. This will affect the color theme and/or theme location column configured above.	ZIP (other valid values are CITY and COUNTY).
rollback.on.failed.email	This property if set to 'Y' will roll back Enroll or Invite to an Account if the sending the email fails. Set it to 'N' if mail session is not configured or you want to commit Enroll and Invite even if sending email fails.	Y
account.list.max.rows	This property specifies the number of associated accounts that will be displayed without enabling search functionality. Once the number of accounts exceeds this limit, search will be enabled.	10
account.list.page.size	This property controls the page size or the number of accounts per page presented in the Account List. If the number of associated accounts exceeds the value of this parameter, paging will be enabled.	10
max.rows.premise.search	Set this property to the max number of rows that can result in a Premise search. The system will show error if the premise search in Start Service and New Customer service exceeds the value set here.	10
default.customerclass.parm	Property to set default Customer Class configured in CCB for Start/Stop/Transfer Services.	R
default.personbusiness.parm	This property sets the default Person Business configured in CCB for Start/Stop and Transfer service.	P
default.newcust.requestmode	This property sets the default Request Mode configured in CCB for New Customer Service.	C1ST
oucss.reset.password.pattern	Set of characters to be used to generate a random password using the Forgot Password functionality. Valid examples for this are: Numeric Only: 0123456789 Alphabet Only (Small caps and capital letters): abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ This is basically a list of what characters can be used for the password.	0123456789abcdefghijklmnopqrstuvwxyz$#*_ABCDEFGHIJKLMNOPQRSTUVWXYZ

default.enroll.role	Access role to be used when a user enrolls to an account. If the Access role configured in this property is not found, ACCOUNT_HOLDER will be used as default.	ACCOUNT_HOLDER
csr.account.access	Access role to be used for accounts when CSR views the account after searching it using Customer Search screen.	ACCOUNT_HOLDER
csr.search.results.fetchsize	Number of accounts to be fetched when searching using CSR search screen.	300
include.topTag.usageDownload	Property to control if the top tag should be included when downloading Usage Data in XML format. If set to false, the top tag will be omitted in the file.	True
outage.map.base.startingX	Property to set the default latitude location to center the Outage Map.	-81.70
outage.map.base.startingY	Property to set the default longitude location to center the Outage Map.	40.69
outage.map.base.zoom	Property to set default Map Zoom level when no data is found.	4
attachment.list.max.row	Property to set the maximum rows to be allowed for attachment.	5
forms.list.page.size	Property to set the maximum number of issues to be displayed in forms list page.	10
oucss.debug.enable	Property to enable showing of debug message along with error messages on screen.	False
def.day.mode.range.in.month	Property used in Usage Detail to set the default range for Day view mode.	3
def.hour.mode.range.in.days	Property used in Usage Detail to set the default range for Hour view mode.	7
def.month.mode.range.in.year	Property used in Usage Detail to set the default range for Month view mode.	1
max.day.mode.range.in.years	Property used in Usage Detail to set the maximum range for Day view mode.	1
max.hour.mode.range.in.days	Property used in Usage Detail to set the maximum range for Hour view mode.	30
max.month.mode.range.in.years	Property used in Usage Detail to set the maximum range for Month view mode.	4
scalar.usage.graph.color	Property to control the default color of Scalar Usage Detail graph	#660033
enable.email.validation	Property to control if the Email Validatation is enabled. Email Validation is enabled by default.	Y
enable.html.email	Property to control is Emails are sent in HTML formats using templates. This is enabled by default.	Y
oucss.link.ccb.person	The ouss person person with ccb	Y
Address.validation.enabled	Address validation flag	

oucss.attachment.max.size	Property to control the max memory (in bytes) allowed when uploading a file.	5243000
Commercial Properties		
oucss.comm.context.limit	Property to set the number of accounts that can be selected in Business context to view Multi account taskflows	10
oucss.comm.context.pagesize	Property to set the number of accounts to be displayed in Business context without scroll bar. Accounts more than the set property will be displayed with a scroll bar.	10
set.account.page.size	Property to control the page size of the number of accounts per page presented in the Set. If the number of associated accounts exceeds the value of this parameter, paging will be enabled.	10
Notification Properties		
notification.list.page.size	Property to control the page size of notification. If the number of notifications associated with accounts exceeds the value of this parameter, paging will be enabled.	15
notif.list.chars.preview	Property to set the length of the notification before a preview mode is enabled.	140
notif.validate.regex.phone	Property to set the regular expression to validate the phone number for Notification preferences.	^(?:\+?1[-.]?)?\(?(\d{3})\)?[-.]?(\d{3})[-.]?(\d{4})$
oucss.context.selection	Property to enable Consolidated Account. If the value is set to A the Portal has no context. If set to S, then user get to choose a context at the time of login.	A
oucss.deviceagent.enable	Flag to enable Mobile Responsive layout on mobile phones. Set it to false to disable this feature.	true
oucss.notification.installed	Property to indicate if Notification Center is installed. **Note**: This property is not used from 2.2.0.0. Use oucss.notification.owner property instead.	false
enable.email.userId	Property to enable using email address as user id. Possible values are Y and N	N
oucss.notification.owner	Propety to indicate if notifications and notification channels is owned by Notification center or CCB. Possible values are OUNC or CCB.	OUNC

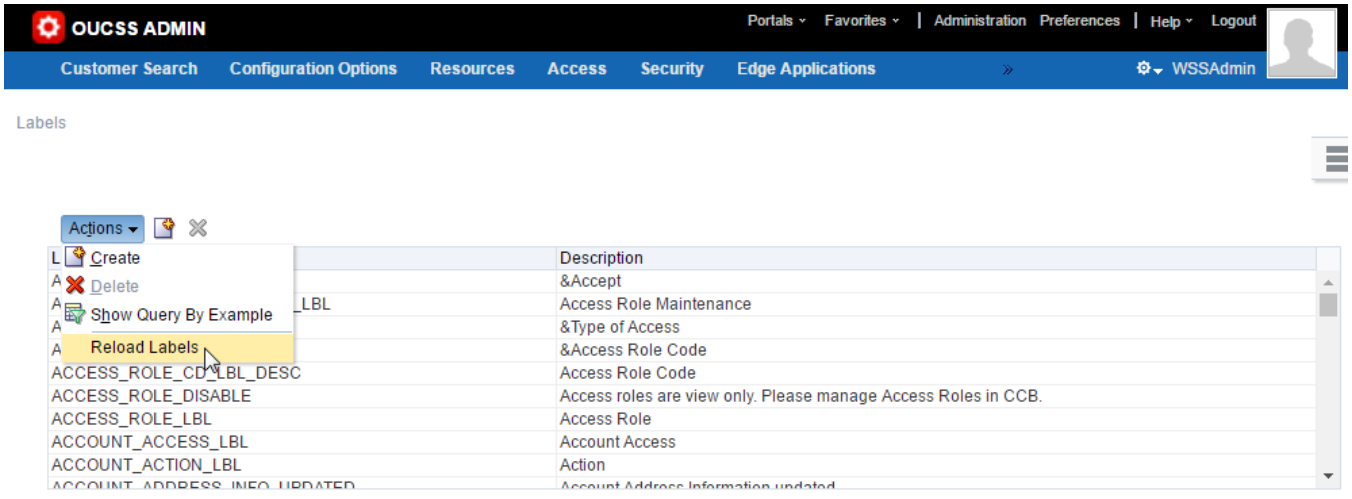
4 After the required changes are saved, update the system cache by clicking the **Actions Menu** > **Flush Cache** button.



Reload Labels and Lookups from CCB

Important: See the pertinent sections of the *Oracle Utilities Customer Self Service Implementation Guide* for information on configuring labels and lookups in CCB (as well as MDM, if applicable) and ensure configurations are in place prior to executing this step.

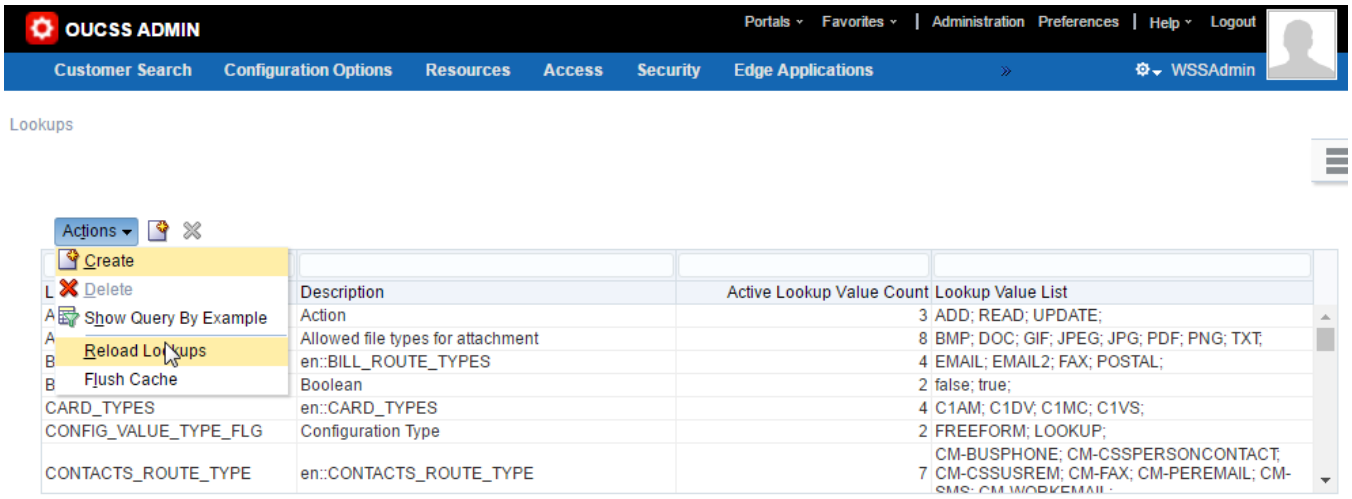
1. Log in into the OUCSS Portal application as WSSAdmin.
2. Select Labels from the Admin Menu.
3. Click **Actions** > **Reload Labels** as shown in the following image:



The message, “Labels from edge application loaded successfully” should appear. A restart of the application is required to refresh the labels with the reloaded labels.

4 Select **Lookup** from **Admin** menu.

5 Click **Actions** > **Reload Lookups**.



6 Restart the Portal Managed server using WLS Admin Console or run the following command from product_home\bin to restart Portal managed servers after reloading labels and lookups from CCB:

On Windows:

```
ant -f InstallBuild.xml RestartManagedServers -
DapplicationPropertyNode=oucssApplication.oucssPortal -
DInstallProperties=%PRODUCT_HOME%\config\InstallProperties.xml -l RestartPortalServer.log
```

On UNIX/Linux:

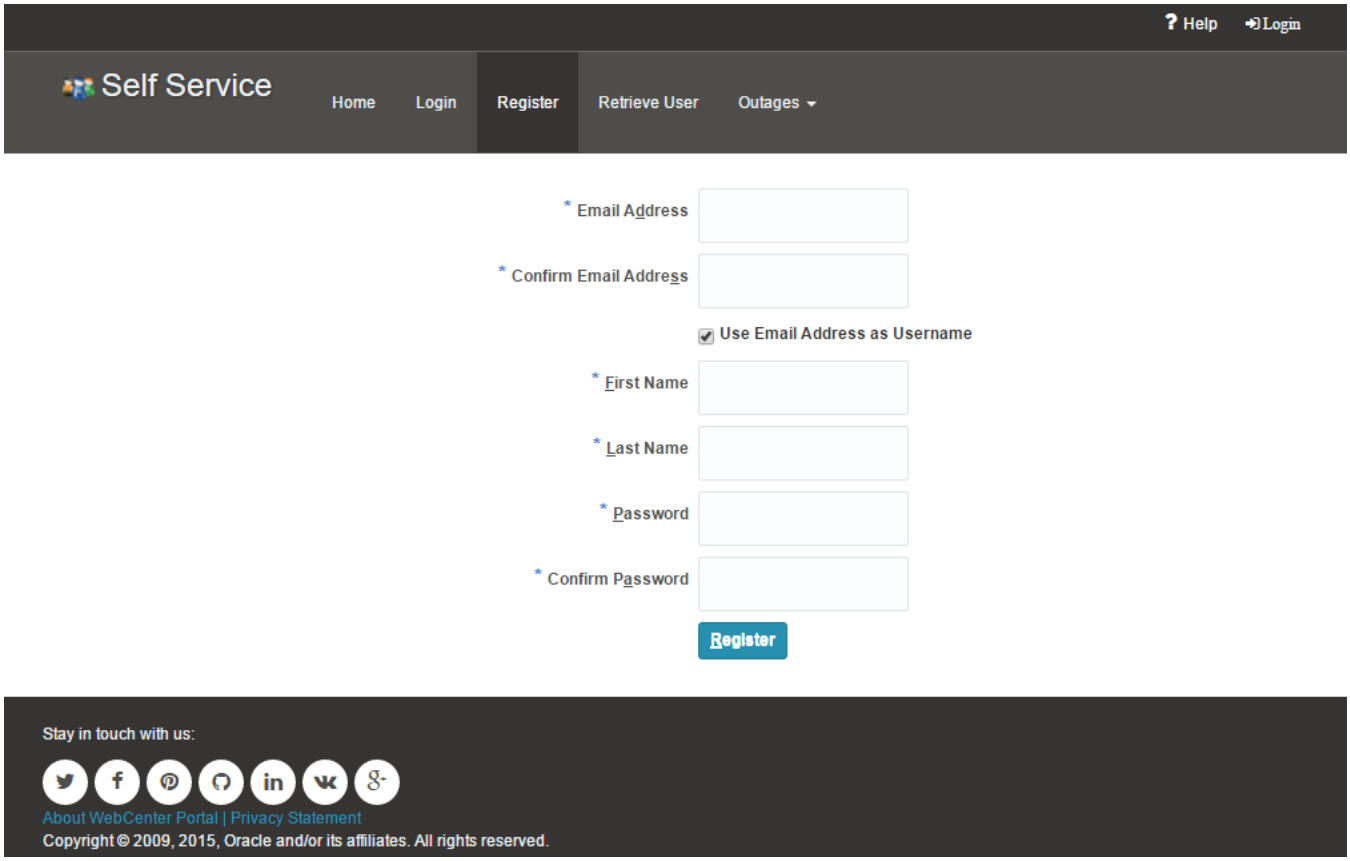
```
ant -f InstallBuild.xml RestartManagedServers -
DapplicationPropertyNode=oucssApplication.oucssPortal -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml -l RestartPortalServer.log
```

Verify User Registration

1 Browse the OUCSS Portal application and click **Register** to open the **OUCSS Registration** page.

2 Enter the **Username**, **Password**, **First** and **Last Name**, and **Email Address** in the self-registration page, then click **Register**.

Note: Following register screen is with enable.email.validation configuration property set to 'Y'.



3 An information screen should appear to let you know the user was successfully created, as shown in the following image.

4 Click the link sent in Email to the email address provided at the time of Registration. Enter the values to verify the details and Click Submit.

Note: Following Validate Email screen is applicable only when enable.email.validation configuration property set to 'Y'.

5 **Login** into OUCSS Portal by going to Login page. Enter the newly-registered user name and password and Select a Login Context (e.g., Residential), then click the **Login** button.

6 From Accounts page, click **Enroll** to open the **Enroll to an Account** details screen.

Note: If enrollment has not yet been performed, you will receive a "No data to Display" message. To perform initial enrollment, proceed with the next step.

7 Enter enrollment details. The verification fields will differ depending on configuration of your CCB environment. For example, enter **Account Id** and other v**erification** details, and then click **Enroll**.

8 After the account has been verified and added, click **Details** and verify establishment of the account by checking that all Dashboard, Information, Financial History, Bill, Compare Plans, and Usage and Payment Arrangement are working properly.

Verify Admin/CSR Functionality

Verify WSS Admin

1 Browse the OUCSS Portal application.

2. Log in as WSSAdmin (WSSAdmin user is member of WSSAdminGroup enterprise role).
3. Click the Admin menu and verify that all Admin pages (Customer Search, Configuration Options, Resources, Access, Security, Edge Application, Line of Business, Portlets, Language, Labels, Lookups, Messages, Train and Offers) are accessible and functioning properly.

Verify CSR

1. Browse the OUCSS Portal application.
2. Log in as WSSCSR (WSSCSR user is member of WSSCSRGroup enterprise group).
3. Click **Admin** and verify that only the **Customer Search** is displayed.

Installing OUCSS Inbound Services

OUCSS Inbound Services EAR hosts 3 applications. Deploy this EAR if you would like to use one or more of the following functionalities.

- Account Enroll provisions the Account Enroll webservice that can be used by WSS Admins to mass enroll users to OUCSS.
- Offers Service provisions the OTB Offers Web Service to drive the Offers and Promotions taskflows in OUCSS.
- Rest Service application provisions the OUCSS Rest Services that can be used for Native Mobile Applications.

Install Steps

This procedure describes the installation method for OUCSS Inbound Services enterprise application.

1. Perform Steps 3-6 described in OUCSS Portal Install Steps to setup the environment.
2. If OUCSS Portal is not deployed on the same domain, then perform Steps 7-10 described in OUCSS Portal Install Steps to create OUCSS DB Schema and import OUCSS Users.
3. Verify that Admin and Managed Server configured for OUCSS Inbound Service are up and running before proceeding.
4. Run the installation command to deploy the following OUCSS artifacts:
   - OUCSS_Common_Extension.war,OUCSS_Residential_Extension.war, OUCSS_Commercial_Extension.war, extend.oucss.portal.war, jax-rs and OUCSS_Rest_Extension.war as shared libraries in WebLogic. These libraries are required.
   - OUCSSInboundServices.ear containing the OUCSS Account Enroll, OUCSS Offers Service and OUCSS Rest Services applications.
   - Configure Web Service Connections as per the edge application details configured in InstallProperties.xml.
   - Security Credentials (CSF Keys) OWSM Server policies.
   - Create Mail Session.

   On Windows:

   ```
   ant -f InstallBuild.xml InstallInBoundService -
   DInstallProperties=%PRODUCT_HOME%\config\InstallProperties.xml -l
   InstallInBoundService.log
   ```

   On UNIX/Linux:

   ```
   ant -f InstallBuild.xml InstallInBoundService -
   DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml | tee
   InstallInBoundService.log
   ```

   Note: After running the command check InstallInBoundService.log for any build errors. Fix any errors in the log and rerun InstallInBoundService command.
5. The OUCSS Inbound Service WSDL can be accessed using the following URL formats

   Note: Replace the host, port and context root with values configured in InstallProperties.xml

Account Enroll WSDL	http://<InBoundServiceHost>:<InBoundServicePort>/<AccountEnrollContextRoot>/AccountEnrollService?WSDL
Offer Service WSDL	http://<InBoundServiceHost>:<InBoundServicePort>/<OffersContextRoot>/OffersService?WSDL
Rest Services	http://<InBoundServiceHost>:<InBoundServicePort>/<RestServiceContextRoot>/

Post-Installation Checklist

Use this following checklist to verify that OUCSS Inbound Services installed correctly.

Verify the OUCSS Schema Tables

Verify the OUCSS Schema as described in Section Verify the OUCSS Schema Tables of OUCSS Portal Install and targeted to managed server/cluster associated with Inbound Services.

Verify the OUCSS Data Source

Verify the OUCSS Data Source as described in Section Verify the OUCSS Data Source of OUCSS Portal Install and targeted to managed server/cluster associated with Inbound Services.

Verify Deployments

To verify OUCSS shared library and EAR deployment

1. Login in to the Oracle WebLogic Server console as WLS Admin.
2. Navigate to Deployments screen.
3. Click on the Deployment Order Column Header twice to sort by descending order.

   The following deployments should be listed as "Library" and targeted to managed server/cluster associated with Inbound Services:

   - com.oracle.ugbu.ss.lib (2.2, 2.2.0.0.0) [as "Library" deployment]
   - com.oracle.ugbu.ss.commercial.lib (2.2, 2.2.0.0.0) [as "Library" deployment]
   - com.oracle.ugbu.ss.residential.lib (2.2, 2.2.0.0.0) [as "Library" deployment]
   - extend.oucss.portal (2.2, 2.2.0.0.0) [as "Library" deployment]
   - com.oracle.ugbu.ss.rest.lib(2.2, 2.2.0.0.0) [as "Library" deployment]
   - jax-rs (2.0, 2.21.1.0) [as "Library" deployment]
4. Verify that the OUCSSInboundServices (v2.2.0.0) is deployed as Enterprise Application and is **Active**.

Name	State	Health	Type	Targets	Scope	Domain Partitions	Deployment Order
OUCSSInboundServices (v2.2.0.0)	Active	OK	Enterprise Application	WC_Inbound	Global		700
extend.spaces.webapp(2.0,12.2.1)	Active		Library	AdminServer, WC_Cluster1	Global		700
com.oracle.ugbu.ss.lib(2.2,2.2.0.0.0)	Active		Library	WC_Cluster1, WC_Inbound	Global		700
com.oracle.ugbu.ss.residential.lib(2.2,2.2.0.0.0)	Active		Library	WC_Cluster1, WC_Inbound	Global		700
com.oracle.ugbu.ss.commercial.lib(2.2,2.2.0.0.0)	Active		Library	WC_Cluster1, WC_Inbound	Global		700
extend.oucss.portal(2.2,2.2.0.0.0)	Active		Library	WC_Cluster1, WC_Inbound	Global		700
extend.spaces.webapp(2.0,12.2.1.0.1)	Active		Library	AdminServer, WC_Cluster1	Global		700
jax-rs(2.0,2.21.1.0)	Active		Library	WC_Inbound	Global		700
com.oracle.ugbu.ss.rest.lib(2.2,2.2.0.0.0)	Active		Library	WC_Inbound	Global		700

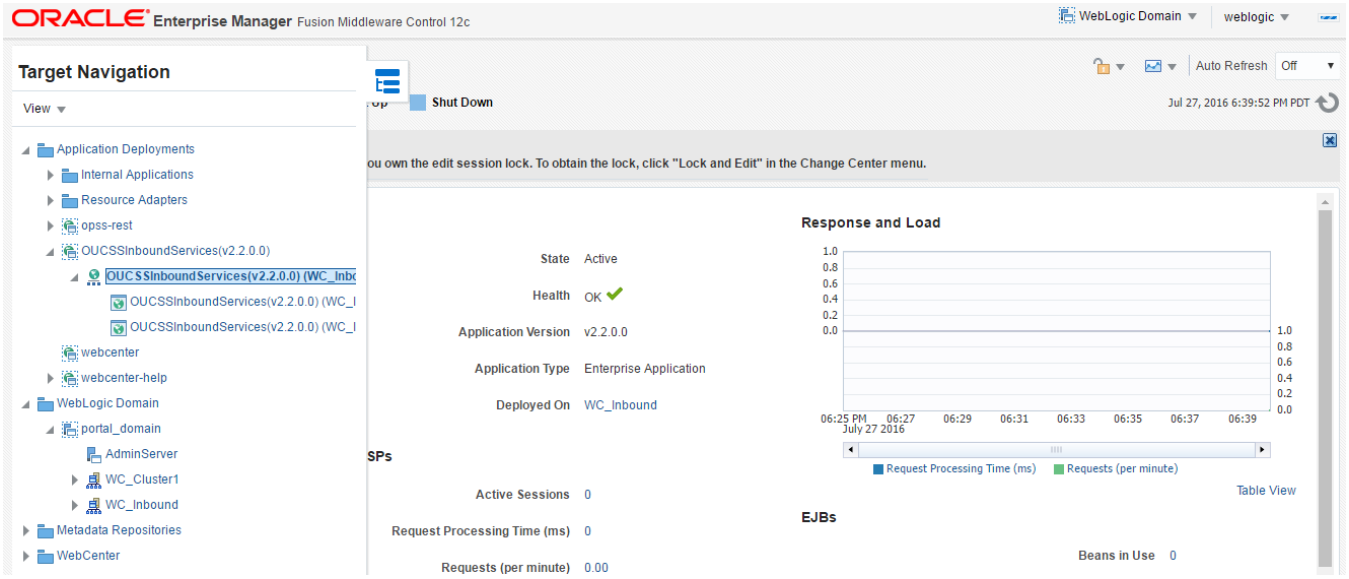
Verify the OUCSS Mail Session

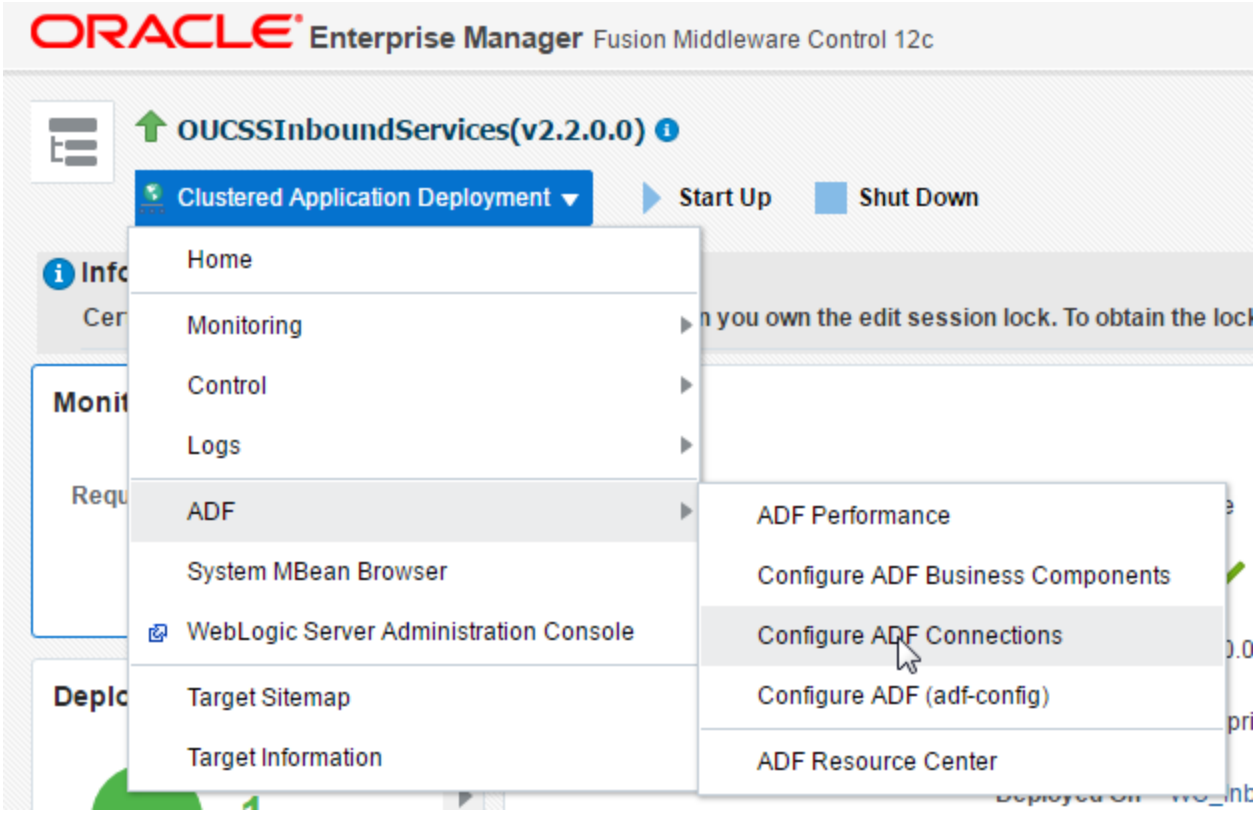
Verify the OUCSS Mail Session as described in Section Verify the OUCSS Mail Session of OUCSS Portal Install and targeted to managed server/cluster associated with Inbound Services.

Verify Connections

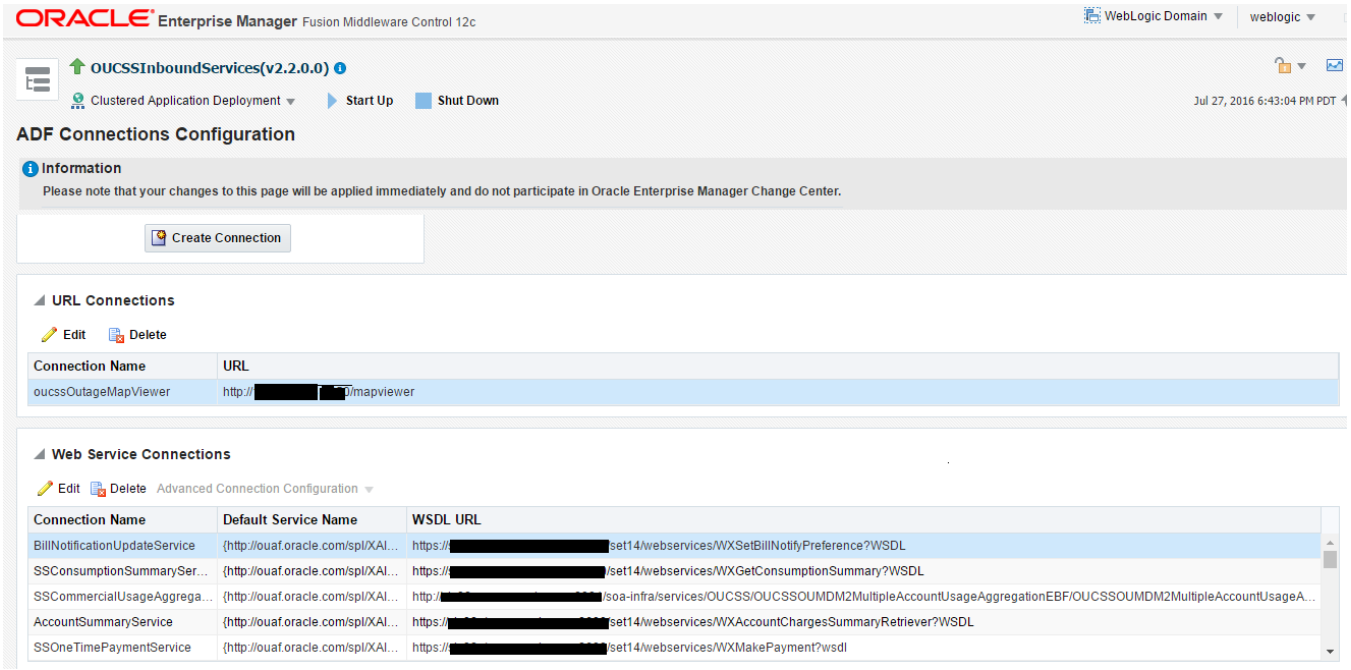
To verify that the CCB edge application *wsdl* is correctly tokenized:

1. Log in into the Oracle Enterprise Manager console at `http://<WLSAdminHost>:<WLSAdminServerPort>/em` as WLS Admin.
2. Select **OUCSSInboundService(v2. 2.0.0)** from Application Deployments OUCSSInboundServices(v2.2.0.0)**,** then > **Configure ADF Connections** from the drop down menu as shown in the following image:





3 Under **Web Service Connections** each connection name has a corresponding CCB WSDL URL. Click on any connection name (e.g., **AccountSummaryService**), click **Edit**, and select **WSDL URL**. The connection URL (e.g., `http://ccbhostname:portno/spl/XAIApp/xaiserver/WXAccountChargesSummaryRetriever?WSDL`) should open in your browser.

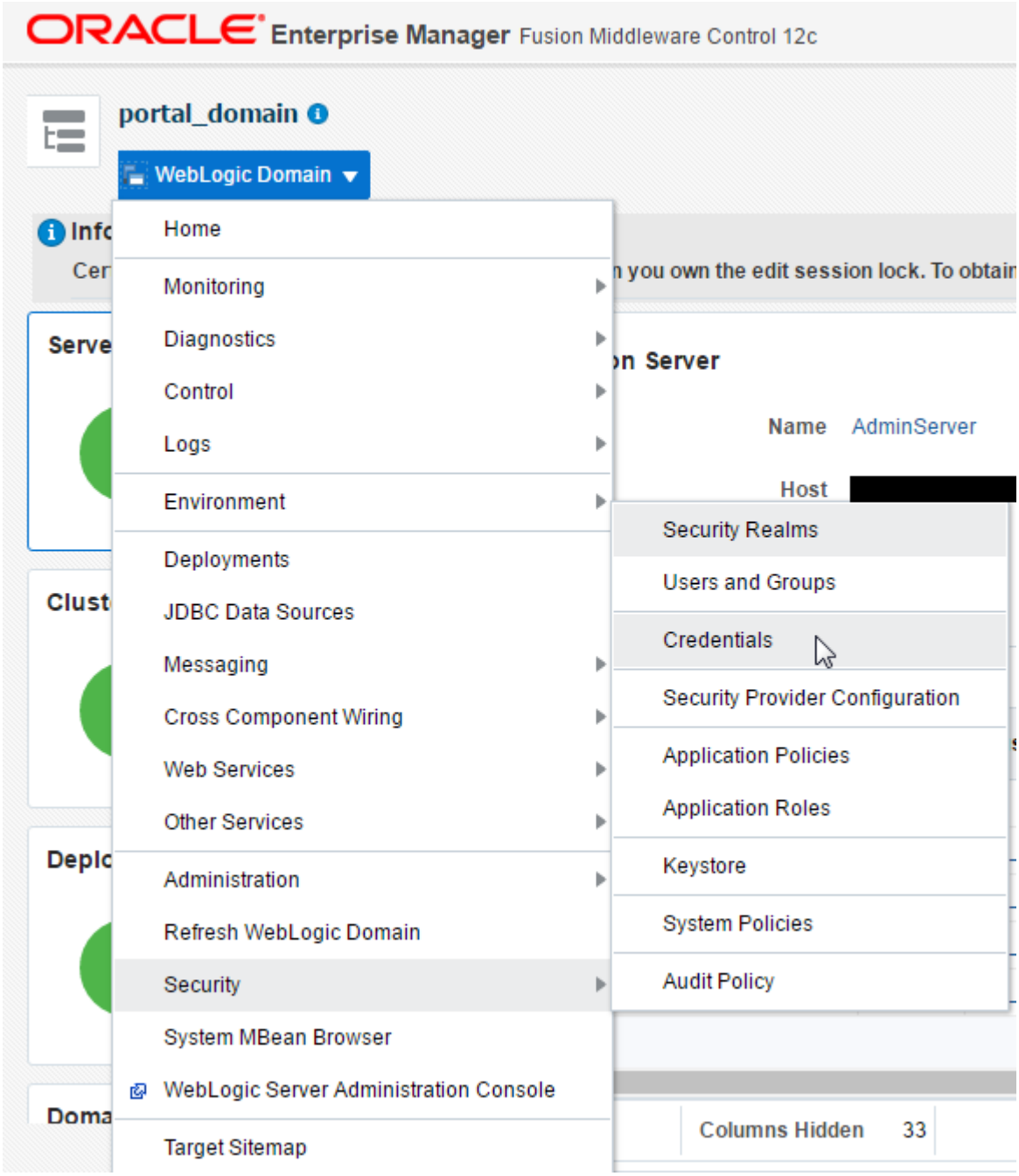


4. Repeat Step 3 for all remaining connections including **oucssOutageMapviewer** (if present) to confirm that connections are de-tokenized with connections configured in InstallProperties.xml.

Verify the OUCSS Security Credential

To verify that the Security Credential (CSF-Keys) were successfully created:

1. Perform Steps 1-3 described in OUCSS Portal Section to go to Credentials screen in EM.
2. Under Credentials select and expand oracle.wsm.security and verify that the following CSF-Keys exist:
   - keystore-csf-key
   - sign-csf-key
   - enc-csf-key
   - OUCSS_XAI_BASIC_KEY
   - OUCSS_INTG_BASIC_KEY
   - OUCSS_OUNC_BASIC_KEY


ORACLE Enterprise Manager Fusion Middleware Control 12c
portal_domain
WebLogic Domain
Home
Monitoring
Diagnostics
Control
Logs
Environment
Deployments
JDBC Data Sources
Messaging
Cross Component Wiring
Web Services
Other Services
Administration
Refresh WebLogic Domain
Security
System MBean Browser
WebLogic Server Administration Console
Target Sitemap
Security Realms
Users and Groups
Credentials
Security Provider Configuration
Application Policies
Application Roles
Keystore
System Policies
Audit Policy
Name AdminServer
Host
Columns Hidden 33


oracle.wsm.security
OUCSS_OUNC_BASIC_KEY Password OUCSS_OUNC_BASIC_KEY
sign-csf-key Password sign-csf-key
keystore-csf-key Password keystore-csf-key
OUCSS_INTG_BASIC_KEY Password OUCSS_INTG_BASIC_KEY
OUCSS_XAI_BASIC_KEY Password OUCSS_XAI_BASIC_KEY
enc-csf-key Password enc-csf-key

Post-Installation Steps

Create Security Key Store

Account Enroll and Rest Services are secured using OWSM Policy. For these services to work a keystore must be set up.

1. Go to <<Java_Home>>/bin and run the keytool command to generate a java key store (jks). The java key store (jks) is required to authenticate and encrypt the messages by OWSM.

   Sample command:

   ```
   keytool -genkeypair -keyalg RSA -alias orakey -keypass <<sign-csf-key-password>> -
   keystore default-keystore.jks -storepass <<keystore-password>> -validity 3600
   ```

   - For alias use the username from /oucssInstall/oucssConnection/OUCSS_Inbound/sign-csf in InstallProperties.xml
   - For keypass use the password from /oucssInstall/oucssConnection/OUCSS_Inbound/sign-csf in InstallProperties.xml
   - For storepass use the password from /oucssInstall/oucssConnection/OUCSS_Inbound/keystore-csf in InstallProperties.xml

   Refer http://docs.oracle.com/javase/8/docs/technotes/tools/windows/keytool.html to know more about Key and Certificate Management tool.

2. Copy the default-keystore.jks file to <<Domain_Home>>/config/fmwconfig folder. <<Domain_Home>> is the domain path where the inbound services application is deployed.

3. Go to the <<Domain Home>>/oracle_common/common/bin and run the following WLST to import the credentials from Java key Store into OPSS Key Store –

   ```
   svc = getOpssService(name='KeyStoreService')
   svc.importKeyStore(appStripe='owsm',name='keystore',password='welcome1',
   aliases='orakey', keypasswords='welcome1', type='JKS', permission=true,
   filepath='<<KeyStorePath>>/default-keystore.jks');
   ```

4. Restart all servers including the Admin server.

Chapter 3

Installing CSS BPEL Flows

This section describes the installation steps for CSS BPEL flows where Oracle Utilities Customer Self Service (CSS) calls Oracle Utilities Meter Data Management (MDM), Oracle Utilities Network Management System (NMS) and Customer Care and Billing (CCB) to process or retrieve information.

Note: This integration does *not* require installation of the AIA Foundation Pack.

Software Requirements

The following software must be installed, configured and running prior to installation of CSS direct BPEL flows:

- Oracle SOA Suite 12.2.1.0 on WebLogic Server 12.2.1.0
- Oracle Utilities Meter Data Management release 2.1.0.3 installed on an Oracle database.
- Oracle Utilities Network Management System – Application version v1.12.0.2 installed on an Oracle database.
- Oracle Utilities Customer Care and Billing release 2.5.0.2 installed on an Oracle database.
- Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Meter Data Management Release 12.1 Media Pack with the latest patches.
- Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Network Management System Release 12.1 Media Pack.

Pre-Installation Tasks

The following tasks should be completed before you install the CSS BPEL flows:

- Ensure that the Oracle SOA Suite 12.2.1.0 on WebLogic Server 12.2.1 is installed and running.
- Login to the **Weblogic Server Administration** console using the URL http://admin_server_hostname:port/console to confirm there are no changes in **Pending Activation** status.

Complete this step to verify that the WebLogic Server is in a healthy state. If any items are in Pending Activation status, then there is likely an issue on the server. All issues must be resolved before you can proceed with the installation.

- If it's not already running, start the **Node Manager**.
- Restart the **Enterprise Manager** and the **WebLogic Administration** server.
- Ensure the WebLogic Admin server, SOA server, and Node Manager are up and running.
- Create the new **Product Home** folder (e.g., `OUCSS`).

Note: The syntax for **Product Home** depends on whether you are installing on Linux or Windows. On Linux, the variable is `$PRODUCT_HOME`. On Windows, it is `%PRODUCT_HOME%`.

Domain Topology

Oracle recommends separate WebLogic domains for portal applications in which the OUCSS Portal application and OUCSS Inbound Services can be deployed (e.g., **portal_domain**, as well as a separate domain for installation of CSS BPEL flows and OUNC Flows, e.g., **soa_domain)**.

Installation on SSL-Enabled Servers

The Admin server port in the installation properties can be specified with either the unsecured port or the SSL listening port. If the Admin server is enabled and the same is specified in the installation properties file, the installation will be carried out with the SSL port of the Admin server using the **t3s** (t3+SSL) protocol.

Cluster Installation

A WebLogic Server cluster consists of multiple WebLogic Server (Managed Server) server instances running simultaneously and working together to provide increased scalability and reliability.

For a cluster installation, the Oracle Http Server must be installed. For details, see

https://docs.oracle.com/middleware/1212/webtier/WTINS/install_gui.htm#WTINS125

In the installation properties file in the OHSServer section the following details must be completed:

Cluster Scenario

- Provide the details of the OHS server, including `protocol`, `hostname`, and `portnumber`, should the cluster load need to be balanced with the OHS server.
- **mgdservernames** should be completed with the server names that are configured in the cluster as well as the entries that are to be provided in the `mod_wl_ohs.conf` file.

If **soa_server1** and **soa_server2** are the WebLogic server instances in the **soa_cluster1** WebLogic cluster:

- `soa_server1` is hosted on node `abc.yourcompany.com` listening at port 8001, and `soa_server2` is hosted on node `bcd.yourcompany.com` and listening at port 8001.
- `abc.yourcompany.com:8001` and `bcd.yourcompany.com:8001` must be registered in the `mod_wl_ohs.conf` file.
- `SOA/OHSServer/mgdservernames` can be set to `soa_cluster1`, or by comma-separated values such as `soa_server1`, `soa_server2`, etc.

Standalone Scenario

If **soa_server1** is the only managed server:

- Provide the details of the OHS server, including the `protocol`, `hostname`, and `portnumber` of the managed server.

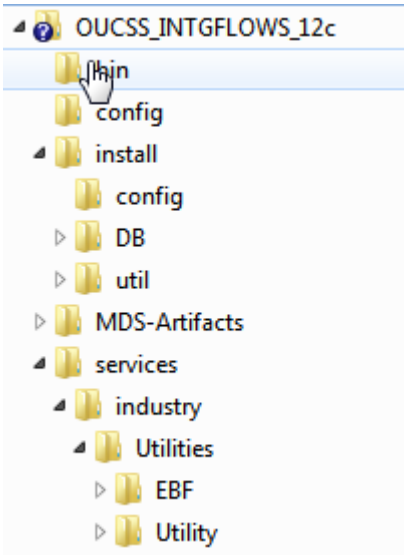
- `SOA/OHSServer/mgdservernames` must be `soa_server1`.

Installing the Integration

Installing on SOA 12c

1 Download OUCSS_INTGFLOWS_12c.zip from the Oracle Software Delivery Cloud (edelivery.oracle.com)

2 Extract the zip file to create OUCSS_INTGFLOWS folder. This folder includes a subfolder hierarchy as shown in the following image. If the folder is read-only, remove the read-only attribute from the folder.



3 Download patch 23295348 and follow the instructions included in the readme.txt file.

Refer to the readme.txt file included with the patch for more information and installation instructions. The following sub-steps provide more information related to the steps included in the readme file.

A Verify that the following environment variables are set.

Variable	Example
Unix/Linux and Windows OS	
PATCH_HOME	XXX/23295348
MW_HOME	XXX/Middleware
SOA_HOME	$MW_HOME/soa
ORACLE_HOME	$SOA_HOME
PRODUCT_HOME	This is the integrated flows product installation home. Example: Unix/Linux: PRODUCT_HOME=/slot/oracle/OUCSS_INTGFLOWS Windows: PRODUCT_HOME=C:\Oracle\OUCSS_INTGFLOWS

The following commands indicated in the readme file (*setWLSEnv.sh* on Linux or *setWLSEnv.bat* on Windows) set the environment variables used for executing the installation scripts.

On Windows:

```
cd %MW_HOME%\wlsserver\server\bin\

setWLSEnv.cmd
```

On UNIX/Linux:

```
source "$MW_HOME/wlserver/server/bin/setWLSEnv.sh"
```

The following is an example to set up environment variables in a typical installation:

On UNIX/Linux:

```
export MW HOME=/Oracle/Middleware/soa
export SOA_HOME=$MW_HOME/soa
export ORACLE_HOME=$SOA_HOME
export PRODUCT HOME=/Product Homes/OUCSS INTGFLOWS
export PATCH HOME=/PATCH DWNLD/23295348
source $MW_HOME/wlserver/server/bin/setWLSEnv.sh
```

On Windows:

```
SET MW HOME=C:\Oracle\Middleware\soa
SET SOA HOME=%MW HOME%\soa
SET ORACLE HOME=%MW HOME%\soa
SET PRODUCT_HOME=C:\Product_Homes\OUCSS_INTGFLOWS
SET PATCH_HOME=C:\PATCH_DWNLD\23295348
cd %MW HOME%/wlserver/server/bin/
setWLSEnv.cmd
```

Notes:

- Do not delete the install directory. This directory is used as the download location for patches.
- For a Windows installation, when updating any of the properties listed in the table below, add "/" to the path (e.g., `C:/OUCSS_INTGFLOWS`).
- This installation uses the values in $PRODUCT_HOME and its underlying properties file that were used to configure the integrated flow installation.

B Verify that the the fields in Install Properties xml have been populated.

Update the `<PRODUCT_HOME>/config/InstallProperties.xml` file with values appropriate to your environment prior to installing the patch. Refer to Appendix C for a sample of the CSS BPEL Flows *InstallProperties.xml* file and an explanation of the properties and elements available in the file. (Step 1 in the in the PatchInstallInstructions.txt file included in the patch download.)

Notes:

- In InstallProperties.xml, the hostname, portnumber, protocol, and context entries in the "EdgeApplication/OUMDM/ManagedServer" node are used to build the MDM edge application end point URL in the ConfigurationProperties.xml file during install.
- In InstallProperties.xml, the hostname, portnumber, protocol, and context entries in the EdgeApplication/OUCCB/ManagedServer node are used to build the CCB edge application end point URL in the ConfigurationProperties.xml file during install.

4 Install the CSS BPEL Flows.

Follow the guidelines in step 4 in the **PatchInstallInstructions.txt** file included in the patch download. This section provides additional detail to supplement those steps. Step F is only needed if optional BPEL flows are needed.

A Open a command prompt and go to the `<unzipdir>\OUCSS_INTGFLOWS` folder in which you unzipped OUCSS.zip (this is the folder referred to as PRODUCT_HOME, e.g., `PRODUCT_HOME=/slot/oracle/OUCSS_INTGFLOWS`).

B Execute this command to install the Database artifacts like creating the tables, inserting the seed data.

On UNIX/Linux:

```
cd $PRODUCT_HOME/bin
```

```
ant -f InstallBuild.xml installDB -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml | tee idb.log
```

On Windows:

```
cd %PRODUCT_HOME%/bin
```

```
ant -f InstallBuild.xml installDB -
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -l idb.log
```

Note: After running above command, verify that installation log does not contain any errors and the build is successful. If there are any errors in install.log, fix the errors before running the install again.

C Execute this command to install the WebLogic Java resources such as JDBC Datasources, DB Adapter deployment, and Credentials maps for Edge applications.

On UNIX/Linux:

```
cd $PRODUCT_HOME/bin
```

```
ant -f InstallBuild.xml installWL -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml | tee iwl.log
```

On Windows:

```
cd %PRODUCT_HOME%/bin
```

```
ant -f InstallBuild.xml installWL -
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -l iwl.log
```

Note: After running above command, verify that installation log does not contain any errors and the build is successful. If there are any errors in install.log, fix the errors before running the install again.

D After executing the above command it is higly recommended to restart the Admin Server and all the SOA managed servers under the domain.

E Execute this command to install the SOA artifacts like SOA Partitions,Update the MDS with the CSS artifacts and deployment of the mandatory composites.

On UNIX/Linux:

```
cd $PRODUCT_HOME/bin
```

```
ant -f InstallBuild.xml installSOA -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml | tee InstallSOA.log
```

On Windows:

```
cd %PRODUCT_HOME%/bin
```

```
ant -f InstallBuild.xml installSOA -
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -l InstallSOA.log
```

Note: After running above command, verify that installation log does not contain any errors and the build is successful. If there are any errors in install.log, fix the errors before running the install again.

F Execute this command in order to install the Optional OUCSS-OUCCB BPEL Flows. This step is optional; it should only be executed if the optional OUCSS-OUCCB BPEL flows are required.

On UNIX/Linux:

```
cd $PRODUCT_HOME/bin
```

```
ant -f InstallBuild.xml installOptionalSOA -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml -l InstallOptFlows.log
```

On Windows:

```
cd %PRODUCT_HOME%/bin
```

```
ant -f InstallBuild.xml installOptionalSOA -
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -l
InstallOptFlows.log
```

G If the OUCSS Portal and/or OUCSS Inbound Services are installed prior to the installation of OUCSS BPEL Flows and any other BPEL flows (e.g., Oracle Utilities Notification Center Flows, CCB-MDM Flows) are pending:

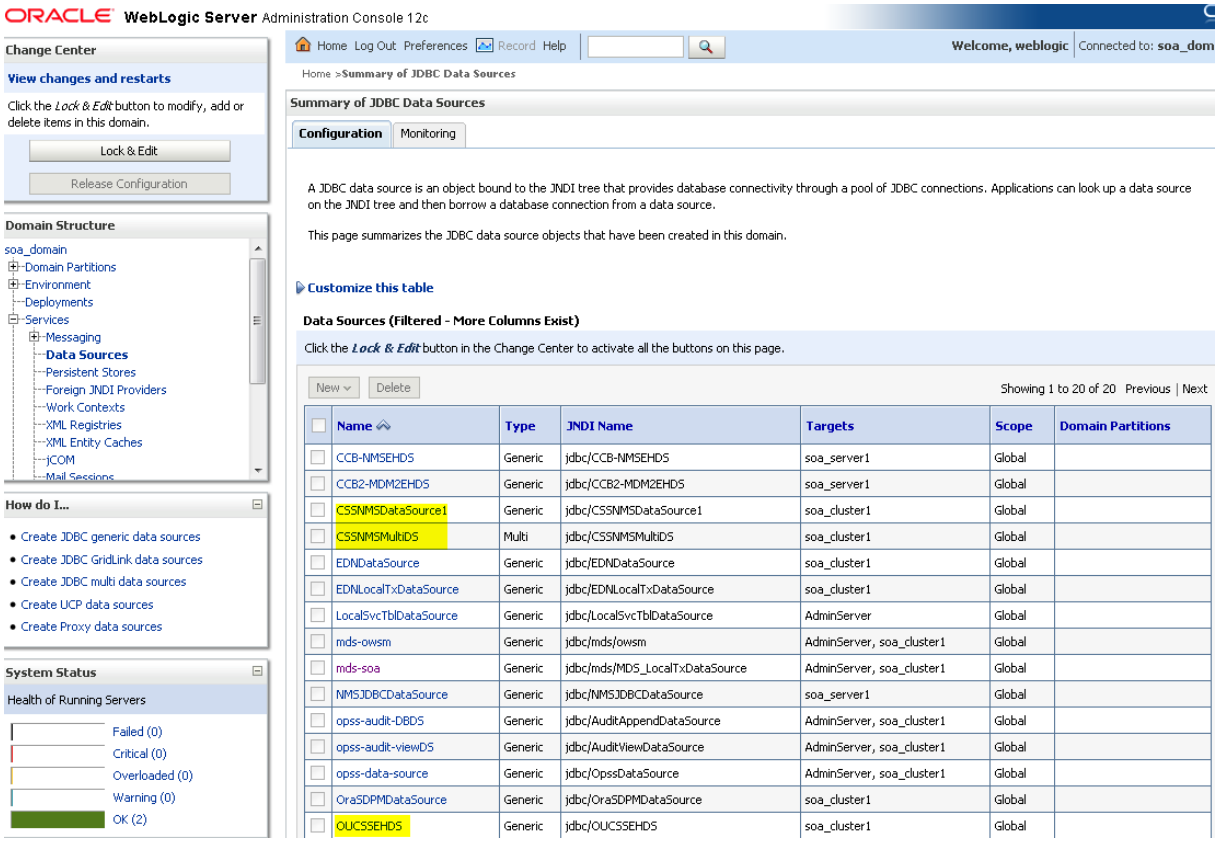
- Ensure that the flows are installed.
- Run the commands described in the Modifying all Edge Application Connections topic in Appendix F, Connection Management, to ensure that the new flows are registered with the OUCSS Portal and/or OUCSS Inbound Services.Post-Installation Checklist for Mandatory CSS BPEL Flows

Data Source Configurations Checklist

1 Ensure that the following data sources are created on the server:

- **OUCSSEHDS** – Error Handling Data Source
- **CSSNMSMultiDS** – NMS Multi Data Source
- **CSSNMSDataSource1** – NMS Generic Data Source

Navigation: On the left pane, select the **Services > Data Sources;** check the data sources marked below are installed:



2 Check that the Connection Pool settings for the Generic Data Source(s) and Error Handling Data Source are correctly pointing to their corresponding database.

Navigation: On the Left Pane, select **Services > Data Sources** and in the main page select the **Connection Pool** tab check the URL and properties text area for the credentials

A NMS Generic Data Source CSSNMSDataSource1 must point to the NMS Database.

B Verify that the Error Handling Data Source is pointing to the correct Error Handling Database.

3 Test the database for correct configurations.

Navigation: On the Left Pane, select the **Services > Data Sources** and in the main page select the **Monitoring** tab. Select the sub task **Testing** and test the connectivity for the NMS Generic Data Source and Error Handling Data Source.

4 Verify that the NMS Generic Data Source(s) is linked to the NMS Multi Data Source(s).

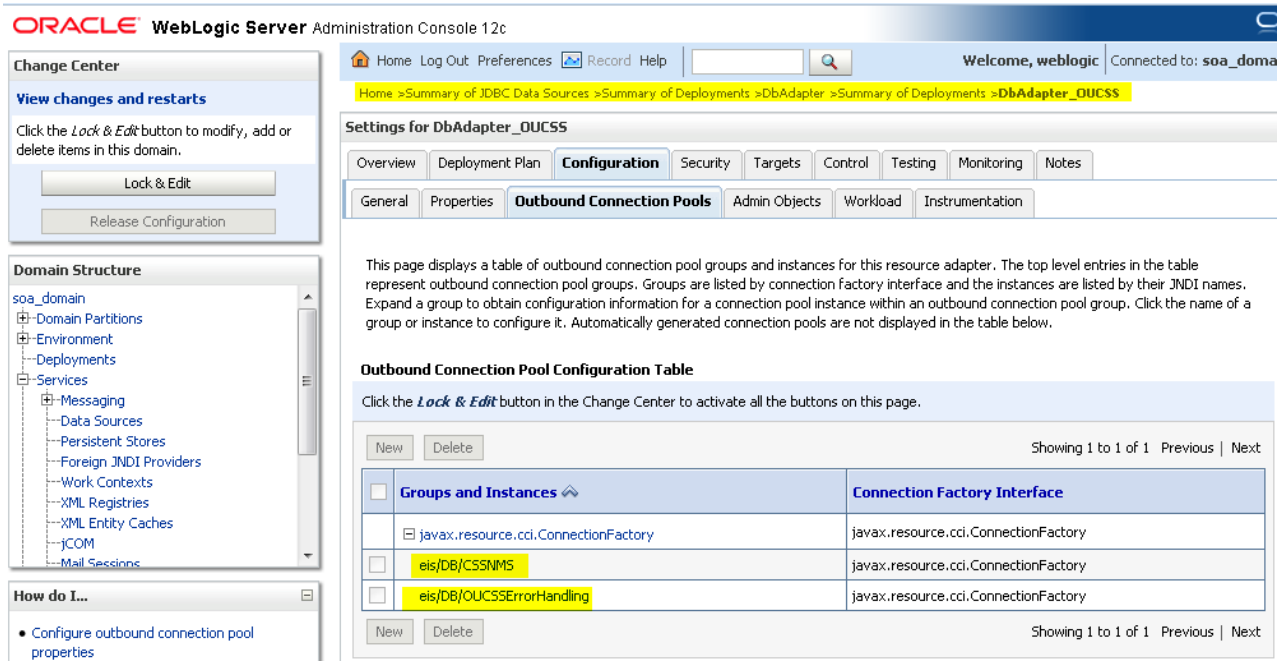
Database Outbound Connection Pool

1 Ensure that following two connection instances are created on the server:

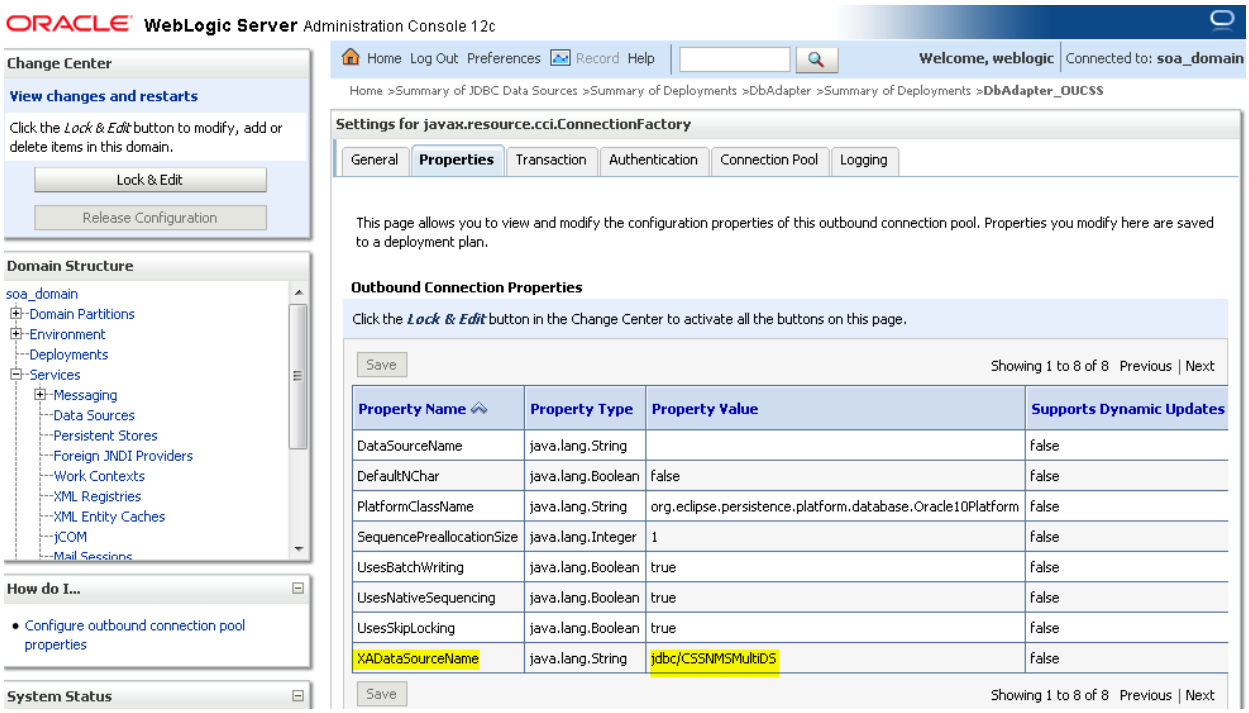
- `eis/DB/OUCSSErrorHandling`: ErrorHandling connection instance.
- `eis/DB/CSSNMS`: NMS connection instance.

2 On the Left Pane, select the **Deployments,** click on the **DBAdapter_OUCSS,** select the **Configuration** tab and select the **Outbound Connection Pools** tab.

3 Expand javax.resource.cci.ConnectionFactory.



4 Select the `eis/DB/CSSNMS` connection factory and make sure the **xaDataSourceName** is pointed to the NMS Multi Data Source JNDI name.

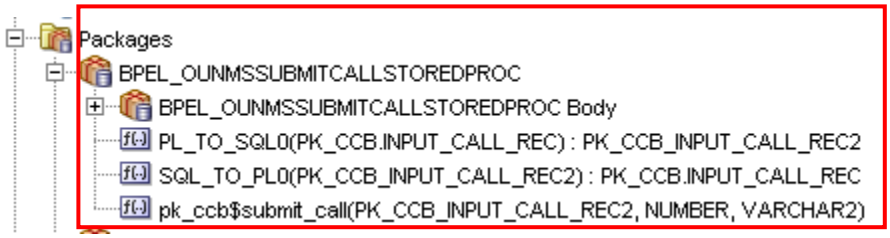


NMS Multi Data Source JNDI name is found on **Services > Data Sources** and in the **General** tab.

5 Select the `eis/DB/OUCSSErrorHandling`: connection factory and make sure **dataSourceName** is pointed to the Error Handling JNDI name.

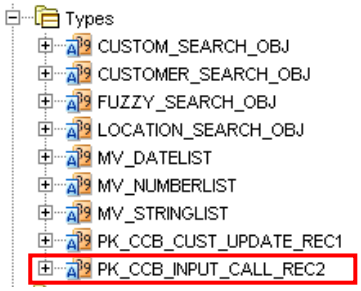
Verify BPEL Wrapper Procedure for Submit Call Created in NMS Database

1 Ensure **BPEL_OUNMSSUBMITCALLSTOREDPROC** package is created under the Package folder in NMS Database.



Note: This BPEL Wrapper Procedure is used by the DB adapter in OUCSSOUNMSTroubleCallInterfaceEBF when submitting an outage or trouble call to NMS.

2 Ensure **PK_CCB_INPUT_CALL_REC2** object is created under the Types folder in NMS Database.

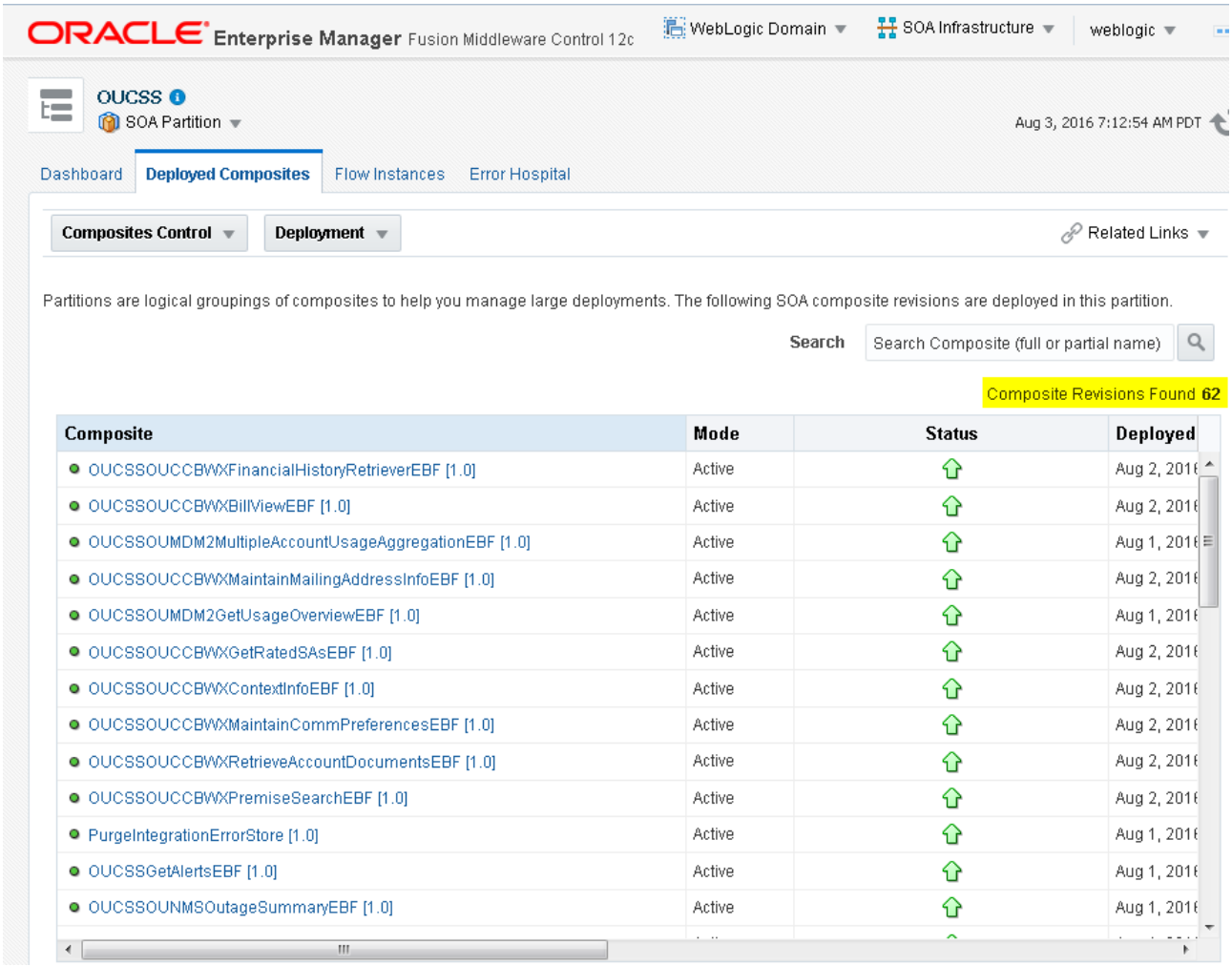


Note: This type is being used by the BPEL Wrapper Procedure.

Verifying Composites in Enterprise Manager

Verify that the OUCSS partition was created with all the composites deployed:

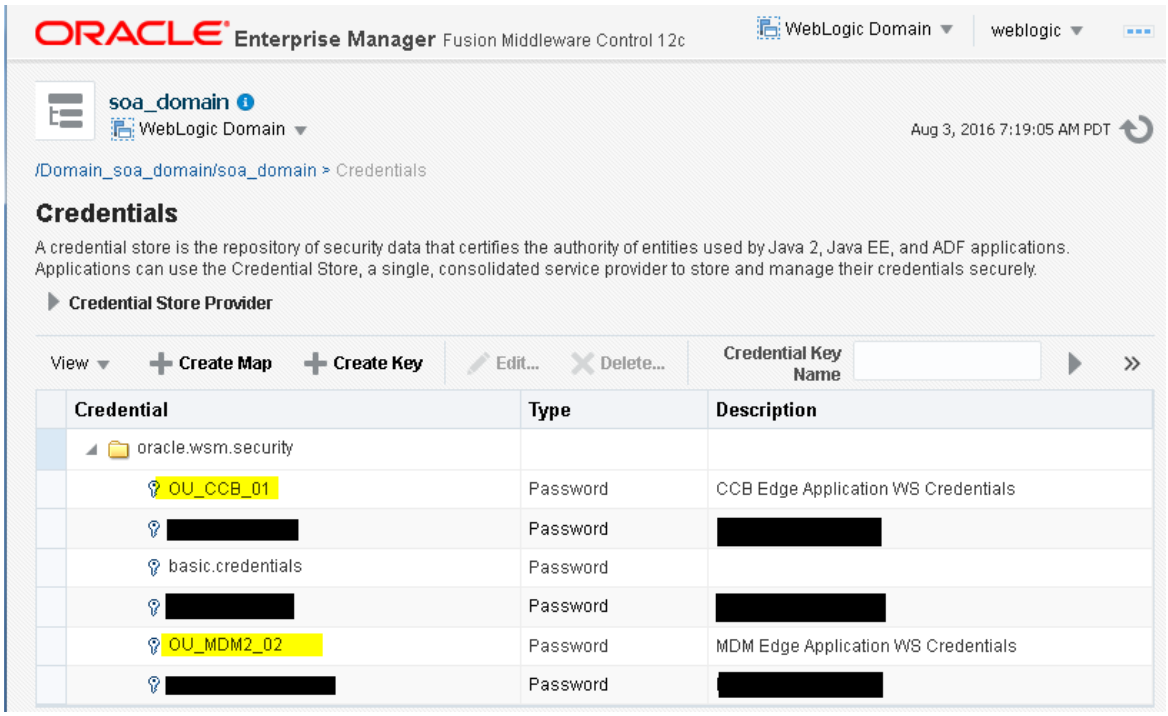
1. Log in to Enterprise Manager.
2. Expand the Target Navigation >SOA > soa-infra >OUCSS partition.
3. On the Right Hand side find the deployed Composites to be **62** in total if optional CSS BPEL flows are also installed. If only mandatory CSS BPEL flows are installed then there will only be **22** composites deployed**.**



Verify Security Credentials from EM

Follow these steps to verify security for connecting to Oracle Utilities Meter Data Management (MDM) and Oracle Utilities Customer Care and Billing (CCB) from SOA12c middleware:

1. Log in to the Enterprise Manager.
2. **From Target Navigation, e**xpand WebLogic Domain and click **soa_domain**
3. **On the soa_domain page, go to the WebLogic Domain dropdown. Click Security > Credentials.**
3. Expand the **oracle.wsm.security** credential and verify that the keys **OU_CCB_01** and **OU_MDM2_02** were created.

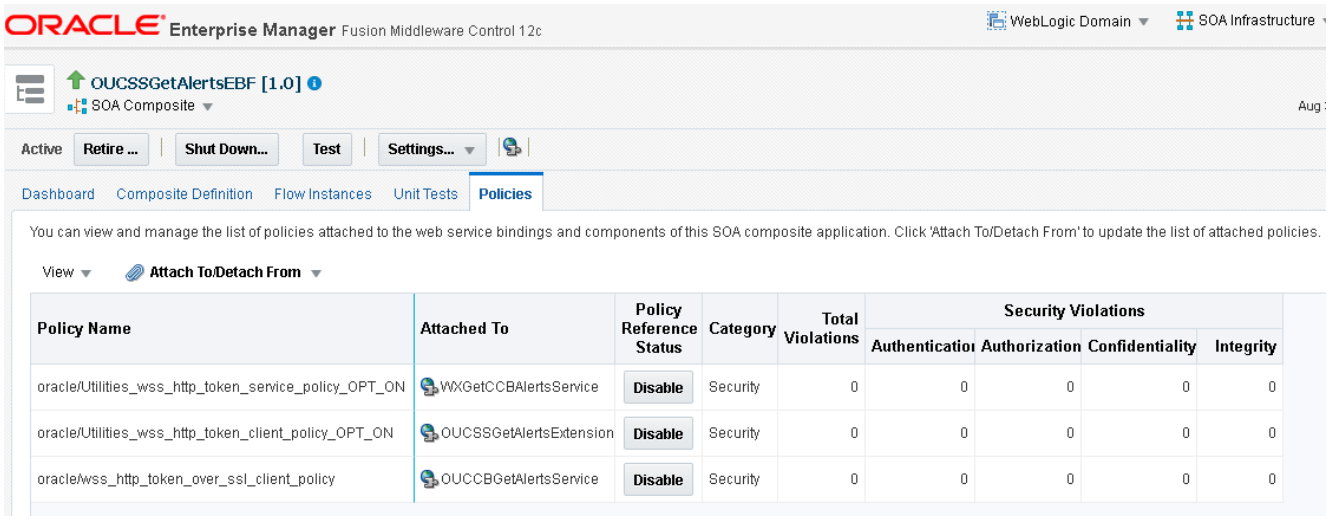


Verify Attached Policies from EM

Follow these steps to verify the policies attached to the web services that each BPEL process is using:

1. Log in to Enterprise Manager.
2. Expand the **SOA** -> soa-infra ->**OUCSS** partition.
3. Choose OUCSSGetAlertsEBF, scroll down to the Services and References section in Dashboard Tab.
   - Verify that the **WXGetCCBAlertsService** Web Service Type with Service Usage is linked to a service policy:

   Click on the service and select the **Policies** tab:



   - Verify that the **OUCCBGetAlertsService** Web Service Type with Reference Usage is calling a CCB Web Service and is linked to a appropriate client policy.

4 Iterate this process for other Composites randomly to check if the appropriate policies are attached as mentioned in the Installation Properties file.

Note: Please refer to Appendix I for more information on Security Policies.

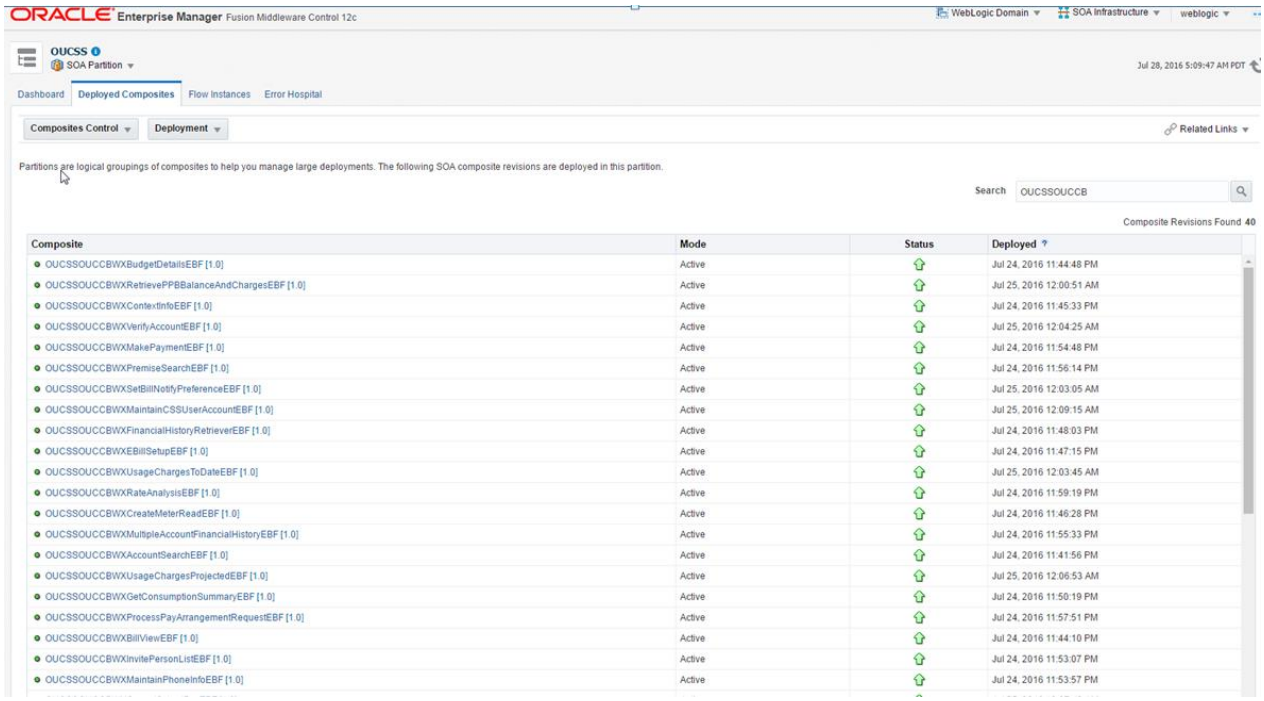
Post-Installation Checklist for Optional OUCSS-OUCCB BPEL Flows

Verifying Composites in SOA Enterprise Manager

1 Log in to the SOA Enterprise Manager.

2 Expand the **Farm_soa_domain>soa>soa-infra>OUCSS** partition.

Total deployed composites should be **62** if optional CSS BPEL flows are also installed. There are 40 composites for the optional flows**.**



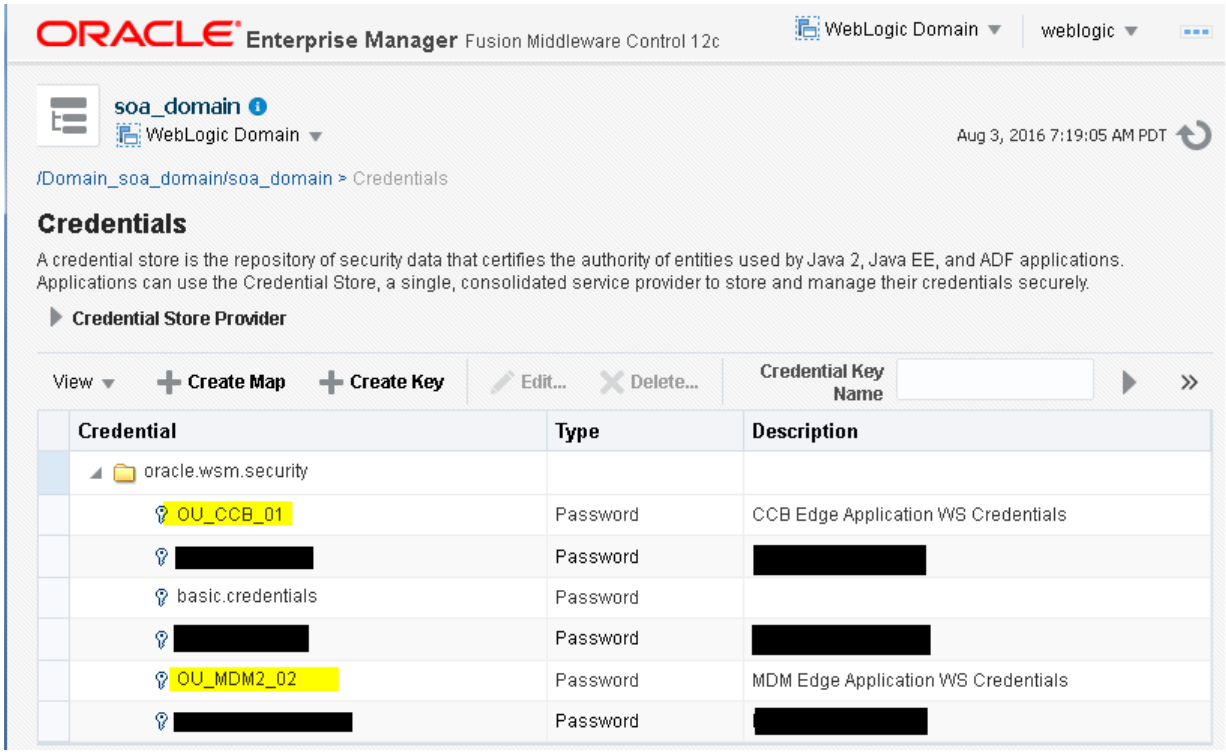
Verify Security Credentials from SOA Enterprise Manager

Follow these steps to verify security for connecting to Oracle Utilities Customer Care and Billing (CCB) from SOA11g middleware:

1 Log in to the SOA Enterprise Manager.

2 Expand WebLogic Domain and right-click **soa_domain > Security > Credentials**.

3 Expand the **oracle.wsm.security** credential and verify that the keys **OU_CCB_01** is created.



Verify Attached Policies from SOA Enterprise Manager

Follow these steps to verify the policies attached to the web services that each BPEL process is using:

1. Log in to SOA Enterprise Manager.
2. Expand the **SOA** -> soa-infra -> **OUCSS** partition.
3. Choose a composite (example: **OUCSSOUCCBWXAccountSearchEBF**), then scroll down to the **Services and References** section and verify that security policies are attached.

Note: Please refer to Appendix I for more information on Security Policies.

Updating the MDS Folder

Prerequisite: Before updating the MDS folder, set the environment variables as described in step 2 in the "Installing the Integration" procedure earlier in this chapter.

To update the MDS folder, open a Command prompt and execute the following command:

On UNIX/Linux:

```
cd $PRODUCT_HOME\bin
```

```
ant -f InstallBuild.xml  updateMDS -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml | tee updatemds.log
```

On Windows:

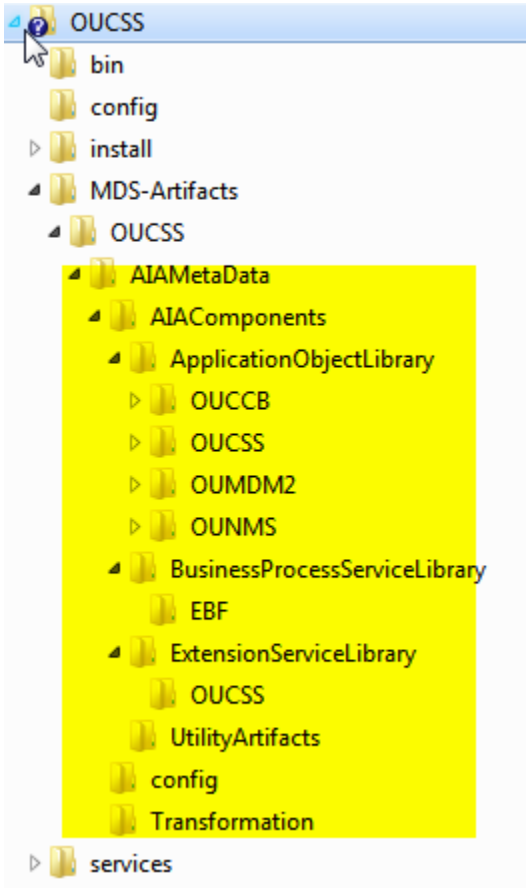
```
cd %PRODUCT_HOME%\bin
```

```
ant -f InstallBuild.xml  updateMDS -
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -l updatemds.log
```

Note: After running the command check updatemds.log for any errors. Fix any errors in the log and rerun updateMDS command.

MDS Deployment Examples

The Product Home folder (e.g., OUCSS_INTGFLOWS) contains an MDS-Artifacts subfolder with all files that can be deployed to MDS:



Custom Schema Changes

If custom elements are added to the application object schema (e.g., the MDM schema), the ApplicationObjectLibrary folder must be updated in MDS

Concrete WSDL Changes for Extensions

If the extension service needs to be called by a process and the concrete WSDL is updated, the ExtensionServiceLibrary folder must be updated in MDS.

Uninstalling Direct Integrated Flows

To uninstall direct integrated flows:

1. Set the environment variables as described in Step 3-A in the "Installing the Integration" topic earlier in this chapter.

2 Execute the following command to go to the PRODUCT_HOME:

On UNIX/Linux:

```
cd $PRODUCT_HOME/bin
```

On Windows:

```
cd %PRODUCT_HOME%/bin
```

3 Verify that the `<PRODUCT_HOME>/config/InstallProperties.xml` file have values appropriate to your environment.

See Appendix C for a sample CSS BPEL Flows *InstallProperties.xml* file and an explanation of the properties and elements available in the file.

Note:

- In InstallProperties.xml, the hostname, portnumber, protocol, context entries in the "EdgeApplication/OUMDM/ManagedServer" node are used to build the MDM edge application end point URL in the ConfigurationProperties.xml file during install.
- In InstallProperties.xml, the hostname, portnumber, protocol, and context entries in the EdgeApplication/OUCCBManagedServer node are used to build the CCB edge application end point URL in the ConfigurationProperties.xml file during install.

4 Execute the following Command to uninstall the OUCSS-OUCCB optional integration flows. These optional BPEL flows were installed when the command in step 4-F (in the "Installing the Integration" procedure) was executed. This step can be ignored if the Optional flows were not previously installed.

On UNIX/Linux:

```
cd $PRODUCT_HOME/bin
```

```
ant -f UnInstallBuild.xml uninstallOptionalSOA -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml -l uninstallOptFlows.log
```

On Windows:

```
cd %PRODUCT_HOME%/bin
```

```
ant -f UnInstallBuild.xml uninstallOptionalSOA -
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -l uninstallOptFlows.log
```

5 Execute the following command to complete the BPEL Flows integration uninstallation

On UNIX/Linux:

```
cd $PRODUCT_HOME/bin
```

```
ant -f UnInstallBuild.xml uninstallSOA -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml | tee uninstallSOA.log
```

On Windows:

```
cd %PRODUCT_HOME%/bin
```

```
ant -f UnInstallBuild.xml uninstallSOA -
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -l uninstallSOA.log
```

Note: After running above command, verify that installation log does not contain any errors and the uninstallation is successful. If there are any errors in uninstallation log and fix the errors before rerunning the uninstall command.

6 Execute the following command to complete the WebLogic Java resources such as Datasources, DB Adapters uninstallation

On UNIX/Linux:

```
cd $PRODUCT_HOME/bin
```

```
ant -f UnInstallBuild.xml uninstallWL -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml -l uninstallWL.log
```

On Windows:

```
cd %PRODUCT_HOME%/bin
```

```
ant -f UnInstallBuild.xml uninstallWL -
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -l uninstallWL.log
```

Note: After running above command, verify that installation log does not contain any errors and the uninstallation is successful. If there are any errors in uninstallation log and fix the errors before rerunning the uninstall command.

7 Execute the following command to complete the Database schemas like CSS Error Handling uninstallation.

On UNIX/Linux:

```
cd $PRODUCT_HOME/bin
```

```
ant -f UnInstallBuild.xml uninstallDB -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml | tee uninstallDB.log
```

On Windows:

```
cd %PRODUCT_HOME%/bin
```

```
ant -f UnInstallBuild.xml uninstallDB -
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -l uninstallDB.log
```

Note: After running above command, verify that installation log does not contain any errors and the uninstallation is successful. If there are any errors in uninstallation log and fix the errors before rerunning the uninstall command.

8 After executing the above command it is higly recommended to restart the Admin Server and all the SOA managed servers under the domain

.

Chapter 4

Installing CCB-MDM Integrated Flows

If Oracle Utilities Customer Self Service (CSS) is integrating with Oracle Utilities Customer Care and Billing (CCB) and Oracle Utilities Meter Data Management (MDM), Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Meter Data Management Release 12.1.1 Media Pack, which also includes the CCB-MDM integrated flow used in CSS, needs to be installed.

This section covers software requirements and installation verification steps.

Software Requirements

The Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Meter Data Management Release 12.1.1 Media Pack with the latest patches must be installed and running on the server.

Make sure the following patches are installed:

- Patch 23544337 - **CCB-MDM USAGE REQ FIX DATE ISSUE - CSS CHARGES TO DATE AFFECTED**
- Patch 23211903 - **NEW DYNAMIC OR CONTRACT OPTION AND EVENTS SYNC ADDED TO CCB2-MDM2INTEGRATION**

Note: This integration does *not* require installation of the AIA Foundation Pack.

Verify CCB-MDM Flows

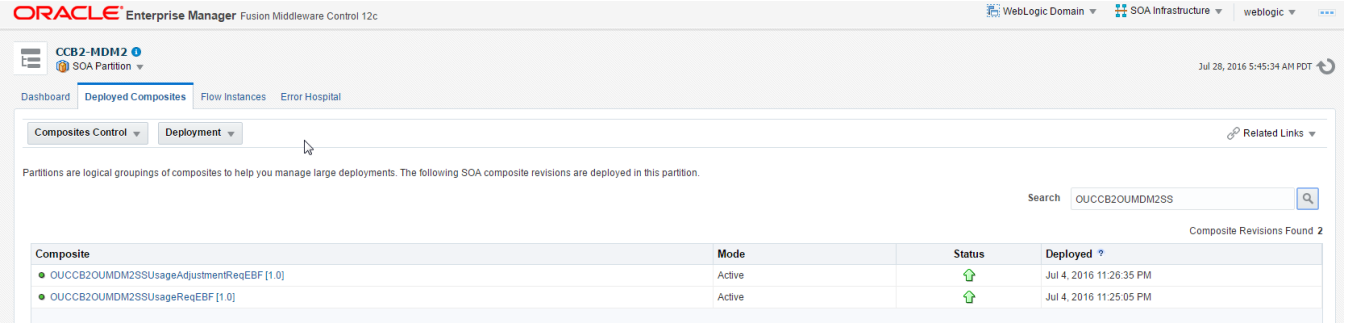
Once Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Meter Data Management Release 12.1.1 Media Pack is installed and running on the server, verify the following:

Verify that CCB-MDM Integrated flows used for OUCSS are in the Enterprise Manager

1. Log in to Enterprise Manager.
2. Expand the `Farm_soa_domain>soa>soa-infra>CCB2-MDM2` partition.

3 Verify that following two composites are deployed:

- OUCCB2OUMDM2SSUsageReqEBF
- OUCCB2OUMDM2SSUsageAdjustmentReqEBF



Note: Only OUCCB2OUMDM2SSUsageReqEBF and OUCCB2OUMDM2SSUsageAdjustmentReqEBF are used by OUCSS.

4 If the OUCSS Portal and/or OUCSS Inbound Services are installed prior to installation of the CCB-MDM Integrated Flows and the installation of any BPEL flows(e.g., Oracle Utilities Notification Center Flows, OUCSS BPEL Flows) are pending:

A Ensure that the flows are installed.

B Run the commands described in the **Modifying all Edge Application Connections** topic in Appendix F, **Connection Management**, to ensure that the new flows are registered with the OUCSS Portal and/or OUCSS Inbound Services.

Chapter 5

Installing Oracle Utilities Notification Center Flows

Oracle Utilities Notification Center is pre-integrated with OUCSS, OUCCB and OUNMS and facilitates processing and sending of messages to customers.

Edge Applications –CCB and NMS provide a mechanism to send messages (or notifications) to customers. The means of delivery are SMS or email, additional delivery channels can be introduced via extensions. OUNC processes all the notifications sent by the edge applications and sends the notification messages to customers. OUCSS provides a unified "hub" by which all these differing notifications can be managed by the customer. The customer is able to define a notification profile that captures how they wish to receive the notifications and notification preferences that captures the type of notifications they want to receive for the account.

This section describes the installation steps for OUNC BPEL flows.

Note: These flows do not require installation of the AIA Foundation Pack.

Software Requirements

The following software must be installed, configured and running prior to installation of OUNC BPEL flows:

- Oracle SOA Suite 12.2.1.0 on WebLogic Server 12.2.1
- OUNC is certified with the following edge applications:
- Oracle Utilities Customer Care and Billing v2.5.0.2
- Oracle Utilities Network Management System v1.12.0.2

Pre-Installation Tasks

The following tasks should be completed before you install the OUNC BPEL flows:

- Ensure that the Oracle SOA Suite 12.2.1.0 on WebLogic Server 12.2.1 is installed and running.
- Login into the **Weblogic Server Administration** console using the http://admin_server_hostname:port/console to confirm there are no changes in **Pending Activation** status.

  Complete this step to verify that the WebLogic Server is in a healthy state. If any items are in Pending Activation status, then there is likely an issue on the server. All issues must be resolved before you can proceed with the installation.
- If it's not already running, start the **Node Manager**.
- Restart the **Enterprise Manager** and the **WebLogic Administration** server.
- Ensure the WebLogic Admin server, SOA server, and Node Manager up and are running.
- Create the new **Product Home** folder (e.g., OUNC_Flows).

  Note: The syntax for **Product Home** depends on whether you are installing on Linux or Windows. On Linux, the variable is `$PRODUCT_HOME`. On Windows, it is `%PRODUCT_HOME%`.

Domain Topology

Oracle recommends separate WebLogic domains for portal applications in which the OUCSS Portal application and OUCSS Inbound Services can be deployed (e.g., **portal_domain**, as well as a separate domain for installation of CSS BPEL flows and OUNC Flows, e.g., **soa_domain)**.

Installation on SSL-Enabled Servers

The Admin server port in the installation properties can be specified with either the unsecured port or the SSL listening port. If the Admin server is enabled and the same is specified in the installation properties file, the installation will be carried out with the SSL port of the Admin server using the **t3s** (t3+SSL) protocol.

Cluster Installation

A WebLogic Server cluster consists of multiple WebLogic Server (Managed Server) server instances running simultaneously and working together to provide increased scalability and reliability.

For a cluster installation, the Oracle Http Server must be installed. For details, see In the installation properties file in the OHSServer section the following details must be completed:

Cluster Scenario

- Provide the details of the OHS server, including `protocol`, `hostname`, and `portnumber`, should the cluster load need to be balanced with the OHS server.
- **mgdservernames** should be completed with the server names that are configured in the cluster as well as the entries that are to be provided in the `mod_wl_ohs.conf` file.

If **soa_server1** and **soa_server2** are the WebLogic server instances in the **soa_cluster1** WebLogic cluster:

- `soa_server1` is hosted on node `abc.yourcompany.com` listening at port 8001, and `soa_server2` is hosted on node `bcd.yourcompany.com` and listening at port 8001.
- `abc.yourcompany.com:8001` and `bcd.yourcompany.com:8001` must be registered in the `mod_wl_ohs.conf` file.

- `OUNC/Core/SOA/OHSServer/mgdservernames` can be set to `soa_cluster1`, or by comma-separated values such as `soa_server1`, `soa_server2`, etc.

Standalone Scenario

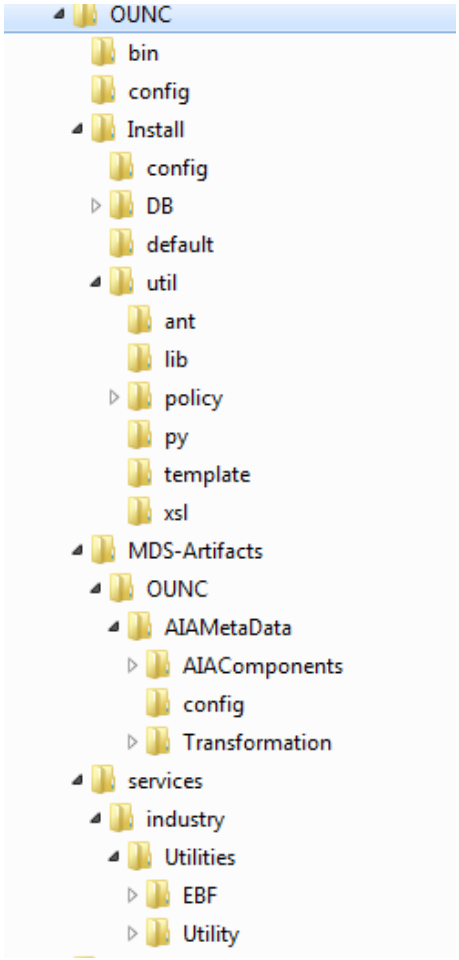
If **soa_server1** is the only managed server:

- Provide the details of the OHS server, including the `protocol`, `hostname`, and `portnumber` of the managed server.
- `OUNC/Core/SOA/OHSServer/mgdservernames` must be `soa_server1`.

Installing the Integration

Installing on SOA 12c

1. Download the OUNC.zip from the Oracle Software Delivery Cloud (edelivery.oracle.com)
2. Extract the zip file to create OUNC_Flows folder. This folder includes a subfolder hierarchy as shown in the following image. If the folder is read-only, remove the read-only attribute from the folder.



3. Download patch 23295348 and follow the instructions included in the readme.txt file.

   The following sub-steps provide more information related to the steps included in the readme file.

A Verify that the following environment variables are set.

Variable	Example
Unix/Linux and Windows OS	
PATCH_HOME	XXX/23295348
MW_HOME	XXX/Middleware
SOA_HOME	$MW_HOME/soa
ORACLE_HOME	$SOA_HOME
PRODUCT_HOME	This is the integrated flows product installation home. Example: Unix/Linux: PRODUCT_HOME=/slot/oracle/OUNC_Flows Windows: PRODUCT_HOME=C:\Oracle\OUNC_Flows

The following commands indicated in the readme file (*setWLSEnv.sh* on Linux or *setWLSEnv.bat* on Windows) set the environment variables used for executing the installation scripts.

On Windows:

```
cd %MW_HOME%\wlsserver\server\bin\
```

```
setWLSEnv.cmd
```

On UNIX/Linux:

```
source "$MW_HOME/wlserver/server/bin/setWLSEnv.sh"
```

The following example shows how to set up environment variables in a typical installation:

On Windows:

```
SET MW_HOME=C:\Oracle\Middleware\soa
SET SOA_HOME=%MW_HOME%\soa
SET ORACLE_HOME=%MW_HOME%\soa
SET PRODUCT_HOME=C:\Product_Homes\OUNC_Flows
SET PATCH_HOME=C:\PATCH_DWNLD\23295348
cd %MW_HOME%/wlserver/server/bin/
setWLSEnv.cmd
```

On UNIX/Linux:

```
export MW HOME=/Oracle/Middleware/soa
export SOA HOME=$MW HOME/soa
export ORACLE_HOME=$SOA_HOME
export PRODUCT HOME=/Product Homes/OUNC Flows
export PATCH_HOME=/PATCH_DWNLD/23295348
source $MW_HOME/wlserver/server/bin/setWLSEnv.sh
```

Note:

- Do not delete the install directory. This directory is used as the download location for patches.
- For a Windows installation, when updating any of the properties listed in the table below, add "/" to the path (e.g., C:/OUNC_Flows).

- This installation uses the values in $PRODUCT_HOME and its underlying properties file that were used to configure the integrated flow installation.

B Verify the fields in Install Properties xml have been populated.

Update the `<PRODUCT_HOME>/config/InstallProperties.xml` file with values appropriate to your environment prior to installing the patch.

Refer to Appendix D for a sample of the OUNC *InstallProperties.xml* file and an explanation of the properties and elements available in the file. (Step 1 in the in the PatchInstallInstructions.txt file included in the patch download.)

Note: In InstallProperties.xml, the hostname, portnumber, protocol, context entries in the "OUNC / EdgeSystems /CCB" node are used to build the CCB edge application end point URL during install.

4 Install the OUNC BPEL Flows.

Follow the guidelines in step 4 in the **PatchInstallInstructions.txt** file included in the patch download. This section provides additional detail to supplement those steps.

A Open a command prompt and go to the <unzipdir>\ OUNC_Flows folder which is referred as PRODUCT_HOME. Example: PRODUCT_HOME=/slot/oracle/OUNC_Flows where you unzipped OUNC.zip

B Under the `<PRODUCT_HOME>/Install/DB/sequence` folder, check the following SQL files:

- nc_notification_seq.sql
- nc_user_delivery_opt_seq.sql
- nc_user_notif_pref_seq.sql

On a new install, the start sequence is defaulted to 1. There is need to update the SQL files.

When reinstalling, perform the following steps:

- Determine the last sequence number of the sequences in the existing OUNC tables
- Update the starting value of the sequences to be last sequence number + 1 in the SQL files.

C Execute this command to install the Database artifacts and complete the DB installation.

On UNIX/Linux :

```
cd $PRODUCT_HOME/bin
```

```
ant -f InstallBuild.xml installDB -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml | tee
ouncInstallDB.log
```

On Windows:

```
cd %PRODUCT_HOME%/bin
```

```
ant -f InstallBuild.xml installDB -
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -l ouncInstallDB.log
```

Note:

- When reinstalling the Notification DB, make sure the starting value of the sequences are correct. Check the last number of the sequences before reinstalling. Make the last number + 1 be the start sequence of the new installation.
- After running the above command, verify that te installation log does not contain any errors and the build is successful. If there are any errors in install.log, fix the errors before running the install again.

D Execute the following command to install the WebLogic Java resources such as JDBC Satasources, DB Adapter deployment, credential maps for edge application, JMS Server,JMS Modules, JMS Queues, and JMS Topics.

On UNIX/Linux:

```
cd $PRODUCT_HOME/bin
```

```
ant -f InstallBuild.xml installWL -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml | tee
ouncInstallWL.log
```

On Windows:

```
cd %PRODUCT_HOME%/bin
```

```
ant -f InstallBuild.xml installWL -
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -l ouncInstallWL.log
```

Note: After running the above command, verify that the installation log does not contain any errors and the build is successful. If there are any errors in install.log, fix the errors before running the install again.

E After executing the above command it is highly recommended to restart the Admin Server and all the SOA managed servers under the domain.

F Execute this command to install the SOA Partition and SOA Composites.

On UNIX/Linux:

```
cd $PRODUCT_HOME/bin
```

```
ant -f InstallBuild.xml installSOA -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml | tee
ouncInstallSOA.log
```

On Windows:

```
cd %PRODUCT_HOME%/bin
```

```
ant -f InstallBuild.xml installSOA -
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -l ouncInstallSOA.log
```

Note: After running the above command, verify that the installation log does not contain any errors and the build is successful. If there are any errors in install.log, fix the errors before running the install again.

G If the OUCSS Portal and/or OUCSS Inbound Services are installed prior to the installation of the Oracle Utilities Notification Center flows, and if the installation of any BPEL flows (e.g., OUCSS BPEL Flows, CCB-MDM Flows) are pending:

- Ensure that the flows are installed.
- Run the commands described in the **Modifying all Edge Application Connections** topic in Appendix F, **Connection Management**, to ensure that the new flows are registered with the OUCSS Portal and/or OUCSS Inbound Services.

Email Configuration

Configure the Certificates of the Mail Server

1 Import the certificates from the Mail Server and add it to your server trust store.

The Email Server uses two protocols to send/receive messages.

- SMTP for sending.
- POP3 or IMAP for receiving mails. Configure the receiving protocol accordingly e.g.,POP3/IMAP.

2 Get the <Mail Server> Certificate:

```
/usr/bin/openssl s_client -connect <Mail Server>:<Mail Port Number> > smtp.cert
```

Where <Mail Server> is the SMTP server location and <MailPort Number> is the Mail Server listening port.

Example:

```
/usr/bin/openssl s_client -connect stxxx.yourcompany.com:425 >smtp.cert
```

3 Edit the smtp.cert by removing everything except the following:

```
--BEGIN CERTIFICATE--
<certificate>
--END CERTIFICATE--
```

Important: The BEGIN CERTIFICATE and END CERTIFICATE lines must remain in the file.

4 Import the certificates into a new trust store:

```
keytool -import -alias <Mail Server>  -keystore ${WL_HOME}/server/lib/trusted-
certificates.jks -file smtp.cert
```

Note: You will be prompted to enter a password. Enter <password>.

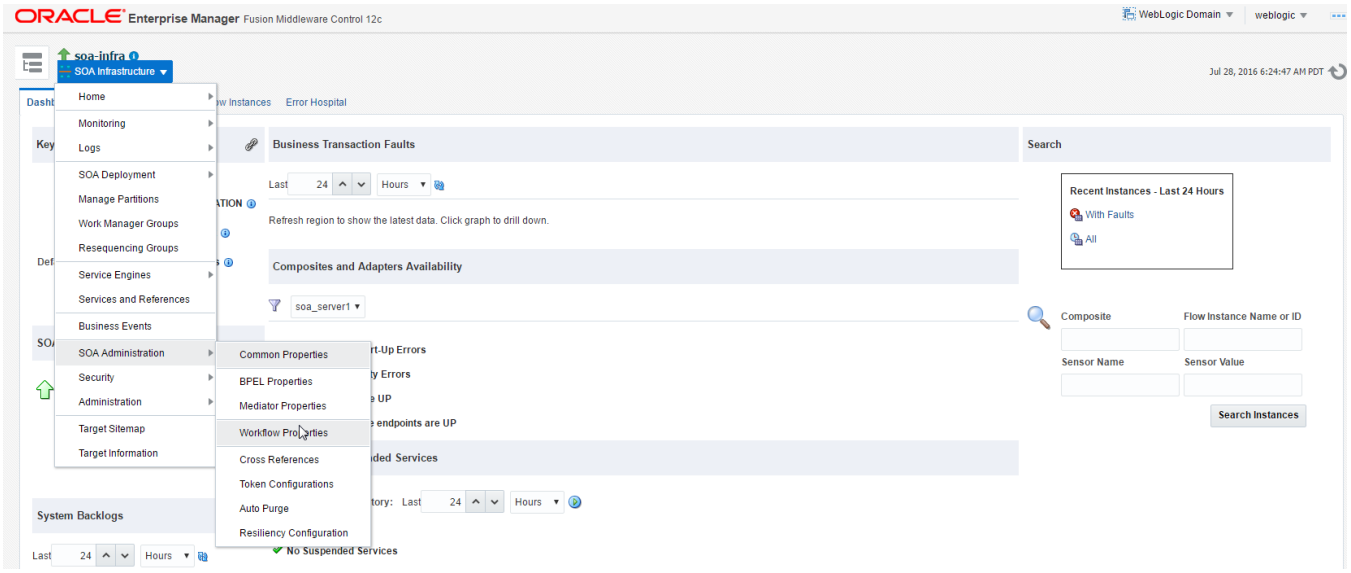
5 Edit the setDomainEnv.cmd or setDomainEnv.sh file (located in <WL_HOME>/user_projects/domains/<domain_name>/bin) by replacing the existing `javax.net.ssl.trustStore` property setting with the following:

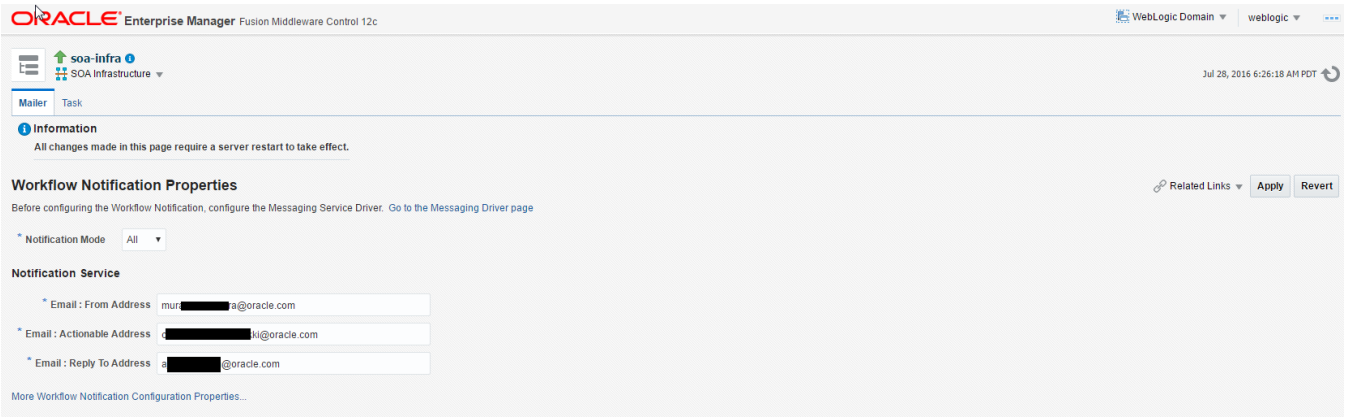
```
-Djavax.net.ssl.trustStore=${WL_HOME}/server/lib/trusted-certificates.jks -
Djavax.net.ssl.trustStorePassword=<password>
```

6 Restart the Admin Server and the Managed Server through the admin console

Sender Address Configuration

The User Messaging Service Email Configuration's OutgoingUsername and WorkFlowNotification's from Address are identical if you wish to configure it as a different one you need to navigate to the Enterprise Manager > soa-infra > SOA Administration and select the Workflow Properties/Workflow Notification Properties based on the version.





Configuring Multiple Sender Address Configuration

Mapping has been changed for the Email Service; the notificationType is mapped to "FromAccountName" of Notification service

The **From Account** of the Notification service specifies the name of the account used to send this message. The default account is named **Default** and is editable from the Workflow Notification Properties page in Oracle Enterprise Manager Fusion Middleware Control as mentioned in the previous section. To add additional accounts, you must use the System MBean Browser in Oracle Enterprise Manager Fusion Middleware Control.

For information on editing “From Account Name” property in Oracle Enterprise Manager Fusion Middleware Control, see *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

Create ASNSDriver using the notification type as the driver Name for each of the notification types in the system (eg. OUT, RST, C1MP, C1PC, C1PP, WSLP, WSPR, WXBD, WXBR, C1FI). Use setASNSDriver and associate a different sender email addresses for each notification type. When email is received, depending on the notification type, the “From” email address will be different.

The "from" email address coming from CCB payload is mapped to the "replyTo" of the notification service.

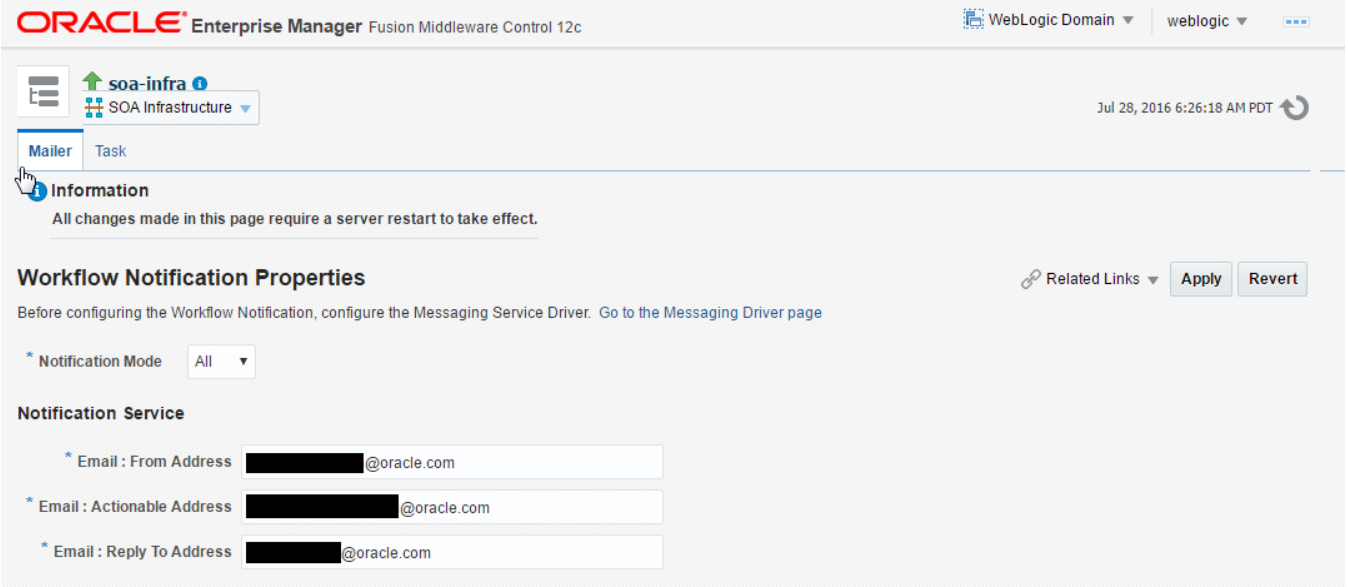
Post Installation Checklist

Verify the User Messaging Service List

1. Go to the Deployments Section in the WebLogic administration console section and ensure that the applications shown below are active:

usermessagingdriver-apns	Installed		Enterprise Application		Global		8
usermessagingdriver-email	Active	OK	Enterprise Application	soa_cluster1	Global		8
usermessagingdriver-extension	Installed		Enterprise Application		Global		8
usermessagingdriver-gcm	Installed		Enterprise Application		Global		8
usermessagingdriver-smpp	Active	OK	Enterprise Application	soa_cluster1	Global		8
usermessagingdriver-twitter	Installed		Enterprise Application		Global		8
usermessagingdriver-xmpp	Installed		Enterprise Application		Global		8
usermessagingserver	Active	OK	Enterprise Application	soa_cluster1	Global		7
worklistapp	Active	OK	Enterprise Application	soa_cluster1	Global		100
wsm-pm	Active	OK	Enterprise Application	soa_cluster1	Global		5

2. Navigate to WebLogic Enterprise Manager, right click on the **soa-infra** node then select SOA Administration and Workflow Properties:
3. Ensure that the Work flow notification properties are set as “**All”**.



4 Expand the User Messaging service node in the EM left panel as follows:

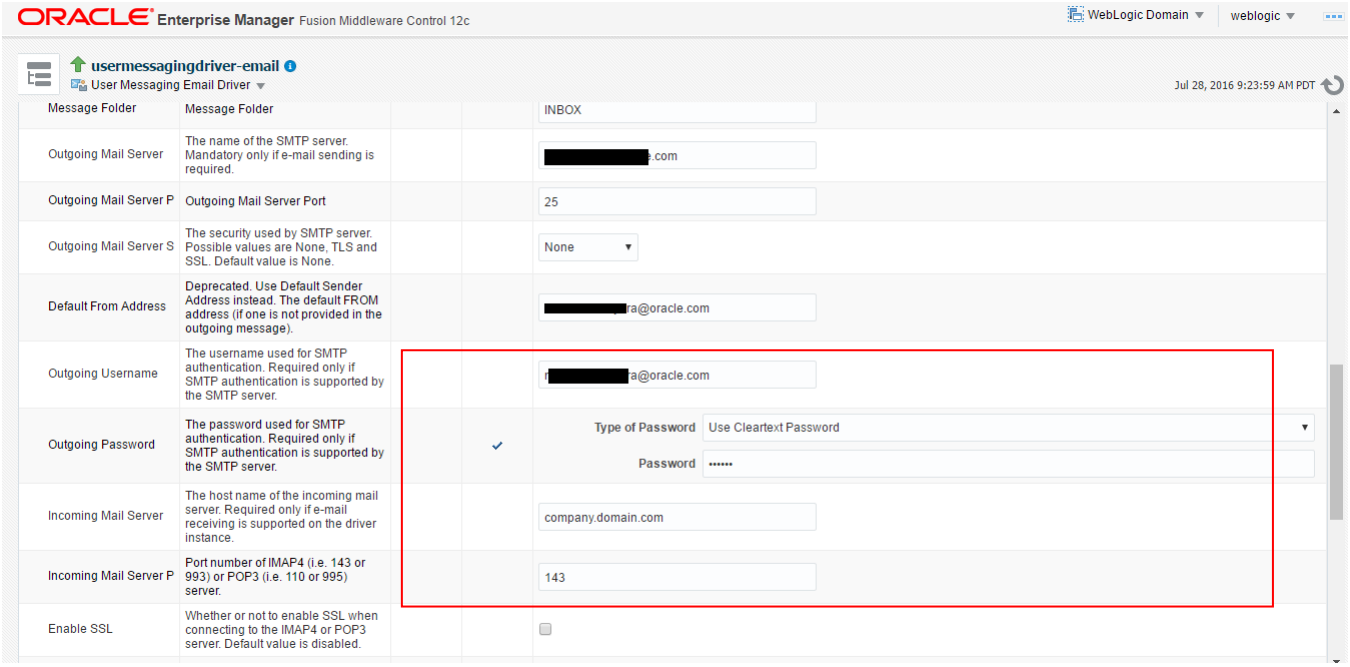
5 Ensure that all these applications are enabled.

Verify EMAIL Properties

1 In the EM Console In the Target Navigation User Select Messaging Service > usermessagingdriver-email

2 From the Context Menu select Email Driver Properies

3 Select the usermessagingdriver-UGBUEMAIL and click on Edit.



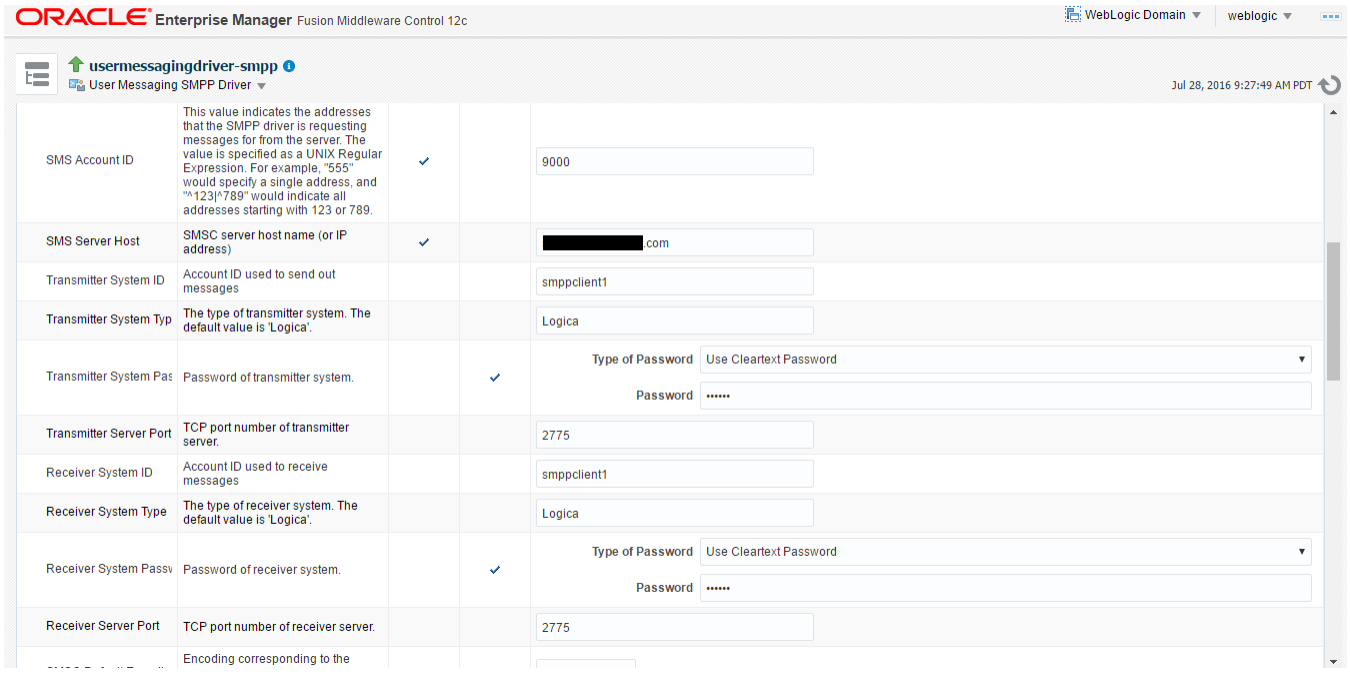
4 Ensure that all properties match those configured in the InstallProperties.xml file (see Appendix D).

Verify SMPP Properties

1 In the EM Console, go to Target Navigation User Select Messaging Service > usermessagingdriver-smpp.

2 From the Context Menu select SMPP Driver Properties.

3 Select the usermessagingdriver-UGBUSMPP, then click Edit.

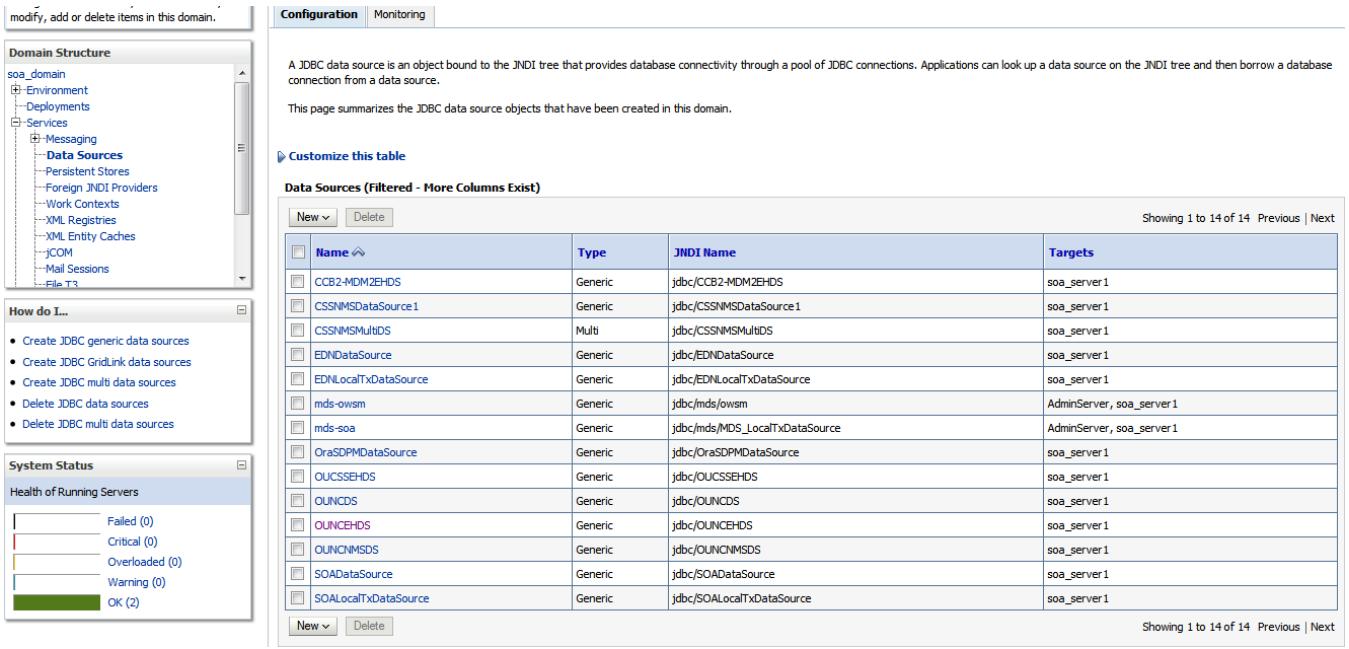


Data Source Configurations Checklist

1 Ensure that the following data sources are created on the server:

- **OUNCEHDS** – Error Handling Data Source
- **OUNCDS** – Notification Data Source
- **OUNCNMSDS** – NMS Generic Data Source

Navigation: On left pane, select the **Services > Data Sources;** check the data sources marked below are installed.



2 Check that the Connection Pool settings for the Generic Data Source(s) and Error Handling Data Source are correctly pointing to their corresponding database.

Navigation: On the Left Pane, select **Services > Data Sources** and in the main page select the **Connection Pool** tab check the URL and properties text area for the credentials

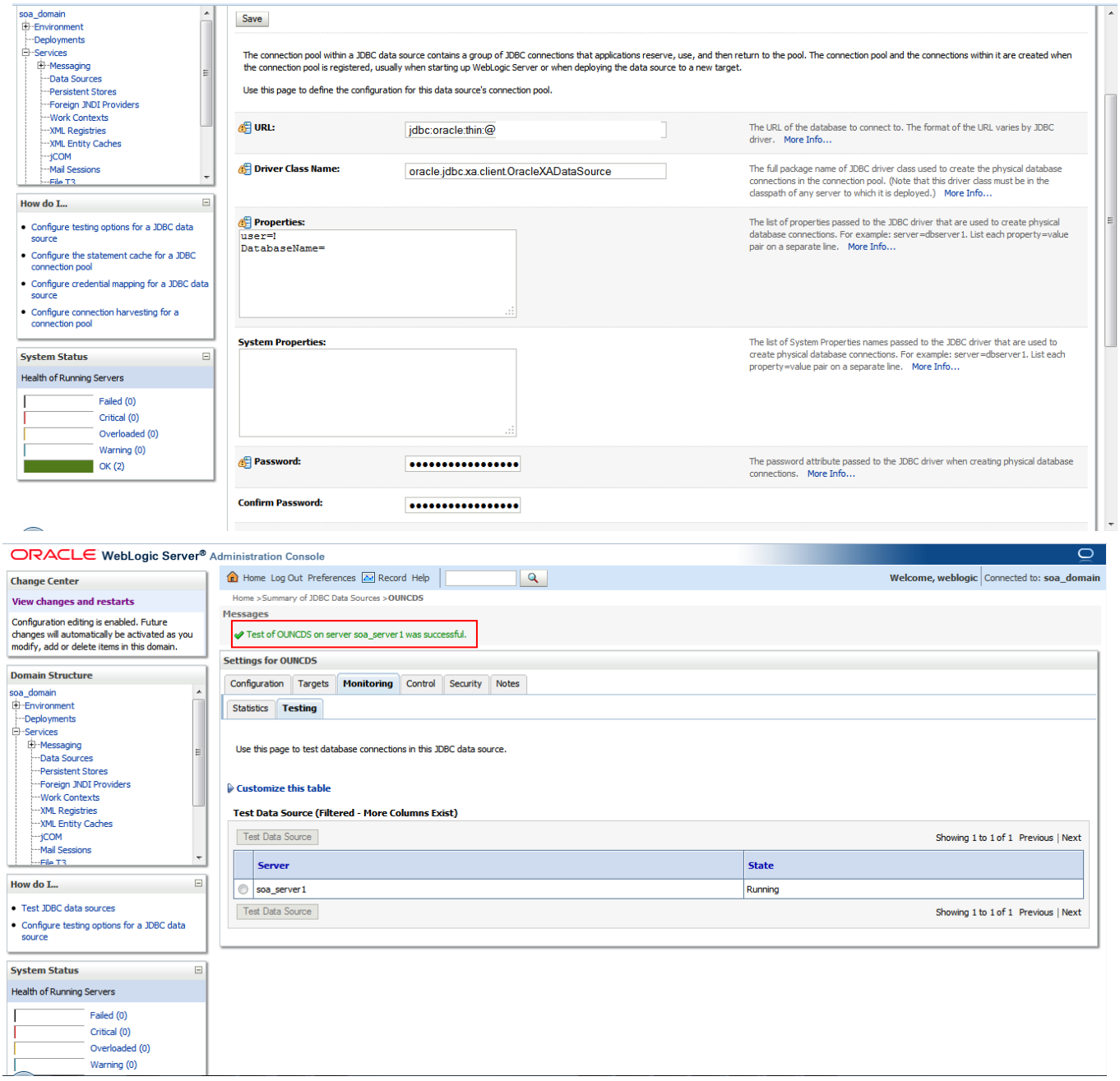
A NMS Generic Data Source OUNCNMSDS must point to the NMS Database.

B Verify that the Error Handling Data Source OUNCEHDS is pointing to the correct Error Handling Database.

C Verify that the OUNCDS is pointing to the correct Notification data base.

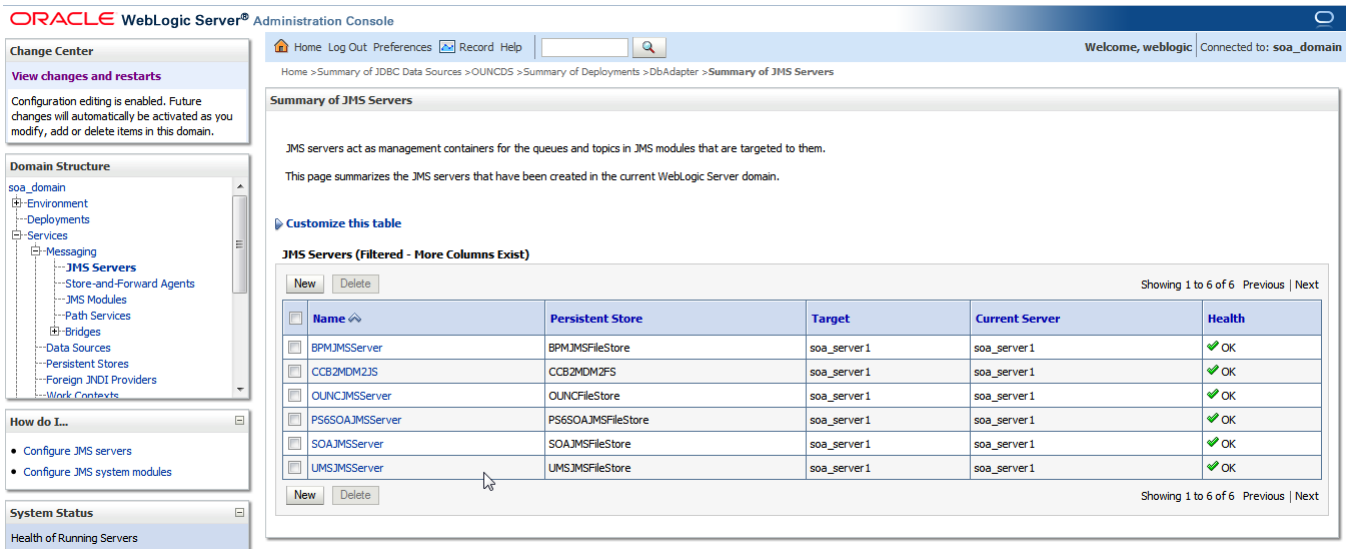
3 Test the database for correct configurations.

Navigation: On the Left Pane, select the **Services > Data Sources** and in the main page select the **Monitoring** tab. Select the sub task **Testing** and test the connectivity for all the above mentioned data sources as depicted below.

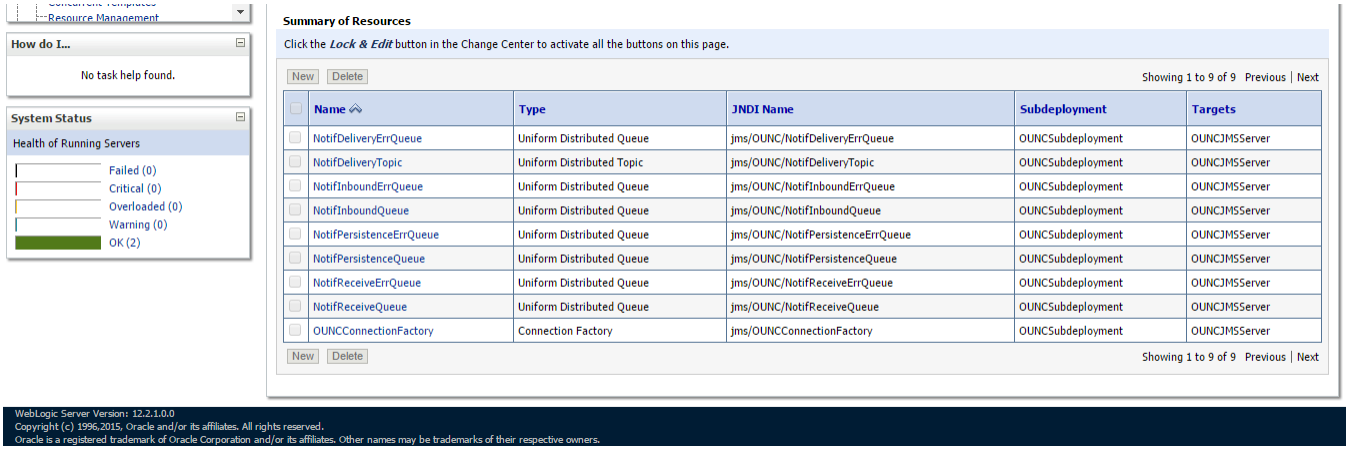


JMS Configurations

1 Check for the JMS Server Configuration by choosing **Services > Messages > JMS Servers.**



2 Ensure the JMS module **OUNCJMSModule** is created. Also check that the **Seven** JMS Queues and one topic shown in the following image are created.



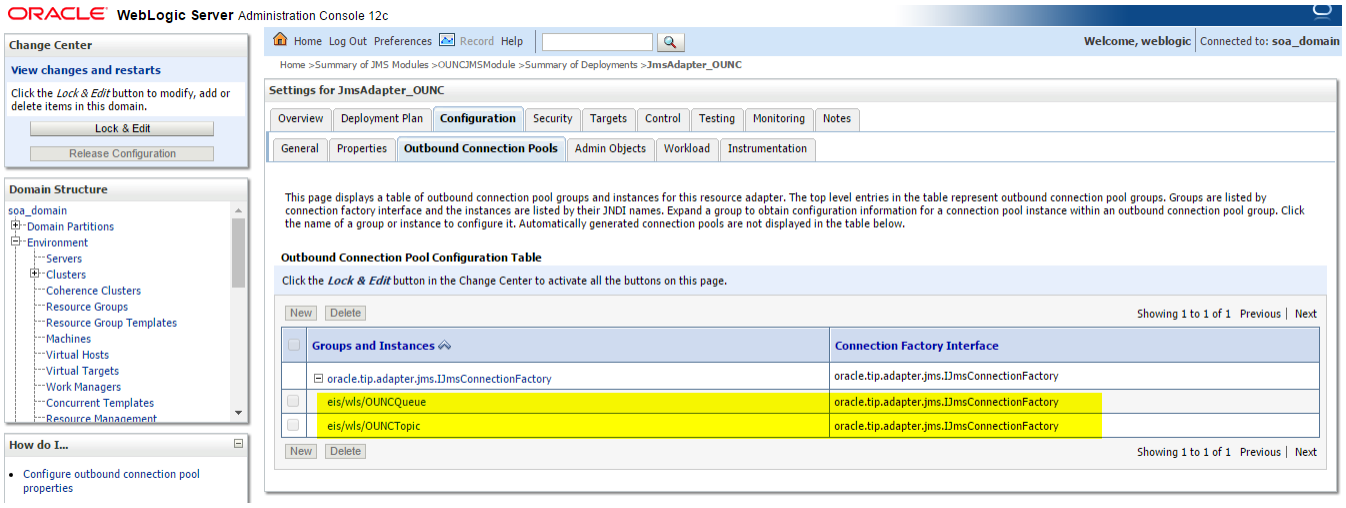
JMS Outbound Connection Pool

1 Ensure that following two connection instances are created on the server:

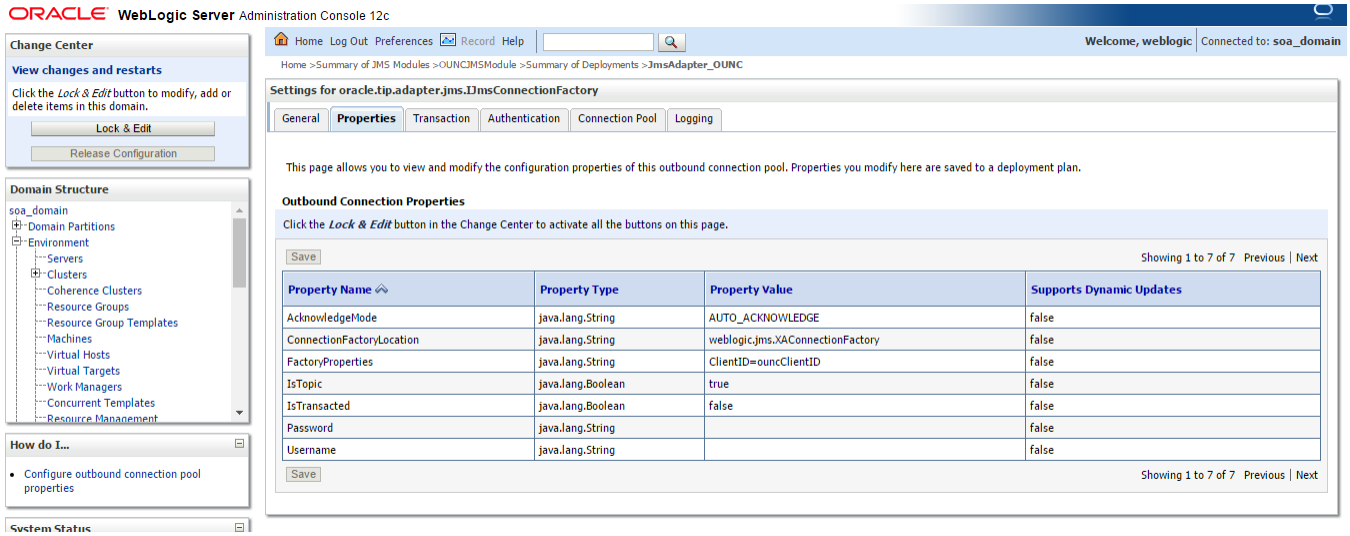
- `eis/wls/OUNCQueue`: Queue Connection instance.
- `eis/DB/OUNCTopic`: Topic Connection instance.

2 On the Left Pane, select the **Deployments,** click on the **JMSAdapter_OUNC,** select the **Configuration** tab and select the **Outbound Connection Pools** tab.

3 Expand oracle.tip.adapter.jms.IJmsConnectionFactory.



4 Click on the `eis/wls/OUNCTopic` to ensure the appropriate property name and values are assigned to it.



5 Ensure that the **ClientId=ouncClientId** is associated in the Outbound Connection pool **FactoryProperties**.

6 Go back to the OutboundConnections Listed page and select **eis/wls/OUNC** and verify all the properties depicted.

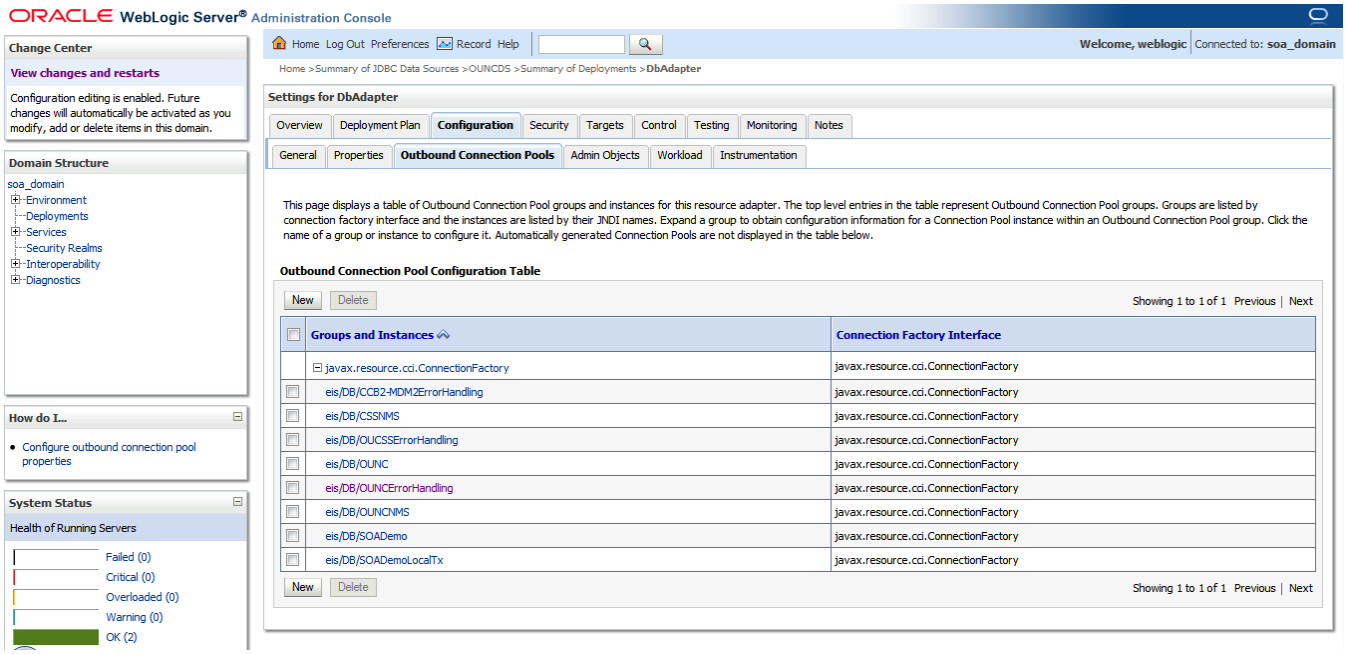
Database Outbound Connection Pool

1 Ensure that following connection instances are created on the server:

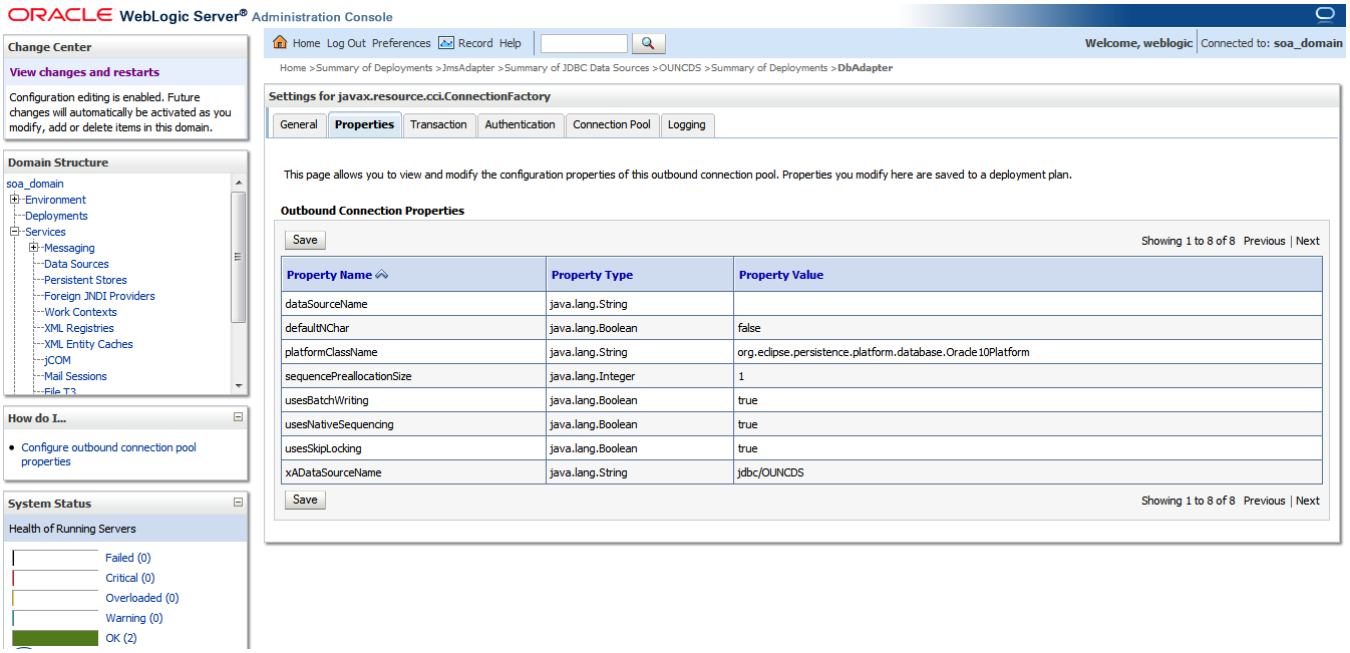
- `eis/DB/OUNCErrorHandling`: ErrorHandling connection instance.
- `eis/DB/OUNC`: Notification connection instance.
- `eis/DB/OUNCNMS` : NMS Connection Instance.

2 On the Left Pane, select the **Deployments,** click on the **DBAdapter,** select the **Configuration** tab and select the **Outbound Connection Pools** tab.

3 Expand javax.resource.cci.ConnectionFactory.



4 Verify that each database outbound connection instance is pointed to the correct database as shown in the following image (shown as **eis/DB/OUNC**, with the data source **jdbc/OUNCDS**).



5 Verify all other Outbound Connection instances.

Outbound Connection Name	Property Name	Property value
eis/DB/OUNC	xaDataSourceName	jdbc/OUNCDS
eis/DB/OUNCEHDS	dataSourceName	jdbc/OUNCEHDS
eis/DB/OUNCNMS	xaDataSourceName	jdbc/OUNCNMSDS

Verification of the Database Objects

1. Open any database connection application such as SQL Developer or SQL *Plus.
2. Connect to the database mentioned in OUNCDS.
3. Execute the following SQL command (where *XXXX* can be any one of the object types in the table below)..

```
SELECT count(*) FROM user_objects WHERE object_type='XXXX' AND status='VALID' AND
object_name LIKE 'NC_%'
```

Example:

```
SELECT count(*) FROM user_objects WHERE object_type='TABLE' AND status='VALID' AND
object_name LIKE 'NC_%'
```

4. It should give a result or output of **17**; ensure that the count for all other entities matches the result.
5. The count should be either equal to or greater than the values in the following table.

OBJECT TYPE	COUNT
PACKAGE	1
SEQUENCE	3
INDEX	15
VIEW	6
TABLE	19

6. Make sure the values of the following sequences are correct:
   - nc_notification_seq

     This sequence is used to populate the **NOTIF_ID** for NC_NOTIFICATION table
   - nc_user_notif_pref_seq

     This sequence is used to populate the **USER_NOTIF_PREF_ID** for NC_USER_NOTIF_PREF table
   - nc_user_delivery_opt_seq

     This sequence is used to populate the **USER_DELIVERY_OPT_ID** for NC_USER_DELIVERY_OPT table

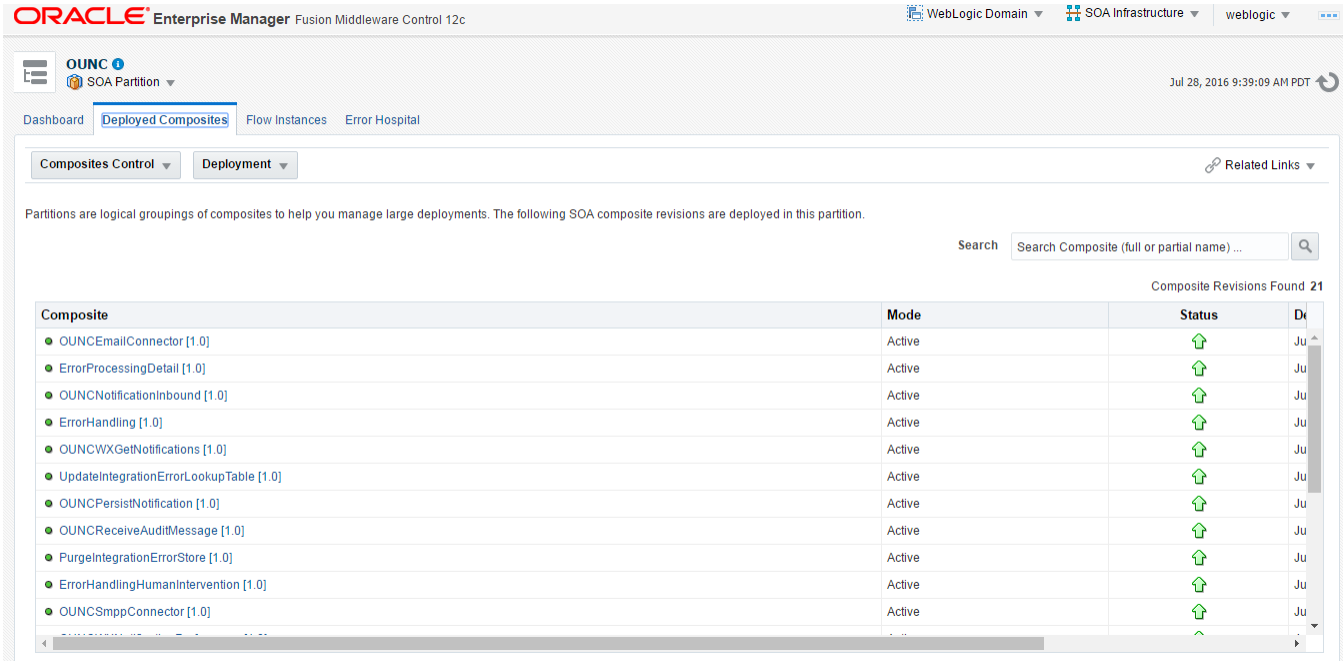
Note:
On install, the sql that creates the sequences are located in `<PRODUCT_HOME>/Install/DB/sequence` folder
On new install, the start sequence is defaulted to 1.
During upgrade or when reinstalling the Notification Module make sure the starting value of the sequences are correct. Check the last number of the sequences before reinstalling or upgrading. Make the last number + 1 be the start sequence.

Verify the Composites in the Enterprise Manager

Verify that the OUNC partition was created with all the composites deployed:

1. Log in to Enterprise Manager.
2. Expand the Farm_soa_domain > soa >soa-infra>OUNC partition.
3. Verify that these 21 composites are deployed and in active state:
   - OUNCReceiveAuditMessage
   - OUNCEmailConnector

- OUNCDeliverDeferred
- PurgeIntegrationErrorStore
- OUNCProcessAuditMessage
- OUNCPersistNotification
- CCBOUNCNotificationInbound
- CCBOUNCNotificationHistory
- OUNCRouteNotification
- OUNCWXNotificationPreferences
- OUNCSendOptInMessage
- OUNCWXGetNotifications
- OUNCNMSNotificationInbound
- ErrorProcessingDetail
- OUNCWXDeliveryChannels
- OUNCNotificationInbound
- OUNCSmppConnector
- ErrorHandlingHumanIntervention
- UpdateIntegrationErrorLookupTable
- ErrorProcessingMaster
- ErrorHandling



Verify Security Credentials from EM

Follow these steps to verify security for connecting to Oracle Utilities Meter Data Management (MDM) and Oracle Utilities Customer Care and Billing (CCB) from SOA11g middleware:

1. Log in to the Enterprise Manager.
2. Expand the WebLogic Domain and select the **soa_domain > Security > Credentials**.
3. Ensure that the following entry is present in the list: OU_CCB_01 and OU_MDM2_02 are present

Verify Attached Policies from EM

1. Follow the below steps to verify the policies attached to the web services that each BPEL process is using:
2. Login to the Enterprise Manager
3. Expand SOA > OUNC partition
4. Choose any composite in there and select the policies and should be able to see the policy attached.

   Note: Please refer to Appendix I for more information on Security Policies.

Uninstalling the OUNC Flows

1. Set the environment variables as described in Step 3-A in the "Installing the Integration" topic earlier in this chapter.
2. Execute the following command to go to the PRODUCT_HOME:

   On UNIX/Linux:

   ```
   cd $PRODUCT_HOME/bin
   ```

   On Windows:

   ```
   cd %PRODUCT_HOME%/bin
   ```

3. Execute the following command to complete the BPEL Flows integration uninstallation.

   On UNIX/Linux:

   ```
   cd $PRODUCT_HOME/bin
   ```

   ```
   ant -f UnInstallBuild.xml uninstallSOA -
   DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml | tee ouncUninstallSOA.log
   ```

   On Windows:

   ```
   cd %PRODUCT_HOME%/bin
   ```

   ```
   ant -f UnInstallBuild.xml uninstallSOA -
   DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -l ouncUninstallSOA.log
   ```

4. Execute the following command to complete the uninstallation of Java resources like JMS Servers, JMS Modules, JMS Queues, Datasources.

   On UNIX/Linux:

   ```
   cd $PRODUCT_HOME/bin
   ```

   ```
   ant -f UnInstallBuild.xml uninstallWL -
   DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml | tee ouncUninstallWL.log
   ```

   On Windows:

   ```
   cd %PRODUCT_HOME%/bin
   ```

```
ant -f UnInstallBuild.xml uninstallWL -
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -l ouncUninstallWL.log
```

5 Execute the following command to complete the DB uninstallation

On UNIX/Linux:

```
cd $PRODUCT_HOME/bin
```

```
ant -f UnInstallBuild.xml uninstallDB -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml | tee ouncUninstallDB.log
```

On Windows:

```
cd %PRODUCT_HOME%/bin
```

```
ant -f UnInstallBuild.xml uninstallDB -
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -l ouncUninstallWL.log
```

Note: After running the above command, verify that the installation log does not contain any errors and the uninstall is successful.

Chapter 6

Installing CCB-NMS Integrated Flows

If CCB owns the notification preferences and delivery channels, CCB will be the single source of notifications for Notification Center. CCB communicates any notification preference to NMS, and NMS sends notifications for the notification preferences set to CCB through the BPEL flows for Notification. These BPEL integration flows are part of the Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Network Management System Release 12.1.1 Media Pack, which also includes the CCB-NMS integrated flow used in Notification (which also needs to be installed for this functionality).

Note: These flows do not communicate with OUCSS directly.

This section covers software requirements and installation verification steps.

Software Requirements

The Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Network Management System Release 12.1.1 Media Pack with the latest patches must be installed and running on the server.

Make sure the following patches are installed:

- Patch **23333992 - CCB - NMS FLOWS FOR NOTIFICATIONS**

Note: This integration does *not* require installation of the AIA Foundation Pack.

Verify CCB-NMS Flows

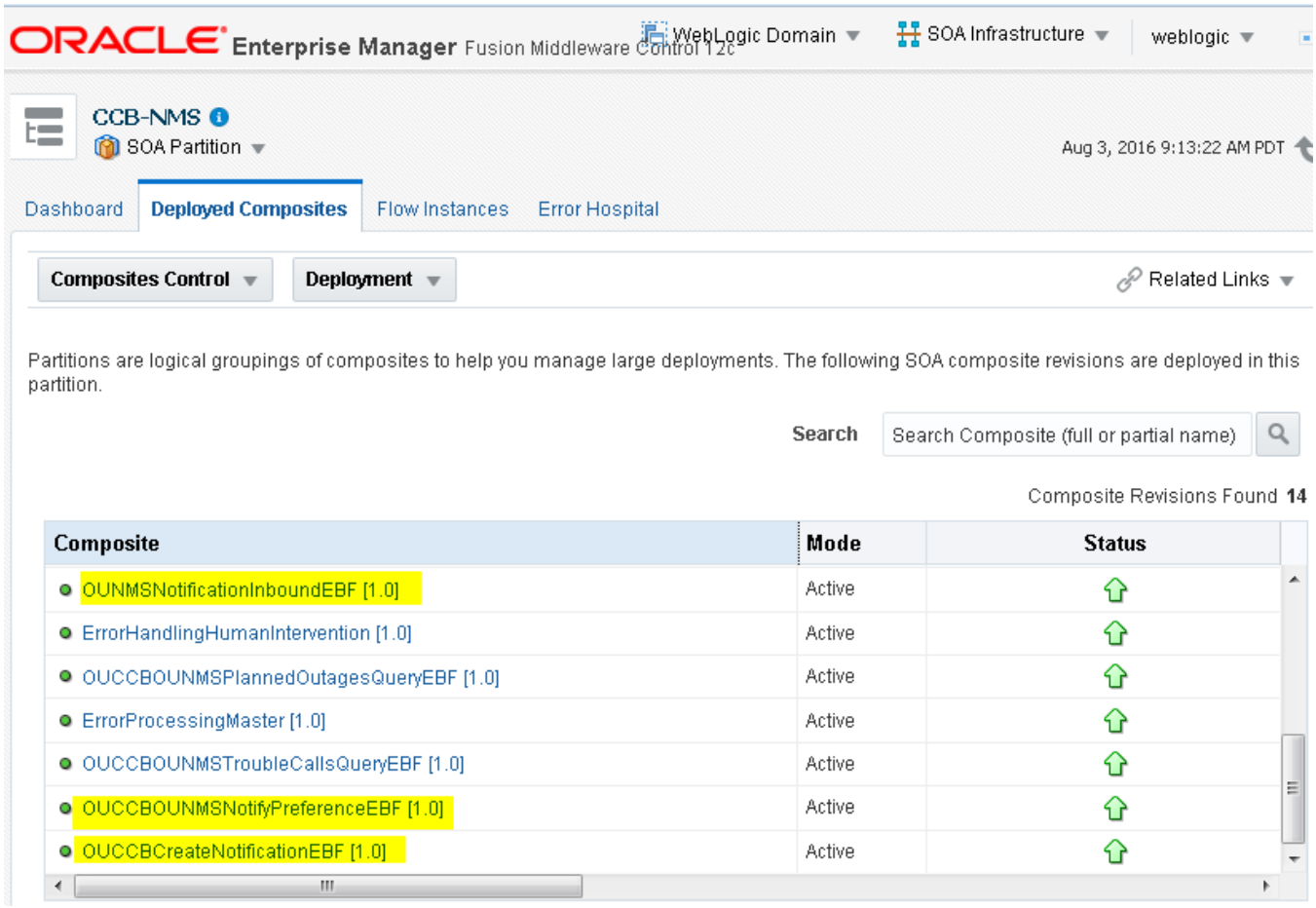
Once Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Meter Network Management System Release 12.1.1 Media Pack is installed and running on the server, verify the following:

Verify that CCB-NMS Integrated flows used for Notification are in the Enterprise Manager

1. Log in to Enterprise Manager.
2. Expand the `Farm_soa_domain>soa>soa-infra>CCB-NMS` partition.

3 Verify that following three composites are deployed:

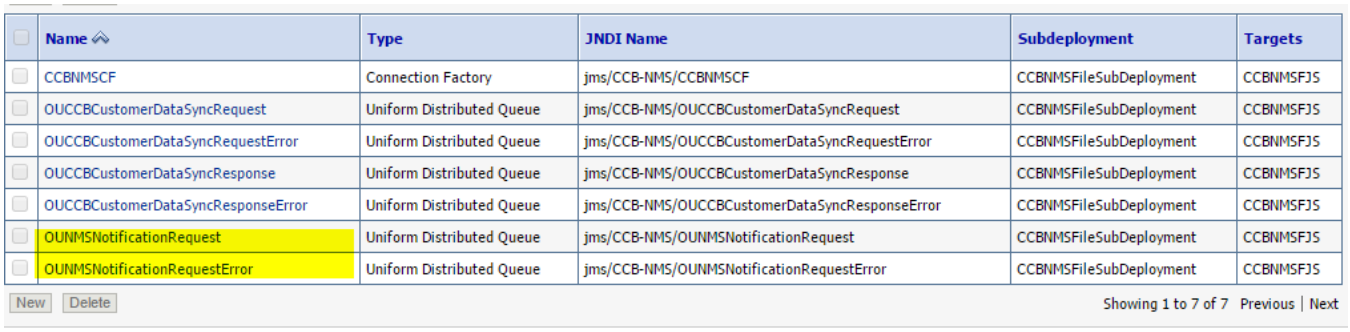
- OUNMSNotificationInboundEBF
- OUCCBOUNMSNotifyPreferenceEBF
- OUCCBCreateNotificationEBF



Verify JMS Queues

Verify that the JMS queues for CCB-NMS Integration flows for Notification are present

- OUNMSNotificationRequest
- OUNMSNotificationRequestError



Chapter 7

Uninstalling OUCSS

UnInstall OUCSS Portal

The following procedure describes how to uninstall the default OUCSS Portal installation.

Notes:

- Before running the uninstall scripts, ensure that AdminServer and WC_Portal is up and running.
- If uninstalling all the artifacts the ensure that if the OUCSSInboundServices is targeted on the same managed server as that of the OUCSSPortal ear then it is highly recommended to uninstall the InboundServices prior to the uninstalling OUCSS Portal.

1. Perform Steps 3–6 as described in the Installing OUCSS Portal section of this document to set up the environment.
2. Run the following command to uninstall the following OUCSS artifacts:
   - OUCSS Mail Session
   - OUCSS Shared lib and extend.oucss.portal (11.1.1, 11.1.1.9.0), used to extend OUCSS Portal.
   - OUCSSPortal (v2.2.0.0) Enterprise application and associated MDS Partition.

   On Windows:

   ```
   ant -f UnInstallBuild.xml uninstallOUCSS -
   DInstallProperties=%PRODUCT_HOME%\config\InstallProperties.xml -l unInstallPortal.log
   ```

   On UNIX/Linux:

   ```
   ant -f UnInstallBuild.xml uninstallOUCSS -
   DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml | tee unInstallPortal.log
   ```

   Note: After running the command check UnInstallPortal.log for any build errors. If "BUILD SUCCESSFUL" does not appear at the end of the file, fix any errors listed in the log and rerun the UnInstallPortal command.

3 Run the following command to drop OUCSS Schema and Data Source

On Windows:

```
ant -f UnInstallBuild.xml DBUnInstallPortal -
DInstallProperties=%PRODUCT_HOME%\config\InstallProperties.xml -l DBUnInstallPortal.log
```

On UNIX/Linux:

```
ant -f UnInstallBuild.xml DBUnInstallPortal -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml -l DBUnInstallPortal.log
```

Note: After running the command check DBUnInstallPortal.log for any build errors. If "BUILD SUCCESSFUL" does not appear at the end of the file, fix any errors listed in the log and rerun the DBUnInstallPortal command.

4 Run the following command to restart the Portal managed servers.

On Windows:

```
ant -f InstallBuild.xml RestartManagedServers –
DapplicationPropertyNode=oucssApplication.oucssPortal -
DInstallProperties=%PRODUCT_HOME%\config\InstallProperties.xml -l
RestartServerOnUnInstall.log
```

On UNIX/Linux:

```
ant -f InstallBuild.xml RestartManagedServers –
DapplicationPropertyNode=oucssApplication.oucssPortal -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml -l
RestartServerOnUnInstall.log
```

5 Remove Users and Groups from the WebLogic Admin Console manually.

6 Verification of a successful uninstall:

Note: Data Source, Mail Session and Shared libraries will be deleted if no other managed server is a target. If there is another managed server set as target, then the script removes the managed server used by Portal Application from the target.

A Log in to the WebLogic console as wlsadminuser/wlsadminpasswd.

B Choose portal**_domain > Deployments** and verify that the following are either no longer listed or the target should be removed from the managed server:

- **com.oracle.ugbu.ss.lib (2.2, 12.2.1.0.0)**
- **com.oracle.ugbu.ss.residential.lib(2.2, 12.2.1.0.0)**
- **com.oracle.ugbu.ss.commercial.lib(2.2, 12.2.1.0.0)**
- **extend.oucss.portal (2.2,2.2.0.0.0)**
- **extend.spaces.webapp(2.0,12.2.1.0.1)**

C Choose **Services > Data Sources** and verify that the **OUCSSDS** data source is no longer present.

D Choose **Services** > **Mail Sessions**. Verify that the **OUCSS** mail session is no longer present.

E Finally, verify that OUCSS DB User is dropped from the database.

Uninstall OUCSS Inbound Services

The following procedures describe how to uninstall the OUCSS Inbound Services installation when the OUCSS Portal is still installed as well as when the OUCSS Portal is already uninstalled.

The following procedure describes how to uninstall OUCSS Inbound Services when OUCSS Portal is already unInstalled or if OUCSS Portal is deployed on a separate managed server.

1. Perform Steps 3–6 in the Installing OUCSS Portal procedure to set up the environment.
2. Verify the `/oucssInstall/oucssApplication/oucssInbound/deploy` flag in InstallProperties.xml is set to *true*.
3. Run the following command to uninstall the following OUCSS artifacts:
   - *OUCSS_Extension.war, OUCSS_Commercial_Extension.war, extend.oucss.portal.war* and OUCSS_Rest_Extension.war as shared libraries.
   - OUCSS Mail Session
   - OUCSSInboundServices (v2.2.0.0) Enterprise application and associated MDS Partition.

   On Windows:

   ```
   ant -f UnInstallBuild.xml UnInstallInboundService -
   DInstallProperties=%PRODUCT_HOME%\config\InstallProperties.xml -l
   UnInstallInboundService.log
   ```

   On UNIX/Linux:

   ```
   ant -f UnInstallBuild.xml UnInstallInboundService -
   DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml | tee
   UnInstallInboundService.log
   ```

   Note: After running the command check UnInstallInboundService.log for any build errors. If "BUILD SUCCESSFUL" does not appear at the end of the file, fix any errors listed in the log and rerun the UnInstallInboundService command.
4. Verification of a successful uninstall:

   Note: Data Source, Mail Session and Shared libraries will NOT be deleted; the script undeploys OUCSS Inbound Application and only the shared libraries that are particularly used for this application.

   A. Log in to the WebLogic console as WLS Admin.

   B. Goto **Deployments** and verify that the following are no longer listed:
      - **com.oracle.ugbu.ss.lib (2.2, 12.2.1.0.0)**
      - **com.oracle.ugbu.ss.residential.lib(2.2, 12.2.1.0.0)**
      - **com.oracle.ugbu.ss.commercial.lib(2.2, 12.2.1.0.0)**
      - **com.oracle.ugbu.ss.rest.lib (2.2, 2.2.0.0.0)**
      - **jax-rs(2.0,2.21.1.0)**
      - **OUCSSInboundServices (v2.2.0.0) (enterprise application)**

   C. Choose **Services > Data Sources** and verify that the **OUCSSDS** data source is no longer present or no more targeted to the managed server where the OUCSSInboundServices application is deployed.

   D. Choose **Services** > **Mail Sessions**. Verify that the **OUCSS** mail session is no longer present.

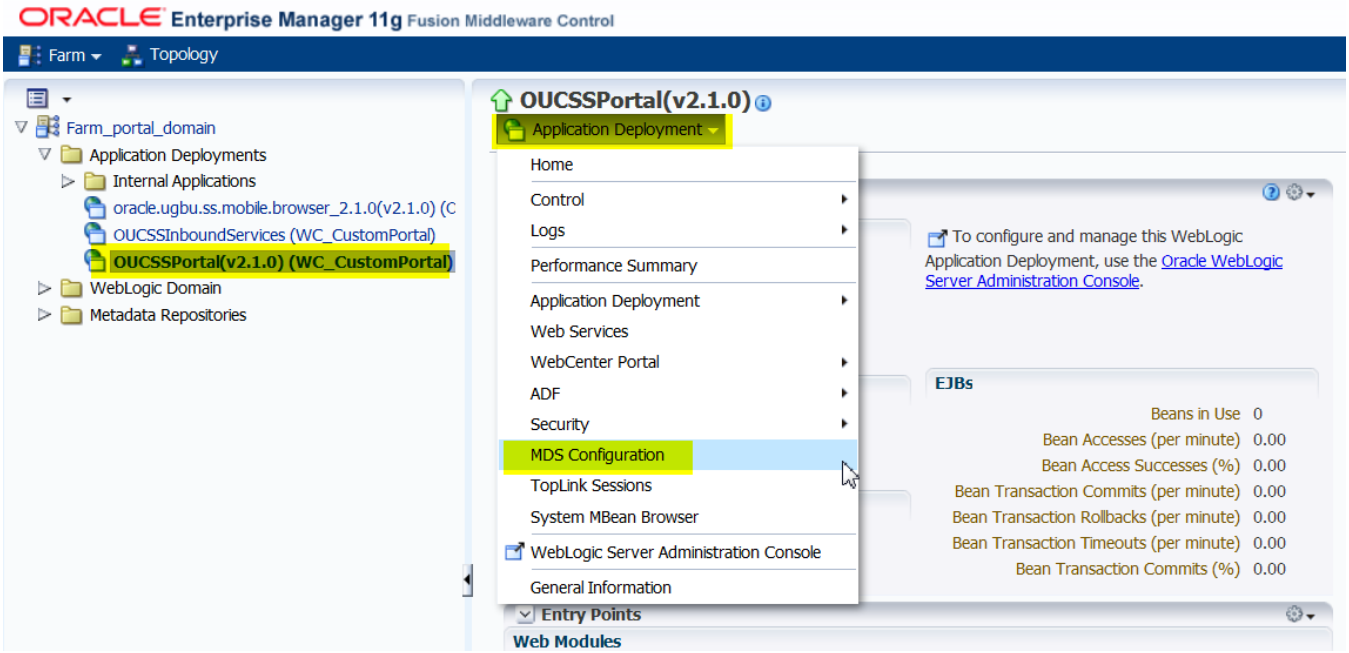
Chapter 8

Upgrading OUCSS

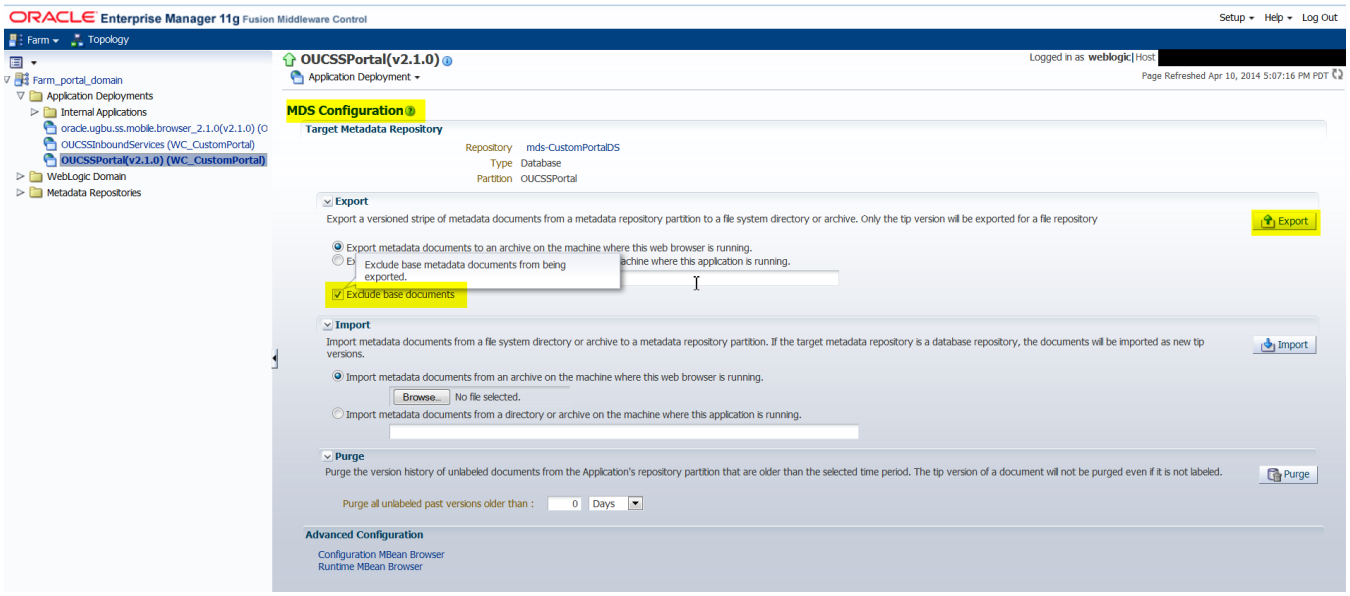
This procedure describes the steps to upgrade from previous version of OUCSS Portal (2.0.1, 2.1.0 , 2.1.0.1, 2.1.0.2) to version 2.2.0.0.

Pre-Upgrade Steps

1. Take a backup of existing OUCSS DB schema.
2. Export MDS metadata of the existing OUCSS Portal.
   - Login to Oracle Enterprise Manager (EM) of existing instance and click on OUCSSPortal.
   - From the Application Deployment menu, click on MDS Configuration.



- Check the Exclude base documents checkbox and click on Export. Save the file.



3 As the WebCenter Portal is upgraded from 11g to 12c with OUCSS 2.2.0.0, the folder structure of exported archive from previous step needs to be modified. Un-archive the exported file and search for the folder(s) 'site\site'. Modify the folder hierarchy to 'site\webcenter' and archive it back.

4 Export existing Portal Resources (Page Templates, Navigation Models, Resource Catalogs, etc.). Refer to the OUCSS whitepaper, "Customizing and Extending the OUCSS Custom Portal" for instructions on how to export and import portal resources.

5 Back up the latest version of `extend.oucss.portal.war`.

6 Shut down the managed servers listed in the Target section of the OUCSSDS Data Source.

7 Download the OUCSS 2.2.0.0 package. Set up the environment as described insteps 1–7 in the "Installing OUCSS Portal" section of this document.

Upgrade Steps

- Upgrade OUCSS DB Schema to version 2.2.0.0.
- Install OUCSS Portal v2.2.0.0 on a new 11.1.1.8.0 WebCenter Domain.
- Install extend.oucss.portal.war to 2.2.0.0 instance. This step is application if extend.oucss.portal.war was deployed with custom code in existing instance.
- Import MDS Customizations.
- Import Portal Resources.
- Migrate Identity Store/LDAP users from previous domain to 2.2.0.0 domain. If you configured the 2.2.0.0 domain to use same LDAP as before, then no action is needed.

Upgrade the OUCSS DB Schema

1 Verify that the value of /oucssInstall/oucssPortal/database/installedVersion property in InstallProperties.xml reflects the version of the OUCSS Portal that you currently running. For example, if you currently have OUCSS 2.1.0 installed, set this property to value 2.1.0.

2 Run the following command to upgrade OUCSS schema to version 2.2.0.0:

On Windows:

```
ant -f UpgradeInstallBuild.xml DBUpgradePortal -
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -l DBUpgradePortal.log
```

On UNIX/Linux:

```
ant -f UpgradeInstallBuild.xml DBUpgradePortal -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml -l DBUpgradePortal.log
```

Note: After running the command check DBUpgradePortal.log for any errors. If “BUILD SUCCESSFUL” does not appear at the end of the file, fix any errors listed in the log before proceeding.

3 Verify the schema using the steps described in Verify Schema Table section.

4 Verify that all the users in SS_USER table and users access to accounts in SS_USER_LOB_ACCESS_ROLE table are accurate.

Install OUCSS Portal v2.2.0.0

1 Verify that the /oucssInstall/oucssPortal/database/createDB property is set to false in InstallProperties.xml to disable creation of a new OUCSS DB Schema.

2 Verify that the /oucssInstall/oucssPortal/database properties in InstallProperties.xml are configured to use the upgraded DB schema details.

3 Install OUCSS Portal v2.2.0.2 by 0following the Install Steps section of this document.

Install extend.oucss.portal.war

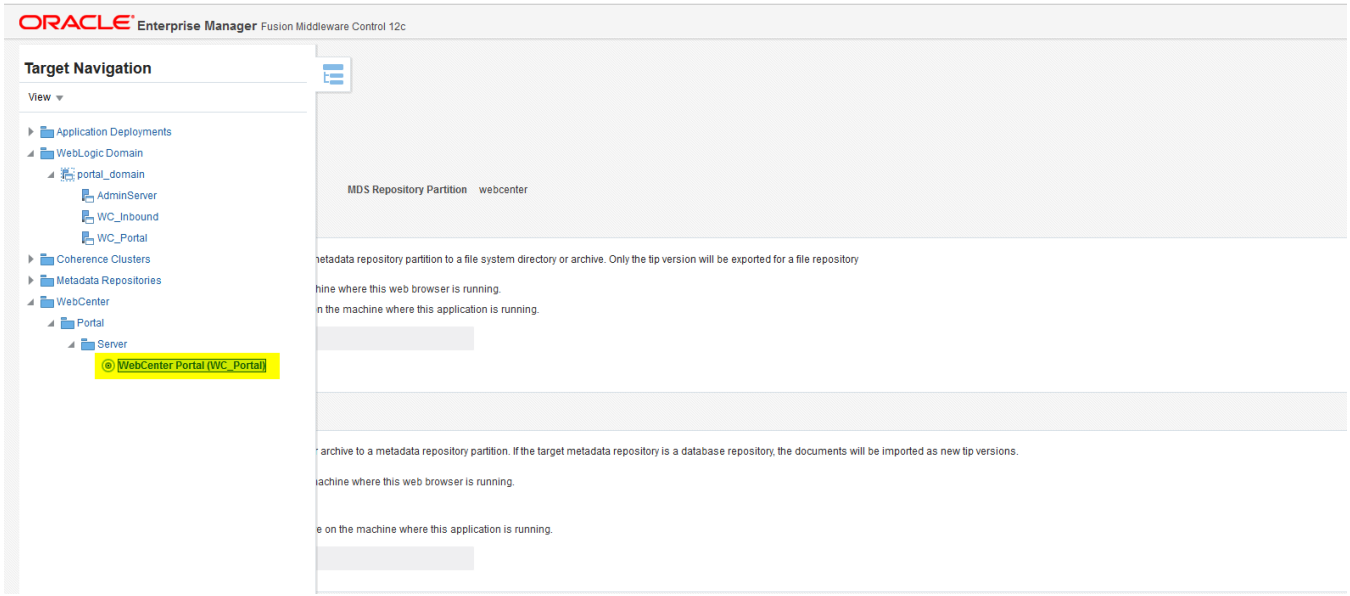
The extend.oucss.portal.war with custom implementation is required to be reinstalled to the new OUCSS 2.2.0.0 instance. The default implementation version of extend.ocuss.portal shared library in 2.2.0.0 is updated to 11.1.1.9.0. To activate the custom extend.oucss.portal.war, the implementation version should be updated to 11.1.1.9.1.

1. Open the extend.oucss.portal project in JDev.
2. Update the implementation-version in MANIFEST.MF to 11.1.1.9.1.
3. Change the common library path to the libraries provided with v2.2.0.0.
4. Install the extend.oucss.portal shared library to managed server running OUCSS Portal v2.2.0.0.
5. Source control extend.oucss.portal.war and the changes.

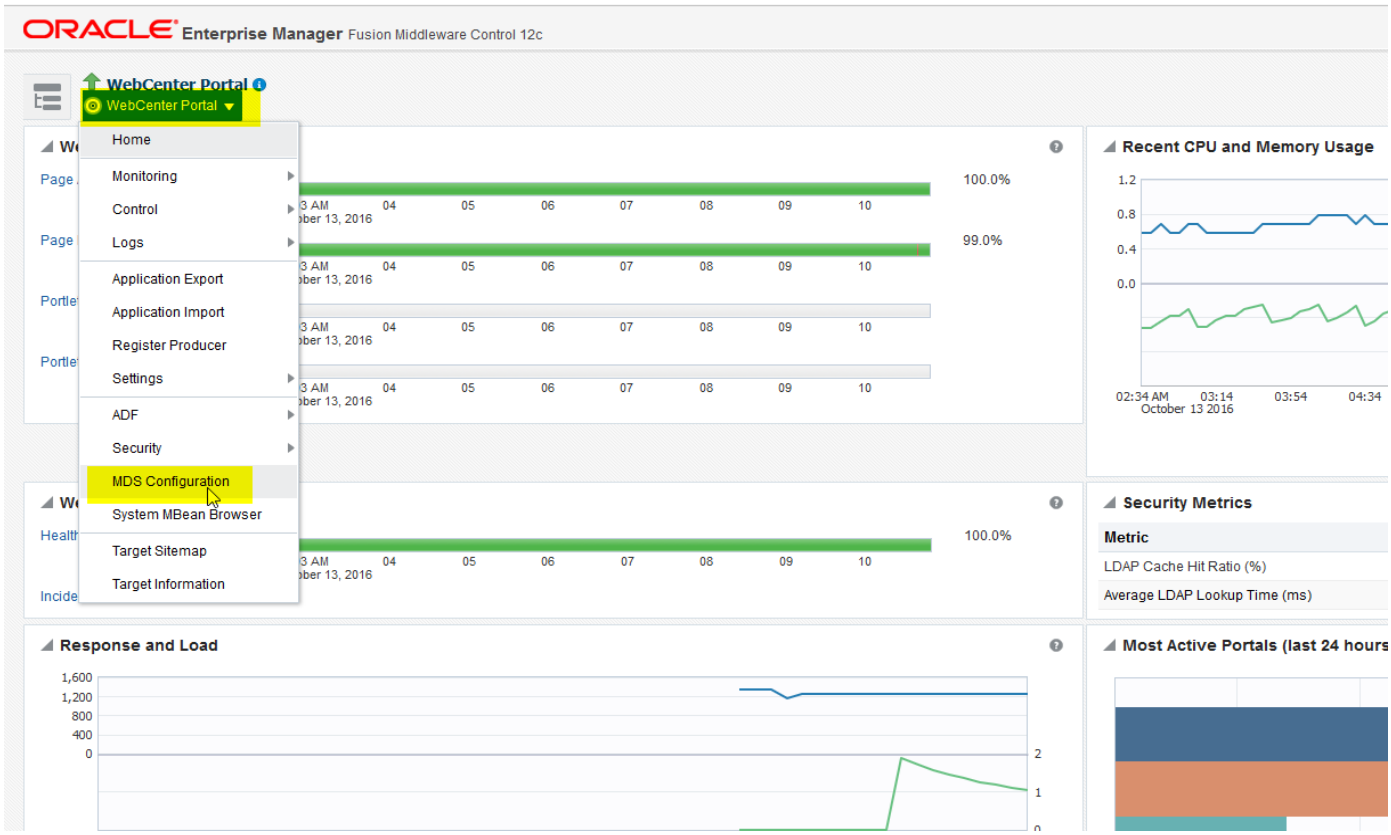
Import MDS Customizations

Import the MDS customization exported from the previous install.

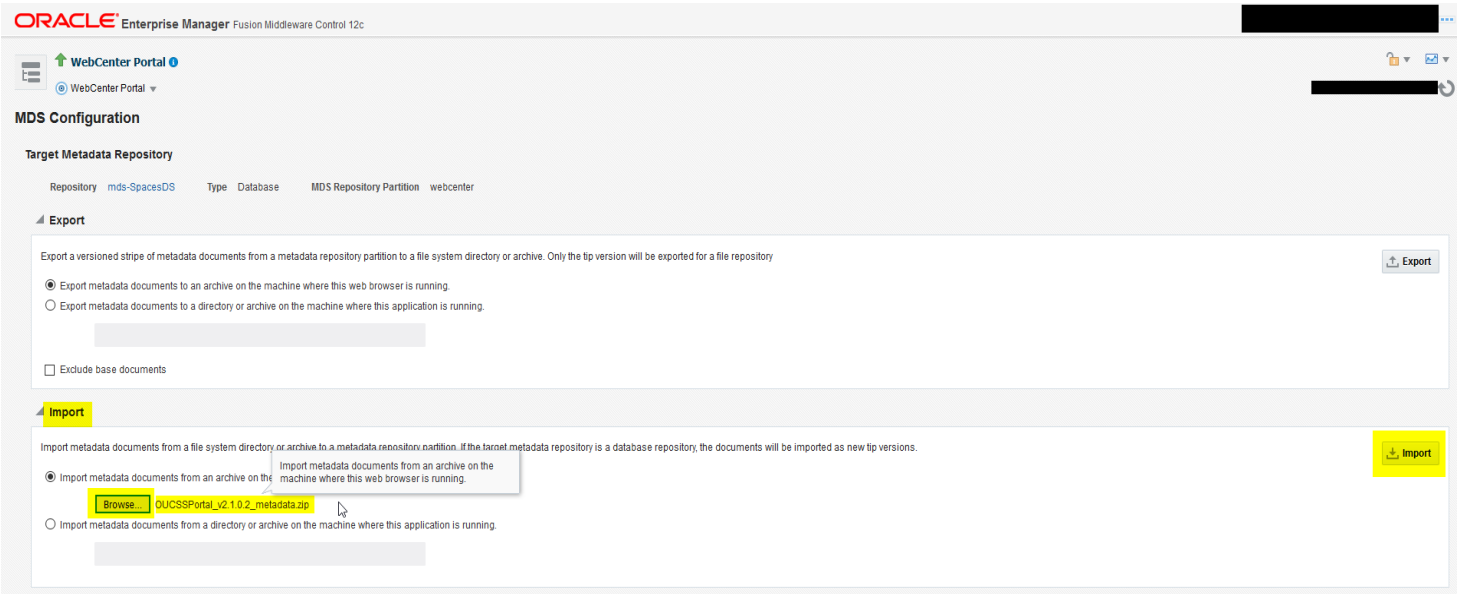
1. Login to EM of 2.2.0.0 domain and click on WebCenter Portal.



2. Select MDS Configuration from Application Deployments menu.



3 Browse the MDS archive that was previously exported. Click on Import to import the metadata.



4 On successful import, MDS customizations related to OUCSS Protal and OUCSS Taskflows will be migrated to new instance.

Import Portal Resources

As 2.1.0.2 portal instance was built on WebCenter 11g, and 2.2.0.0 portal instance is built on WebCenter 12c - there is no direct migration path exists between these two versions of portal resources (e.g. Page Template, Resource Catalog, Skin and Navigational Model). We may take following approaches for migrating individual portal resource.

Page Template

1. Identify the page template that needs to be moved from 2.1.0.2 to 2.2.0.0. Once identified, view source code of the page template by selecting the row followed by Edit Source under Actions menu.
2. Navigate to Administration of WebCenter Portal 12c and create a new page template under Assets.
3. Select Edit Source from Actions menu.
4. Copy the source from 2.1.0.2 to 2.2.0.0 and save the change.
5. Available flag should be checked for this new page template.
6. Refer to the OUCSS whitepaper, "Customizing and Extending the OUCSS Custom Portal" for instructions on how to choose this new page template as default.

Resource Catalog

1. Identify the resource catalog that needs to be moved from 2.1.0.2 to 2.2.0.0. Once identified, view source code of the resource catalog by selecting the row followed by Edit Source under Actions menu.
2. Navigate to Administration of WebCenter Portal 12c and create a new resource catalog under Assets.
3. Select Edit Source from Actions menu.
4. Copy the source from 2.1.0.2 to 2.2.0.0 and save the change.
5. Make sure proper resource bundle has been used in the copied source code.
6. Available flag should be checked for this new resource catalog.
7. Refer to the OUCSS whitepaper, "Customizing and Extending the OUCSS Custom Portal" for instructions on how to choose this new resource catalog as default.

Skins

1. Identify the skin that needs to be moved from 2.1.0.2 to 2.2.0.0. Once identified, view source code of the skin by selecting the row followed by Edit Source under Actions menu
2. Navigate to Administration of WebCenter Portal 12c and create a new skin under Assets.
3. Select Edit Source from Actions menu.
4. Copy the source from 2.1.0.2 to 2.2.0.0 and save the change.
5. Available flag should be checked for this new skin.
6. Refer to the OUCSS whitepaper, "Customizing and Extending the OUCSS Custom Portal" for instructions on how to choose this new skin as default.

Navigations

1. Defining Navigation for WebCenter Portal 12c is very different than how it is defined in WebCenter Portal 11g. WebCenter Portal 12c no longer includes navigation as part of Assets. To replicate navigation from 11g to 12c follow the steps below.
2. Identify the navigation in 11g which needs to be replicated to 12c. Select the navigation and click Edit.

3 Navigate to Administration of WebCenter Portal 12c and select Pages from the left-hand menu.

4 Create one page at a time following the same navigational site map identified in step 2.

5 Create Folder to define category and Page to hold taskflows by selecting right-arrow followed by Add.

6 Once completed, go to Drafts from the left-hand menu and publish the newly created pages.

Chapter 9

Upgrading CSS BPEL Flows

This procedure describes the different methods for upgrading CSS BPEL flows from previous versions.

The customer can do one of the following:

- Uninstall Previous Version and Install the New Version.
- Install the New Version in a Different SOA/MDS Partition.

Uninstall a Previous Version and Install a New Version

Pre-Upgrade Steps

1 Take a backup of the existing version of the CSS BPEL flows:

- Backup the existing PRODUCT_HOME directories.

  Example: PRODUCT_HOME=/slot/oracle/ OUCSS_INTGFLOWS where you unzipped OUCSS_INTGFLOWS.zip

- Make sure the existing configuration properties file is backup.

2 If upgrading from OUCSS 2.1.0 version to a higher version and the optional OUCSS-OUCCB BPEL Flows were installed previously, rollback patch 17632298.

- In OUCSS version 2.1.0, patch 17632298 had to be applied if the Optional OUCSS-OUCCB BPEL Flows were required. To rollback the patch, follow the steps in the readme.txt of patch 17632298.

3 Uninstall the existing version of CSS BPEL flows. Refer to Installing CSS BPEL flows –Uninstalling Direct Integration for details.

Upgrade Steps

- Install the latest version of the CSS BPEL flows.See Installing CSS BPEL Flows for details.

Install the New Version in a Different SOA/MDS Partition

To keep the existing version of the CSS BPEL flows, the new version can be installed in a different SOA and MDS partition name. The SOA and MDS partition names can be define in the Install Properties file during installation.

Pre-Upgrade Steps

- Take a backup of the existing version of the CSS BPEL flows by backing up the existing PRODUCT_HOME directories.

  Example: PRODUCT_HOME=/slot/oracle/ OUCSS_INTGFLOWS (the folder into which you extracted OUCSS_INTGFLOWS.zip).

- Ensure that the existing configuration properties file is backed up.

Upgrade Steps

- Install the latest version of the CSS BPEL flows in a new SOA and MDS partition name. Refer to Chapter 3 Instaling CSS BPEL flows for install details.
- The new SOA and MDS partition name should be defined in the Install Properties File. Refer to Appendix E. Look for the following in the InstallationProperties file:

  ```
  <soapartition></soapartition>

  <mdspartition></mdspartition>
  ```

Chapter 10

Upgrading Oracle Utilities Notification Flows

This procedure describes the steps to upgrade Oracle Utilities Notification (OUNC) Flows from previous versions.

Pre-Upgrade Steps

1. Take a backup of the existing version of the OUNC BPEL flows:
   - **A** Backup the existing PRODUCT_HOME directories.

     Example: PRODUCT_HOME=/slot/oracle/OUNC where you unzipped OUNC.zip
   - **B** Make sure the existing configuration properties file is backed up.
2. Uninstall the existing version of OUNC BPEL flows. Refer to Chapter 5 Installing Oracle Utilities Notification Flows – Uninstalling the OUNC Flows section for details. Only uninstall the OUNC BPEL flows using Steps 1, 2 and 3. Do **not** run the DB Uninstall Step 4.

   Note: DO NOT run DB uninstallation command, ONLY the BPEL Flows integration uninstallation.

Upgrade Steps

Install the latest version of the OUNC flows.

Refer to Chapter 5 Installing Oracle Utilities Notification Flows - Installing the Integration section for details. **Replace** step 8 for DB Installation with the following:

IMPORTANT: Do **not** execute step 8 mentioned in the installation section for DB Installation. Performing step 8 will wipe out your existing transactional data. Instead, execute the following command to upgrade to the updated DB package:

On UNIX/Linux :

```
cd $PRODUCT_HOME/bin
```

```
ant -f InstallBuild.xml createDBNotificationPackage -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml -l ouncCreateDBPackage.log
```

On Windows:

```
cd %PRODUCT_HOME%/bin
```

```
ant -f InstallBuild.xml createDBNotificationPackage -
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -l ouncCreateDBPackage.log
```

Appendix A

Installing and Configuring Oracle MapViewer

Following section provide information on installing Oracle MapViewer 11.1.1.7.2 to be used with OUCSS Outage Map functionality.

Prerequisite Software for MapViewer

The following software is required to use Oracle MapViewer; you must have the following software:

1. A J2EE server supported by MapViewer
2. Oracle Database with Spatial or Locator (Release 9*i* or later).
3. Oracle Client (Release 9*i* or later), if you need to use JDBC Oracle Call Interface (OCI) features. Note that in general, the JDBC thin driver is recommended for use with MapViewer, in which case the Oracle Client is not required.
4. Java SDK 1.6 or later.

   Note: MapViewer also supports the headless AWT mechanism in J2SE SDK, which enables MapViewer to run on Linux or UNIX systems without setting any `X11 DISPLAY` variable. To enable AWT headless mode on Linux or UNIX systems, specify the following on the command line to start MapViewer:
   `-Djava.awt.headless=true`

Installing on WebLogic (Recommended)

1. Download Oracle MapViewer 11.1.1.7.2 EAR from the Oracle Technology Network (OTN) at http://www.oracle.com/technetwork/middleware/mapviewer/downloads/index-100641.html
2. Create a Managed Server to install the Oracle MapViewer using WLS Admin Console. We recommend using a separate WebLogic Domain to host the Oracle MapViewer. Oracle MapViewer can also be installed on a managed server in OUCSS domain.

3. Follow the steps to deploy the Oracle MapViewer on WebLogic as described in Chapter 1.4.1 of the MapViewer User Guide (http://docs.oracle.com/cd/E28280_01/web.1111/e10145/vis_start.htm#i1006838).

Verifying Deployment

Test if the MapViewer server has started correctly. Enter the following URL to invoke the MapViewer server with a simple get-version request:

```
http://<<mapviewerhost>>:<<mapviewerport>>/mapviewer/omserver?getv=t
```

If MapViewer is running correctly, it should immediately send back a response text string indicating the version and build number, such as the following:

```
Ver11_1_1_7_2_B131120
```

Configuring Map Data

After installing and verifying, MapViewer instance needs to be configured with database to pull map data.

1. Download and upload MapViewer data into Oracle Database. This data can be obtained from various vendors.
2. Update the following spatial views that MapViewer uses to render maps after setting up the Map data.
   - USER_SDO_MAPS
   - USER_SDO_THEMES
   - USER_SDO_STYLES
   - USER_SDO_CACHED_MAPS
3. Configure MapViewer to refer to the above map data source. You can configure MapViewer with one or more data sources.
4. To configure a Data Source, login to *http://<<host>>:<<port>>/mapviwer/mvlogon.jsp* with WebLogic domain admin credentials.
5. Click on “Configuration” link on the left menu.
6. Scroll to the bottom of the Text-Area on the right and add the data source.
7. Prefix ‘!’ to the password to allow MapViewer to encode it when the data source is loaded first.
8. MapViewer configuration also allows configuring other parameters for fine-tuning. Use the same screen to change the configuration as it suits the requirements.
9. After configuring Data and Data Source, use Oracle Map Builder (can be downloaded from OTN), to configure BASE_MAPS, TILES, STYLES, THEMES that are required to render maps.

Creating a Default Theme

For OUCSS Outages to render color regions on the map, a new table and a theme based on this table must be created in the schema configured in MapViewer. A Map Theme can be created depending on the implementation.

This procedure describes the steps to create a sample theme.

1. Login to the MapViewer DB Schema using SQL Developer.
2. Create the table using the following command

```
CREATE TABLE OUCSS_OUTAGE_AREAS
```

```
(
  AREA VARCHAR2(100) Not Null,
  AREA_TYPE VARCHAR2(20) Not Null,
  GEOMETRY SDO_GEOMETRY NOT NULL,
  CONSTRAINT OUCSS_OUTAGE_AREAS_PK PRIMARY KEY
  (
    AREA
  , AREA_TYPE
  )
  Enable
);
```

3 After the table is created, add the table to USER_SDO_GEOM_METADATA and create the index.

```
INSERT INTO USER_SDO_GEOM_METADATA VALUES
('OUCSS_OUTAGE_AREAS','GEOMETRY',SDO_DIM_ARRAY(SDO_DIM_ELEMENT('X', -
180,180,0.05),SDO_DIM_ELEMENT('Y',-90,90,0.05)),8307);
```

```
CREATE INDEX oucss_outage_area_idx ON OUCSS_OUTAGE_AREAS(GEOMETRY) INDEXTYPE IS
MDSYS.SPATIAL_INDEX;
```

4 Create the Theme using the OUCSS_OUTAGE_AREAS table. This theme is used OUCSS Map component. For e.g. a sample theme can be created by using following SQL command or using the Map Builder tool.

```
INSERT INTO USER_SDO_THEMES VALUES ('OUCSS_OUTAGE_AREAS','Table with OUTAGE area
information','OUCSS_OUTAGE_AREAS','GEOMETRY','<?xml version="1.0" standalone="yes"?>
<styling_rules>
  <rule>
   <features style="NTC_ZIP5"> </features>
    <label column="AREA" style="T.ALL_STATE_ABBREVS"> 1 </label>
  </rule>
</styling_rules>
');
```

5 Insert geometries for supported areas in OUCSS_OUTAGE_AREAS tables. The areas vary with implementation. For e.g., a sample SQL to insert an area should look like the following:

```
Insert into OUCSS_OUTAGE_AREAS (AREA,AREA_TYPE,GEOMETRY) values
('44626','ZIP_CODE',MDSYS.SDO_GEOMETRY(2003,8307,null,MDSYS.SDO_ELEM_INFO_ARRAY(1,1003,1)
,MDSYS.SDO_ORDINATE_ARRAY(-81.3830295488997,40.7285129510814,-
81.3812984991402,40.7338839829249,-81.3927475541338,40.7332639948208,-
81.3994335453435,40.7307579737733,-81.4018495656824,40.7147819334023,-
81.4219826201664,40.7148169644293,-81.4258666120158,40.7079269194969,-
81.4303646324607,40.7076419271028,-81.4318656167639,40.6955949053686,-
81.4511426541633,40.7011539319998,-81.4523066753524,40.677843878596,-
81.4380766585527,40.6739768827821,-81.4392956545512,40.6632778265499,-
81.4398236689867,40.6630638744966,-81.4389236608563,40.6627638545034,-
81.435252639055,40.660163835682,-81.4473096636869,40.653477847022,-
81.4131756222542,40.653068851053,-81.4128046156641,40.6424478311357,-
81.4065065786703,40.6420378029597,-81.4032835659656,40.6393258078457,-
81.3991335999646,40.6387798121286,-81.3953325700587,40.6331857595437,-
81.3809395361275,40.6349047840879,-81.3734705403763,40.6324207828505,-
81.3720835035136,40.6378637887078,-81.3751265528508,40.6526088149928,-
81.3749075224809,40.6526058096461,-81.3573414788679,40.6523898339006,-
81.357125505903,40.6523868286052,-81.3568705148351,40.6523378098387,-
81.3554774682247,40.6522848008732,-81.3551714893461,40.6522738155778,-
81.3545554897249,40.652258840303,-81.3564755123726,40.6601568292659,-
81.3489744910513,40.668516868032,-81.350603459601,40.6703478712984,-
81.3458954756601,40.6744298531464,-81.3400944622676,40.692194872556,-
81.3452894692824,40.7049619431687,-81.3256184133173,40.7083269318851,-
81.3099184022803,40.7038868922648,-81.314726389755,40.7124739428984,-
81.3141013702569,40.7259569671867,-81.3378064246284,40.7277349650885,-
81.3479854464389,40.7284649635238,-81.3474874343701,40.7272139471038,-
81.3483784780852,40.7272799620181,-81.3489394486206,40.7255229537069,-
81.3593105035176,40.7281359792679,-81.3663465175681,40.7276139766092,-
81.3830295488997,40.7285129510814)));
```

Configure OUCSS Map Properties

To configure OUCSS Map Properties:

1. Log in to the OUCSS Portal application http://<PortalHost>:<PortalPort>/<PortalContextRoot> as WSSAdmin.
2. Select **Admin > Configuration Options** to go to OUCSS System Configuration page.
3. Select the Map Viewer property to be changed and edit the property value. Review step 11 of Install OUCSS Portal for more information on System Configuration properties.
4. Click **Save** and restart the managed server.

Note:
Refer the MapViewer User Guide http://docs.oracle.com/cd/E28280_01/web.1111/e10145/toc.htm for additional information about MapViewer and its configuration.

Appendix B

Installation Properties

The following listing shows the structure and sample data contained in *InstallProperties.xml* for OUCSS Portal Install.

```
<?xml version="1.0" encoding="UTF-8" ?>
<oucssInstall xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
              xsi:schemaLocation="http://ocuss.oracle.com ../xsd/OUCSSInstallProperties.xsd"
              xmlns="http://ocuss.oracle.com">
  <oucssApplication>
    <!-- Configuration related to OUCSS Portal Application.For complete details refer to
Installation document -->
    <oucssPortal>
      <!--This is to identify for deploying application-->
      <deploy>true</deploy>
      <!-- Application name used for Portal Application deployment.Do not change this -->
      <applicationName>OUCSSPortal</applicationName>
      <!-- Admin server details -->
      <adminServer>
        <hostName>hostname.company.com</hostName>
        <portNumber>7001</portNumber>
        <serverName>AdminServer</serverName>
        <domainName>portal_domain</domainName>

<domainLocation>/scratch/OUCSS/Middleware10.3.6/user_projects/domains/portal_domain</domainLo
cation>
        <realmName>myrealm</realmName>
        <!-- WebLogic admin credentials -->
        <security>
          <userName>weblogic</userName>
              <password>password</password>
        </security>
      </adminServer>
      <deployTarget>
        <!-- Optional. If not provided Installer will intelligently identify the Cluster or
Server.-->
```

```
        <clusterOrServer>Cluster</clusterOrServer>
        <clusterOrServerName>OUCSS_Cluster</clusterOrServerName>
        <hostName>hostname.company.com</hostName>
        <portNumber>9002</portNumber>
      </deployTarget>
      <!-- DB Details to create or connect to OUCSS Schema -->
      <database>
        <createDB>true</createDB>
        <hostName>hostname.company.com</hostName>
        <portNumber>1521</portNumber>
        <sid>DB_SID</sid>
        <!-- SYSDBA Credential e.g. sys or system user. -->
        <sysdba>
          <userName>SYSTEM</userName>
              <password>password</password>
        </sysdba>
        <schema>
          <userName>oucss_schema_name</userName>
              <password>password</password>
        </schema>
        <!--Currently this flag is not used.Leave this blank -->
        <createDataSource>true</createDataSource>
        <dataSourceName>OUCSSDS</dataSourceName>
        <jndi>jdbc/OUCSSDS</jndi>
        <installedVersion>2.2.0.0</installedVersion>
      </database>
      <!-- MDS configuration for Portal Application -->
      <mdsConfig>
        <repositoryName>mds-CustomPortalDS</repositoryName>
        <partitionName>OUCSSPortal</partitionName>
        <repositoryType>DB</repositoryType>
        <jndi>jdbc/mds/CustomPortalDS</jndi>
            <database>
                <userName>OUCSS_MDS</userName>
                <password>password</password>
                <hostName>hostname.company.com</hostName>
                <portNumber>1521</portNumber>
                <sid>DB_SID</sid>
            </database>
      </mdsConfig>
         <contextRoots>
            <OUCSSPortal><contextRoot>OUCSSPortal</contextRoot></OUCSSPortal>
            <OUCSSPortalWeb><contextRoot>OUCSSPortalWeb</contextRoot></OUCSSPortalWeb>
        </contextRoots>
    </oucssPortal>
   <!-- Configuration to deploy OUCSS Inbound web services.For complete details refer to
Installation document -->
    <oucssInbound>
      <!--This is to identify for deploying application-->
      <deploy>true</deploy>
            <!-- Please do not change this application name as this being used to deploy. -->
      <applicationName>OUCSSInboundServices</applicationName>
      <!-- Admin server details -->
      <adminServer>
        <hostName>hostname.company.com</hostName>
        <portNumber>7001</portNumber>
        <serverName>AdminServer</serverName>
        <domainName>portal_domain</domainName>

<domainLocation>/scratch/OUCSS/Middleware10.3.6/user_projects/domains/portal_domain</domainLo
cation>
        <realmName>myrealm</realmName>
        <!-- WebLogic Admin credentials -->
```

```
        <security>
          <userName>weblogic</userName>
              <password>password</password>
        </security>
      </adminServer>
      <deployTarget>
        <!-- Optional.If not provided Installer will intelligently identify the Cluster or
Server.-->
        <clusterOrServer>Cluster</clusterOrServer>
        <clusterOrServerName>OUCSS_Cluster</clusterOrServerName>
        <hostName>hostname.company.com</hostName>
        <portNumber>9002</portNumber>
      </deployTarget>
       <!-- DB Details to create or connect to OUCSS Schema -->
      <database>
        <createDB>true</createDB>
        <hostName>hostname.company.com</hostName>
        <portNumber>1521</portNumber>
        <sid>DB_SID</sid>

        <sysdba>
          <userName>system</userName>
          <password>password</password>
        </sysdba>
        <schema>
          <userName>OUCSS_Schema_Name</userName>
          <password>password</password>
        </schema>
        <!-- Currently this flag is not used.Leave this blank -->
        <createDataSource></createDataSource>
        <dataSourceName>OUCSSDS</dataSourceName>
        <jndi>jdbc/OUCSSDS</jndi>
        <installedVersion>2.2.0.0</installedVersion>
      </database>
      <!-- MDS configuration for Inbound -->
       <mdsConfig>
        <repositoryName>mds-CustomPortalDS</repositoryName>
        <partitionName>OUCSSInbound</partitionName>
        <repositoryType>DB</repositoryType>
        <jndi>jdbc/mds/CustomPortalDS</jndi>
            <database>
              <userName>OUCSS_MDS</userName>
              <password>password</password>
              <hostName>hostname.company.com</hostName>
              <portNumber>1521</portNumber>
              <sid>DB_SID</sid>
            </database>
      </mdsConfig>
      <contextRoots>
       <AccountEnroll><contextRoot>OUCSSAccountEnroll</contextRoot></AccountEnroll>
       <OUCSSRest><contextRoot>OUCSSRest</contextRoot></OUCSSRest>
       <Offers><contextRoot>OUCSSOffers</contextRoot></Offers>
      </contextRoots>
    </oucssInbound>
  </oucssApplication>
  <oucssConnection>
    <!-- CCB webservice connection details -->
    <OUCCB>
        <enabled>true</enabled>
        <hostName>hostname.company.com</hostName>
        <portNumber>8000</portNumber>
        <protocol>http</protocol>
        <context>spl</context>
```

```
      <security>
           <userName>SYSUSER</userName>
             <password>password</password>
             <csf-key>OUCSS_XAI_BASIC_KEY</csf-key>
      </security>
  </OUCCB>
  <!-- NMS webservice connection details -->
  <OUNMS>
    <enabled>true</enabled>
    <hostName>hostname.company.com</hostName>
    <portNumber>7001</portNumber>
    <protocol>http</protocol>
    <partitionName>OUCSS</partitionName>
    <security>
      <userName>weblogic</userName>
      <password>password</password>
      <csf-key>OUCSS_INTG_BASIC_KEY</csf-key>
    </security>
  </OUNMS>
  <!-- MDM webservice connection details -->
  <OUMDM>
    <enabled>true</enabled>
    <hostName>hostname.company.com</hostName>
    <portNumber>7001</portNumber>
    <protocol>http</protocol>
    <partitionName>OUCSS</partitionName>
    <security>
       <userName>weblogic</userName>
      <password>password</password>
      <csf-key>OUCSS_INTG_BASIC_KEY</csf-key>
    </security>
  </OUMDM>
  <!-- Notification webservice connection details -->
  <OUNC>
   <enabled>true</enabled>
    <hostName>hostname.company.com</hostName>
    <portNumber>7001</portNumber>
    <protocol>http</protocol>
    <partitionName>OUNC</partitionName>
    <security>
       <userName>weblogic</userName>
      <password>password</password>
      <csf-key>OUCSS_OUNC_BASIC_KEY</csf-key>
    </security>
  </OUNC>
  <!-- Configutation for Optional OUCSS-BPEL-CCB servers.
       If enabled, select CCB connections will be configured using the below details.-->
  <OUCSS_BPEL_CCB>
    <enabled>false</enabled>
    <hostName>hostname.company.com</hostName>
    <portNumber>7001</portNumber>
    <protocol>http</protocol>
    <partitionName>OUCSS</partitionName>
    <security>
       <userName>weblogic</userName>
      <password>password</password>
      <csf-key>OUCSS_INTG_BASIC_KEY</csf-key>
    </security>
  </OUCSS_BPEL_CCB>
  <OUCSSMISC>
    <enabled>true</enabled>
    <hostName>hostname.company.com</hostName>
    <portNumber>7001</portNumber>
```

```
      <protocol>http</protocol>
      <partitionName>OUCSS</partitionName>
      <security>
         <userName>weblogic</userName>
        <password>password</password>
        <csf-key>OUCSS_INTG_BASIC_KEY</csf-key>
      </security>
    </OUCSSMISC>
    <OUCSS_Inbound>
      <security>
            <keystore-csf>
                  <userName>owsm</userName>
                  <password>password</password>
                  <csf-key>keystore-csf-key</csf-key>
            </keystore-csf>
            <sign-csf>
                  <userName>orakey</userName>
                  <password>password</password>
                  <csf-key>sign-csf-key</csf-key>
            </sign-csf>
            <enc-csf>
                  <userName>orakey</userName>
                  <password>password</password>
                  <csf-key>enc-csf-key</csf-key>
            </enc-csf>
      </security>
    </OUCSS_Inbound>
    <!-- Mail Server connection details -->
    <mailServer>
      <enabled>true</enabled>
      <hostName>mail.company.com</hostName>
      <portNumber>25</portNumber>
      <protocol>smtp</protocol>
      <fromAddress>wssAdmin@company.com</fromAddress>
    </mailServer>
    <!-- MapViewer connection details -->
    <mapViewer>
        <enabled>true</enabled>
        <hostName>mapviewer.company.com</hostName>
        <portNumber>7001</portNumber>
        <protocol>http</protocol>
        <context>mapviewer</context>
        <basemap>NAVTEQ_SF.WORLD_MAP</basemap>
        <colorTheme>OUCSS_OUTAGE_AREAS</colorTheme>
        <colorThemeLocColumn>AREA</colorThemeLocColumn>
        <srid>8307</srid>
    </mapViewer>
    <!-- WSDL URL of external Offers WebService to use if Inbound services are not deployed -
->
    <ExternalOfferService_URL/>
  </oucssConnection>
</oucssInstall>
```

InstallProperties XPath Descriptions and Examples

XPath information contained in *InstallProperties.xml* is as follows:

- `/oucssInstall/oucssApplication/oucssPortal`

  All sub-elements of this node contain information specific to OUCSS Portal.

- `/oucssInstall/oucssApplication/oucssInbound`

  All sub-elements of this node contain information specific to Inbound Web Services in CSS.

- `/oucssInstall/oucssConnection/OUCCB`

  All sub-elements of this node contain information specific to CCB.

- `/oucssInstall/oucssConnection/OUNMS`

  All sub-elements of this node contain information specific to NMS.

- `/oucssInstall/oucssConnection/OUMDM`

  All sub-elements of this node contain information specific to MDM.

- `/oucssInstall/oucssConnection/OUNC`

  All sub-elements of this node contain information specific to Notification Center.

- `/oucssInstall/oucssConnection/OUCSS_BPEL_CCB`

  All sub-elements of this node contain information specific to BPEL flows for CCB.

- `/oucssInstall/oucssConnection/mailServer`

  All sub-elements of this node contain information specific to Mail Server.

- `/oucssInstall/oucssConnection/mapViewer`

  All sub-elements of this node contain information specific to Map Viewer.

XPath	Description	Example
/oucssInstall/oucssApplication/oucssPortal/deploy	Set to true if OUCSS Portal application should be deployed	true
/oucssInstall/oucssApplication/oucssPortal/applicationName	Application name to be used to install OUCSS Portal location. It should be OUCSSPortal	OUCSSPortal
/oucssInstall/oucssApplication/oucssPortal/adminServer/hostname	Hostname of Admin server of WebLogic domain hosting CSS Portal application	portal.company.com

/oucssInstall/oucssApplication/oucssPortal/adminServer/portNumber	Port Number of Admin server of WebLogic domain hosting CSS Portal application	7001
/oucssInstall/oucssApplication/oucssPortal/adminServer/serverName	Admin server name of WebLogic domain hosting CSS Portal application	AdminServer
/oucssInstall/oucssApplication/oucssPortal/adminServer/domainName	Admin server Domain Name of oucssPortal	portal_domain
/oucssInstall/oucssApplication/oucssPortal/adminServer/domainLocation	Admin Server Domain Location of oucssPortal	/XXX/OUCSS210/Middleware/user_projects/domains/portal_domain
/oucssInstall/oucssApplication/oucssPortal/adminServer/realmName		myrealm
/oucssInstall/oucssApplication/oucssPortal/adminServer/security/userName	Admin user name to connect to Admin server	weblogic
/oucssInstall/oucssApplication/oucssPortal/adminServer/security/password	Admin user password to connect to Admin server	**password**
/oucssInstall/oucssApplication/oucssPortal/adminServer/security/password	The security policy that OUCSS accepts when invoking its webservice.	Use oracle/ wss_http_token_client_policy for XAI services or refer to the Security Policies section for more information when invoking IWS services.
/oucssInstall/oucssApplication/oucssPortal/deployTarget/clusterOrServer	Deployment Target Type for CSS Portal	Cluster
/oucssInstall/oucssApplication/oucssPortal/deployTarget/clusterOrServerName	Cluster/ Managed server name hosting CSS.	WC_CustomPortal
/oucssInstall/oucssApplication/oucssPortal/deployTarget/hostName	URL for the Cluster/Server hosting CSS.This will host the OUCSS Portal EAR file	portal.company.com
/oucssInstall/oucssApplication/oucssPortal/deployTarget/portNumber	Port number for the Cluster/Server hosting CSS.	9000
/oucssInstall/oucssApplication/oucssPortal/database/createDB	Flag to indicate if CSS Schema should be created	true

/oucssInstall/oucssApplication/oucssPortal/database/hostName	Hostname to connect to CSS Database	db.company.com
/oucssInstall/oucssApplication/oucssPortal/database/portNumber	Port number to connect to CSS Database	1521
/oucssInstall/oucssApplication/oucssPortal/database/sid	SID/service name to connect to DB	oucss
/oucssInstall/oucssApplication/oucssPortal/database/isservicename	If isservicename is true then sid mentioned is considered as servicename instead of sid	false
/oucssInstall/oucssApplication/oucssPortal/database/sysdba/userName	Sys user to connect to CSS Database	system **Note**: If using sys user, then use "sys as sysdba".
/oucssInstall/oucssApplication/oucssPortal/database/ sysdba/password	Sys user password	password
/oucssInstall/oucssApplication/oucssPortal/database/schema/userName	CSS DB username/schema which will host CSS specific DB objects	Oucss
/oucssInstall/oucssApplication/oucssPortal/database/schema/password	Password for CSS DB username/schema	password
/oucssInstall/oucssApplication/oucssPortal/database/createDataSource	Currently this flag is not used.Leave this blank	
/oucssInstall/oucssApplication/oucssPortal/database/dataSourceName	OUCSSDS is default Datasource Name used by the application.Datasou rce Name should be OUCSSDS	OUCSSDS
/oucssInstall/oucssApplication/oucssPortal/database/jndi	Set to jdbc/OUCSSDS	**jdbc/OUCSSDS**
/oucssInstall/oucssApplication/oucssPortal/database/installedVersion	Leave it blank on install. This property is used only on Upgrade. Set the property to the current installed OUCSS version.	
/oucssInstall/oucssApplication/oucssPortal/mdsConfig/repositoryName	Name of the MDS repository	mds-CustomPortalDS

/oucssInstall/oucssApplication/oucssPortal/mdsConfig/partitionName	MDS Partition name of oucssPortal	OUCSSPortal
/oucssInstall/oucssApplication/oucssPortal/mdsConfig/repositoryType	Repository type	**DB** Note:Only DB type MDS is supported.
/oucssInstall/oucssApplication/oucssPortal/mdsConfig/jndi	JNDI name for WebLogic Datasource for Portal MDS	jdbc/mds/CustomPortalDS
/oucssInstall/oucssApplication/oucssPortal/mdsConfig/database/userName	Username of schema hosting MDS for CSS application.	OUCSS_MDS
/oucssInstall/oucssApplication/oucssPortal/mdsConfig/database/password	Password to connect to schema	password
/oucssInstall/oucssApplication/oucssPortal/mdsConfig/database/hostName	Hostname to connect to DB hosting MDS	db.company.com
/oucssInstall/oucssApplication/oucssPortal/mdsConfig/database/portNumber	Portnumber to connect to DB hosting MDS	1521
/oucssInstall/oucssApplication/oucssPortal/mdsConfig/database/sid	SID/service name to connect to schema	oucss
/oucssInstall/oucssApplication/oucssPortal/mdsConfig/database/isservicename	If isservicename is true then sid mentioned is considered as servicename instead of sid	false
/oucssInstall/oucssApplication/oucssPortal /contextRoots/OUCSSPortal/contextRoot	Context Root for the OUCSSPortal	OUCSSPortal
/oucssInstall/oucssApplication/ oucssPortal /contextRoots/OUCSSPortalWeb/contextRoot	Context Root for the OUCSSPortalWeb	OUCSSPortalWeb
/oucssInstall/oucssApplication/oucssInbound/deploy	Set to true if OUCSS Inbound Services should be deployed	true
/oucssInstall/oucssApplication/oucssInbound/applicationName	Application name to be used to install OUCSS Inbound Services	OUCSSInboundServices

/oucssInstall/oucssApplication/oucssInbound/adminServer/hostName	Hostname of Admin server of WebLogic domain hosting OUCSS Inbound Services	inbound.company.com
/oucssInstall/oucssApplication/oucssInbound/adminServer/portNumber	Port Number of Admin server of WebLogic domain hosting OUCSS Inbound Services	7001
/oucssInstall/oucssApplication/oucssInbound/adminServer/serverName	Admin server name of WebLogic domain hosting OUCSS Inbound Services	AdminServer
/oucssInstall/oucssApplication/oucssInbound/adminServer/domainName	Admin Server Domain Name	portal_domain
/oucssInstall/oucssApplication/oucssInbound/adminServer/domainLocation	Admin Server Domain Location	/XXX/OUCSS210/Middleware/user_projects/domains/portal_domain
/oucssInstall/oucssApplication/oucssInbound/adminServer/realName	WebLogic RealName where You need to create OUCSS Users and Groups	myrealm
/oucssInstall/oucssApplication/oucssInbound/adminServer/security/userName	Admin user to connect to Admin server	weblogic
/oucssInstall/oucssApplication/oucssInbound/adminServer/security/password	Admin user password to connect to Admin server	password
/oucssInstall/oucssApplication/oucssInbound/deployTarget/clusterOrServer	Deployment Target Type for OUCSS Inbound Services	Cluster
/oucssInstall/oucssApplication/oucssInbound/deployTarget/clusterOrServerName	Cluster/ Managed server name hosting OUCSS Inbound Services.	InBoundCluster
/oucssInstall/oucssApplication/oucssInbound/deployTarget/hostName	This will host the OUCSS Inbound will be deployed	inbound.company.com
/oucssInstall/oucssApplication/oucssInbound/deployTarget/portNumber	Port number for the Cluster/Server hosting CSS Inbound	9001

/oucssInstall/oucssApplication/oucssInbound/database/createDB	Flag to indicate if Inbound related data should be created	false
/oucssInstall/oucssApplication/oucssInbound/database/hostName	Hostname to connect to CSS Database. Can be same as for CSS Portal	db.company.com
/oucssInstall/oucssApplication/oucssInbound/database/portNumber	Port number to connect to CSS Database. Can be same as for CSS Portal	1521
/oucssInstall/oucssApplication/oucssInbound/database/sid	SID/service name to connect to schema	oucss
/oucssInstall/oucssApplication/oucssInbound/database/isservicename	If isservicename is true then sid mentioned is considered as servicename instead of sid	false
/oucssInstall/oucssApplication/oucssInbound/database/sysdba/userName	Sys user to connect to CSS Database. Can be same as for CSS Portal	System Note: If using sys user, then use "sys as sysdba".
/oucssInstall/oucssApplication/oucssInbound/database/sysdba/password	Sys user password. Can be same as for CSS Portal	**password**
/oucssInstall/oucssApplication/oucssInbound/database/schema/userName	CSS DB username/schema which will host CSS specific DB objects. Can be same as for CSS Portal	Oucss
/oucssInstall/oucssApplication/oucssInbound/database/schema/password	Password for CSS DB username/schema. Can be same as for CSS Portal	password
/oucssInstall/oucssApplication/oucssInbound/database/createDataSource	Currently this flag is not used. Leave this blank	
/oucssInstall/oucssApplication/oucssInbound/database/dataSourceName	OUCSSDS is default Datasource Name used by the application. Datasource Name should be OUCSSDS	OUCSSDS

/oucssInstall/oucssApplication/oucssInbound/database/jndi	This should be as jdbc/OUCSSDS	jdbc/OUCSSDS
/oucssInstall/oucssApplication/oucssInbound/database/installedVersion	Leave it blank for new install. This property is used only on Upgrade. Set the property to the current installed OUCSS version.	
/oucssInstall/oucssApplication/oucssInbound/mdsConfig/repositoryName	Name of the MDS repository	mds-CustomPortalDS
/oucssInstall/oucssApplication/oucssInbound/mdsConfig/partitionName	MDS PartitionName of oucssInbound	OUCSSInbound
/oucssInstall/oucssApplication/oucssInbound/mdsConfig/repositoryType	Repository type	**DB** Only DB type MDS is supported.
/oucssInstall/oucssApplication/oucssInbound/mdsConfig/jndi	JNDI name for WebLogic Datasource for CSS InboundMDS	jdbc/mds/CustomPortalDS
/oucssInstall/oucssApplication/oucssInbound /mdsConfig/database/userName	Username of schema hosting MDS for CSS Inbound application.	OUCSS_MDS
/oucssInstall/oucssApplication/oucssInbound /mdsConfig/database/password	Password to connect to schema	password
/oucssInstall/oucssApplication/oucssInbound /mdsConfig/database/hostName	Hostname to connect to DB hosting MDS	db.company.com
/oucssInstall/oucssApplication/oucssInbound /mdsConfig/database/portNumber	Portnumber to connect to DB hosting MDS	1521
/oucssInstall/oucssApplication/oucssInbound /mdsConfig/database/sid	SID/service name to connect to schema	oucss
/oucssInstall/oucssApplication/oucssInbound/contextRoots/AccountEnroll//contextRoot	Context Root for the Account Enroll	OUCSS_AccountEnroll
/oucssInstall/oucssApplication/oucssInbound/contextRoots/OUCSSRest//contextRoot	Context Root for the Rest Services	OUCSSRest
/oucssInstall/oucssApplication/oucssInbound/contextRoots/Offers//contextRoot	Context Root for the OUCSS_Offers	OUCSS_Offers
/oucssInstall/oucssConnection/OUCCB/is-iws-enabled	Set to true if CCB related connections need to be created from CSS Portal	true

/oucssInstall/oucssConnection/OUCCB/hostName	Hostname of server hosting CCB application	ccb.company.com
/oucssInstall/oucssConnection/OUCCB/portNumber	Portnumber on which CCB application is listening	8500
/oucssInstall/oucssConnection/OUCCB/protocol	Protocol of CCB application URL	http
/oucssInstall/oucssConnection/OUCCB/context	Appcontext of CCB application URL	If your CCB application URL is http://ccbhostname.us.com:8500/spl, the appcontext would be “spl”
/oucssInstall/oucssConnection/OUCCB/security/userName	Username which should be use to create CSF Key for CCB XAI Inbound calls	SPLXAI
/oucssInstall/oucssConnection/OUCCB/security/password	Password which should be use to create CSF Key for CCB XAI Inbound calls	password
/oucssInstall/oucssConnection/OUCCB/security/policy/csf-key	Name of csf-key created in CSS WebLogic domain to connect to CCB application	OUCSS_XAI_BASIC_KEY
/oucssInstall/oucssConnection/OUNMS/enabled	Set to true if NMS related connections need to be created from CSS Portal	True
/oucssInstall/oucssConnection/OUNMS/hostName	Hostname of SOA server hosting BPEL processes for connecting to NMS application	soa.company.com
/oucssInstall/oucssConnection/OUNMS/portNumber	Portnumber on which SOA server is listening	8500
/oucssInstall/oucssConnection/OUNMS/protocol	Protocol of SOA application URL	http
/oucssInstall/oucssConnection/OUNMS/partitionName	SOA partition name	OUCSS
/oucssInstall/oucssConnection/OUNMS/security/userName	Username which should be use to create CSF Key for NMS related BPEL processes	weblogic

/oucssInstall/oucssConnection/OUNMS/security/password	Password which should be use to create CSF Key for NMS related BPEL processes	password
/oucssInstall/oucssConnection/OUNMS/security/policy/csf-key	Name of csf-key created in CSS WebLogic domain to connect to NMS related BPEL processes	OUCSS_INTG_BASIC_KEY
/oucssInstall/oucssConnection/OUNC/enabled	Set to true if Notification center related connections need to be created from CSS Portal	true
/oucssInstall/oucssConnection/OUNC/hostName	Hostname of SOA server hosting BPEL processes for connecting to Notification center	soa.company.com
/oucssInstall/oucssConnection/OUNC/portNumber	Portnumber on which SOA server is listening	8500
/oucssInstall/oucssConnection/OUNC/protocol	Protocol of SOA application URL	http
/oucssInstall/oucssConnection/OUNC/partitionName	SOA partition name	OUNC
/oucssInstall/oucssConnection/OUNC/security/userName	Username which should be use to create CSF Key for Notification center related BPEL processes	weblogic
/oucssInstall/oucssConnection/OUNC/security/password	Password which should be use to create CSF Key for Notification center related BPEL processes	password
/oucssInstall/oucssConnection/OUNC/security/policy/csf-key	Name of csf-key created in CSS WebLogic domain to connect to Notification center related BPEL processes	OUCSS_INTG_BASIC_KEY

/oucssInstall/oucssConnection/OUCSS_BPEL_CCB/enabled	Configuration for Optional OUCSS-BPEL-CCB BPEL processes. If enabled, select CCB connections will be configured using the below details.	false
/oucssInstall/oucssConnection/OUCSS_BPEL_CCB/hostName	Hostname of SOA server hosting BPEL processes for connecting to optional BPEL flows to CCB.	soa.company.com
/oucssInstall/oucssConnection/OUCSS_BPEL_CCB/portNumber	Portnumber on which SOA server is listening	8500
/oucssInstall/oucssConnection/OUCSS_BPEL_CCB/protocol	Protocol of SOA application URL	http
/oucssInstall/oucssConnection/OUCSS_BPEL_CCB/partitionName	SOA partition name	OUCSS
/oucssInstall/oucssConnection/OUCSS_BPEL_CCB/security/userName	Username which should be use to create CSF Key for optional BPEL flows to CCB	weblogic
/oucssInstall/oucssConnection/OUCSS_BPEL_CCB/security/password	Password which should be use to create CSF Key for optional BPEL flows to CCB.	password
/oucssInstall/oucssConnection/OUCSS_BPEL_CCB/security/policy/csf-key	Name of csf-key created in CSS WebLogic domain to connect to optional BPEL flows to CCB.	OUCSS_INTG_BASIC_KEY
/oucssInstall/oucssConnection/OUCSSMISC/enabled	If enabled the below connections are created for the application	true
/oucssInstall/oucssConnection/OUCSSMISC/hostName	Hostname of SOA server hosting BPEL processes for connecting to optional BPEL flows to CCB.	soa.company.com
/oucssInstall/oucssConnection/OUCSSMISC/portNumber	Portnumber on which SOA server is listening	8500

/oucssInstall/oucssConnection/OUCSSMISC/protocol	Protocol of the SOA application URL	http
/oucssInstall/oucssConnection/OUCSSMISC/partitionName	SOA partition name where the OUCSSMISC composites are deployed.	OUCSS
/oucssInstall/oucssConnection/OUCSSMISC/security/userName	Username which should be used to create csf key for Miscellaneous services	weblogic
/oucssInstall/oucssConnection/OUCSSMISC/security/password	password which should be used to create csf key for Miscellaneous services	password
/oucssInstall/oucssConnection/OUCSSMISC/security/policy/csf-key	Name of csf-key created in CSS WebLogic domain to connect from Miscellaneous services	OUCSS_INTG_BASIC_KEY
/oucssInstall/oucssConnection/OUCSS_Inbound/security/keystore-csf/userName	Username which should be used to create csf key for Inbound services	owsm
/oucssInstall/oucssConnection/OUCSS_Inbound/security/keystore-csf/password	Password which should be use to create CSF Key for Inbound services	password
/oucssInstall/oucssConnection/OUCSS_Inbound/security/keystore-csf/csf-key	Name of csf-key created in CSS WebLogic domain to connect from rest services	keystore-csf-key
/oucssInstall/oucssConnection/OUCSS_Inbound/security/sign-csf/username	Username which should be used to create csf key for Inbound services	orakey
/oucssInstall/oucssConnection/OUCSS_Inbound/security/sign-csf/password	Password which should be use to create CSF Key for Inbound services	password
/oucssInstall/oucssConnection/OUCSS_Inbound/security/sign-csf/csf-key	Name of csf-key created in CSS WebLogic domain to connect from rest services	sign-csf-key

/oucssInstall/oucssConnection/OUCSS_Inbound/security/enc-csf/username	Username which should be used to create csf key for Inbound services	orakey
/oucssInstall/oucssConnection/OUCSS_Inbound/security/enc-csf/password	Password which should be use to create CSF Key for Inbound services	password
/oucssInstall/oucssConnection/OUCSS_Inbound/security/enc-csf/csf-key	Name of csf-key created in CSS WebLogic domain to connect from rest services	enc-csf-key
/oucssInstall/oucssConnection/mailServer/enabled	Flag to indicate if Mail Server related configuration should be created	true
/oucssInstall/oucssConnection/mailServer/hostName	Mail server hostname	mail.company.com
/oucssInstall/oucssConnection/mailServer/portNumber	Mail server portnumber	25
/oucssInstall/oucssConnection/mailServer/protocol	Mail server protocol	Smtp
/oucssInstall/oucssConnection/mailServer/fromAddress	Mail server from address	wssAdmin@company.com
/oucssInstall/oucssConnection/mapViewer/enabled	Flag to indicate if Map Viewer related configuration should be created	true
/oucssInstall/oucssConnection/mapViewer/hostName	Map Viewer Host name	mapviewer.company.com
/oucssInstall/oucssConnection/mapViewer/portNumber	Map Viewer Port number	7001
/oucssInstall/oucssConnection/mapViewer/protocol	Map Viewer Protocol	http
/oucssInstall/oucssConnection/mapViewer/context	MapViewer context	mapviewer
/oucssInstall/oucssConnection/mapViewer/basemap	MapViewer base map	NAVTEQ_SF.WORLD_MAP
/oucssInstall/oucssConnection/mapViewer/ colorTheme	MapViewer color Theme	OUCSS_OUTAGE_AREAS
/oucssInstall/oucssConnection/mapViewer/ colorThemeLocColumn	MapViewer color Theme Loc Column	AREA
/oucssInstall/oucssConnection/mapViewer/srid	MapViewer SRID	8307

/oucssInstall/oucssConnection/ExternalOfferService_WSDL	Configure the WSDL URL of Custom Offer Service if the OTB Offer Service is not used, leave it blank otherwise.

Appendix C

CSS Direct BPEL Flows Installation Properties

The following XML file contains the structure and sample data contained in ***InstallProperties.xml*** (used for installing CSS BPEL flows):

```
<?xml version="1.0" encoding="UTF-8"?>
<config>
<modulename>OUCSS</modulename>
<soapartition>OUCSS</soapartition>
<mdspartition>OUCSS</mdspartition>
<EdgeApplications>
  <OUMDM>
        <ManagedServer>
              <hostname>mdmhost.company.com</hostname>
              <portnumber>13000</portnumber>
              <protocol>http</protocol>
              <context>ouaf</context>
              <servername/>
              <username/>
              <password/>
        </ManagedServer>
        <username>SYSUSER</username>
        <password>password</password>
        <policy> oracle/wss_username_token_client_policy</policy>
  </OUMDM>
  <OUCCB>
        <ManagedServer>
              <hostname>ccbhost.company.com</hostname>
              <portnumber>8500</portnumber>
              <protocol>http</protocol>
              <context>spl</context>
              <servername/>
              <username></username>
              <password></password>
        </ManagedServer>
```

```
         <username>SYSUSER</username>
         <password>password</password>
         <policy> oracle/wss_http_token_over_ssl_client_policy</policy>
   </OUCCB>
   <OUNMS>
         <enabled>true</enabled>
         <db>
               <xads-flag>true</xads-flag>
               <multi-ds>
                           <hostname>db.company.com</hostname>
                           <port>1521</port>
                           <sid>oucss</sid>
                           <multids>CSSNMSMultiDS</multids>
                           <dsnameslist>CSSNMSDataSource1</dsnameslist>
                           <algorithmtype>Load-Balancing</algorithmtype>
               </multi-ds>
               <generic-dss>
                     <generic-ds>
                           <hostname>db.company.com</hostname>
                           <port>1521</port>
                           <sid>oucss</sid>
                           <jdbcdsname>CSSNMSDataSource1</jdbcdsname>
                           <dbvendor>oracle</dbvendor>

<jdbc_xa_driver_class>oracle.jdbc.xa.client.OracleXADataSource</jdbc_xa_driver_class>

<jdbc_driver_class>oracle.jdbc.OracleDriver</jdbc_driver_class>
                           <user>schema_name</user>
                           <pwd>password</pwd>
                     </generic-ds>
               </generic-dss>
               </db>
               </OUNMS>
</EdgeApplications>
<SOA>
   <AdminServer>
         <hostname>xxx.yourcompany.com</hostname>
         <portnumber>7001</portnumber>
         <servername>AdminServer</servername>
         <username>weblogic</username>
         <password>password</password>
         <domainname>soa_domain</domainname>
   </AdminServer>
   <ManagedServer>
         <protocol>http</protocol>
         <hostname>soa.company.com</hostname>
         <portnumber>8001</portnumber>
         <servername>soa_server1</servername>
         <username>weblogic</username>
         <password>password</password>
   </ManagedServer>
   <OHSServer><!--For Standalone Environments provide the  same hostname,portnumber and
protocol as that of the ManagedServer-->
         <protocol>http</protocol>
         <hostname>ohs.company.com</hostname>
         <mgdservernames>soa_server1,soa_server2</mgdservernames><!--For restarting the
list of managed servers-->
         <portnumber>7777</portnumber>
   </OHSServer>
   <mdsconfig>
         <mdsdbusername>system</mdsdbusername>
         <mdsdbuserpassword>password</mdsdbuserpassword>
         <mdsdbhostname>db.company.com</mdsdbhostname>
```

```
         <mdsdbportnumber>1521</mdsdbportnumber>
         <mdsdbsid>oucss</mdsdbsid>
   </mdsconfig>
</SOA>
<WorkFlow.Notification>
   <fromemailid>admin@company.com</fromemailid>
   <Notificationmode>yes</Notificationmode>
</WorkFlow.Notification>
<EH>
  <dba.dbusername>system</dba.dbusername>
  <dba.dbuserpassword>password</dba.dbuserpassword>
  <dbusername>schema</dbusername>
  <dbuserpassword>password</dbuserpassword>
  <dbuser.createflag>true</dbuser.createflag>
  <dbhostname>db.company.com</dbhostname>
  <dbportnumber>1521</dbportnumber>
  <dbsid>oucss</dbsid>
</EH>
</config>
```

InstallProperties XPath Descriptions and Examples

Property	Description	Example
<config>		
<modulename>	Name of the integration module.	Default: **OUCSS** Do not change this value.
<soapartition>	Name of the soa-partition if wish to be different from module name	**OUCSS** Do not change this value.
<mdspartition>	Name of the mds-partition if wish to be different from module name	**OUCSS** Do not change this value.
<EdgeApplications>		
<OUMDM>		
<ManagedServer>		
<hostname>	MDM Application Hostname	mdmhostname.company.com
<portnumber>	MDM application port number	7010
<protocol>	MDM Application Server protocol Valid values are http or https	http or https

	<context>	MDM context	Ouaf/XAIApp/xaiserver → For XAI services ouaf/webservices → For IWS servcies
	<servername>	Managed server name	
	<username>	Currently not used; leave blank	
	<password>	Currently not used; leave blank	
<username>		MDM Application Username used in the MDM credential key OU_MDM2_02	
<password>		MDM Application Password used in the MDM credential key OU_MDM2_02	
<policy>		The security policy that MDM accepts when invoking its webservice	Use oracle/ wss_http_token_client_policy for XAI services or refer to Appendix I Security Policies section for more information when invoking IWS services.
<OUCCB>			
<ManagedServer>			
	<hostname>	CCB Application Hostname	ccbhostname.company.com
	<portnumber>	CCB application port number	7010
	<protocol>	CCB Application Server protocol Valid values are http or https	http or https
	<context>	CCB context	Spl/XAIApp/xaiserver → For XAI Services spl/webservices → For IWS Services
	<servername>	CCB Managed server name	
	<username>	User name used to log in as an Managed server administrator.	
	<password>	Password used to log in as a Managed server administrator.	
<username>		CCB Application Username used in the CCB credential key OU_CCB_01	
<password>		CCB Application Password used in	

	the CCB credential key OU_CCB_01	
<policy>	The security policy that CCB accepts when invoking its webservice	Use oracle/ wss_http_token_client_policy for XAI services or refer to Appendix I Security Policies section for more information when invoking IWS services.
<OUNMS>		
<enabled>	If defined as true, it will create NMS related artifacts. Valid values are true or false	
<db>		
<xads-flag>	Create XA Data Source flag	Default: **true**
<multi-ds>		
<hostname>	Database hostname	soa.company.com
<port>	Database port number	1521
<sid>	Database SID	OUCSS
<multids>	Multi data source name	**CSSNMSMultiDS** (Do not change this value.)
<dsnameslist>	Adds the list of the generic data sources the user wants to associate with the multi data source created.	**CSSNMSDataSource1** (The name(s) defined here should be the same as the name defined in generic-dss/ generic-ds/jdbcdsname property)
<algorithmtype>	Algorithm type for the Multi Data Source	**Values:** **Load-Balancing** (recommended algorithm) or **Failover**
<generic-dss>		
<generic-ds>		
<hostname>	NMS Database hostname	nms.company.com
<port>	NMS Database port number	1521
<sid>	NMS Database SID	nmssid
<jdbcdsname>	NMS Data source name	**CSSNMSDataSource1**
<dbvendor>	DB Vendor	Default: **oracle**
<jdbc_xa_driver_class>	JDBC Driver class	**oracle.jdbc.OracleDriver**

		<jdbc_driver_class>	JDBC XA Driver class	**oracle.jdbc.xa.client.OracleXADataSource**
		<user>	NMS Database user name	nmsdbuser
		<pwd>	NMS Database password	nmsdbpwd
<SOA>				
<AdminServer>				
	<hostname>		Host name of the server where admin server hosting SOA suite is installed.	adminserver.company.com
	<portnumber>		Port number the admin server (hosting SOA suite) is listening to.	7043
	<servername>		Admin server name (hosting SOA suite)	AdminServer
	<username>		User name used to log in as an Admin server (hosting SOA suite) administrator.	weblogic
	<password>		Password used to log in as an Admin server (hosting SOA suite) administrator.	
	<domainname>		WebLogic domain name hosting SOA suite.	soa_domain
<ManagedServer>				
	<protocol>		Managed Server protocol Valid values are http or https	http
	<hostname>		Host name of the server where managed server (hosting SOA suite) is installed. Even in the case of Cluster, provide the host name of one of the SOA managed server	soa.company.com
	<portnumber>		Port number the managed server (hosting SOA suite) is listening to. Even in the case of Cluster, provide the	8043

		host name of one of the SOA managed server	
	<servername>	Managed server name (hosting SOA suite)	Managedserver1
	<username>	User name used to log in to managed server (hosting SOA suite) as an administrator.	WebLogic
	<password>	Password used to log in to managed server (hosting SOA suite) as an administrator.	WebLogicPwd
<OHSServer>			
	<protocol>	The protocol with which theOracle HTTP Server can be accessed.If standalone single SOA server provide the protocol of the SOA Server	http
	<hostname>	The hostname of the OHS Server if single SOA server provide the hostname of the SOA server	hostname.company.com
	<mgdservernames>	Provide all the managed servers that are listed in the Mod_WL_OHS file that are to be load balanced.In case of Cluster, the preferred name would be name of the Cluster instead of list of the servers separated by comma.	Soa_server1, soa_server2, or soa-Cluster1
	<portnumber>	The portnumber of the OHS server.If standalone server provide the portnumber of the SOA server.	7777
	<mdsconfig>		
	<mdsdbusername>	User name used to log in to MDS schema.	XXX_MDS

	<mdsdbuserpassword>	Password used to log in to MDS schema.	
	<mdsdbhostname>	Host name of the server hosting the database containing the MDS schema.	db.company.com
	<mdsdbportnumber>	Port number of the database containing MDS schema.	1521
	<mdsdbsid>	SID of the database containing MDS schema.	SID
<WorkFlow.Notification>			
	<fromemailid>	Email ID which should be set in the “From” property of Workflow Notification bean	admintest@company.com
	<Notificationmode>	Notification Mode	yes
<EH>			
	<dba.dbusername>	User name used to log in as a database administrator (DBA). This database hosts the schema required for the CSS Direct Flows Integration.	System
	<dba.dbuserpassword>	Password used to log in as a database administrator (DBA). This database hosts the schema required for CSS Direct Flows Integration.	
	<dbusername>	User name used to log in to OUCSSDIRFL schema for CSS Direct Flows integration. This user can be automatically	Schema_user

		created by the install (set dbuser.createflag to true) or manually outside the install process.	
	<dbuserpassword>	Password used to log in to OUCSSDIRFL schema for CSS Direct Flows Integration.	
	<dbuser.createflag>	Flag specifying whether to create a new schema or use the existing schema for CSS Direct Flows Integration. If the schema is created manually outside of the installation process, then set this value to “false”. Else, set the value to “true”, if the installation script should automatically create the schema. Valid values: true or false (this is case sensitive)	true
	<dbhostname>	Database host name used for CSS Direct Flows Integration.	Db.company.com
	<dbportnumber>	Database port number used for CSS Direct Flows Integration.	1521
	<dbsid>	Database SID used for CSS Direct Flows Integration.	
<app>		These properties are needed to specify where the BPEL Wrapper Stored Procedure is to be created. Normally, this will be in the NMS Database Information.	
	<db_vendor_app>	Db Vendor	Oracle

<jdbc_ds_name_app>	Leave blank. Not in use.	
<jdbc_driver_class_app>	JDBC Driver Class	oracle.jdbc.OracleDriver
<db.hostname>	Database hostname	
<db.port>	Database port number	
<db.sid>	Database SID	
<db.adminuser>	Data Admin User name	
<db.adminpwd>	Data Admin password	
<dbuser>	Database User name	
<dbpwd>	Database password	

Appendix D

OUNC Installation Properties

The following XML file contains the structure and sample data contained in ***InstallProperties.xml*** (used for installing OUNC flows):

```
<?xml version="1.0" encoding="UTF-8"?>
<config>
<OUNC>
   <modulename></modulename>
   <soapartition></soapartition>
   <mdspartition></mdspartition>
   <EdgeSystems>
          <CCB>
                 <enabled></enabled>
                 <hostname></hostname>
                 <portnumber></portnumber>
                 <servername></servername>
                 <protocol></protocol>
                 <appcontext></appcontext>
                 <username></username>
                 <password></password>
                 <policy></policy>
          </CCB>
          <MDM>
                 <enabled></enabled>
                 <protocol></protocol>
                 <hostname></hostname>
                 <portnumber></portnumber>
                 <username></username>
                 <password></password>
                 <policy></policy>
          </MDM>
          <NMS>
                 <enabled></enabled>
                 <DB>
                        <dbusername></dbusername>
                        <dbuserpassword></dbuserpassword>
                        <dbhostname></dbhostname>
```

```
                        <dbportnumber></dbportnumber>
                        <dbsid></dbsid>
                </DB>
        </NMS>
  </EdgeSystems>
  <Core>
        <SOA>
                <AdminServer>
                        <hostname></hostname>
                        <portnumber></portnumber>
                        <servername></servername>
                        <username></username>
                        <password></password>
                        <domainname></domainname>
                </AdminServer>
                <ManagedServer>
                        <hostname></hostname>
                        <portnumber></portnumber>
                        <servername></servername>
                        <username></username>
                        <password></password>
                </ManagedServer>
                <OHSServer><!--For Standalone Environments provide the  same
hostname,portnumber and protocol as that of the ManagedServer-->
                        <protocol></protocol>
                        <hostname></hostname>
                        <mgdservernames></mgdservernames><!--For restarting the list of
managed servers-->
                        <portnumber></portnumber>
                </OHSServer>
                <mdsconfig>
                        <mdsdbusername></mdsdbusername>
                        <mdsdbuserpassword></mdsdbuserpassword>
                        <mdsdbhostname></mdsdbhostname>
                        <mdsdbportnumber></mdsdbportnumber>
                        <mdsdbsid></mdsdbsid>
                </mdsconfig>
                <partition-name></partition-name>
        </SOA>
        <DB>
                <dba.dbusername></dba.dbusername>
                <dba.dbuserpassword></dba.dbuserpassword>
                <dbusername></dbusername>
                <dbuserpassword></dbuserpassword>
                <dbuser.createflag></dbuser.createflag>
                <dbhostname></dbhostname>
                <dbportnumber></dbportnumber>
                <dbsid></dbsid>
                <installedVersion></installedVersion>
        </DB>
        <EH>
                  <dba.dbusername></dba.dbusername>
                  <dba.dbuserpassword></dba.dbuserpassword>
                  <dbusername></dbusername>
                  <dbuserpassword></dbuserpassword>
                  <dbuser.createflag></dbuser.createflag>
                  <dbhostname></dbhostname>
                  <dbportnumber></dbportnumber>
                  <dbsid></dbsid>
        </EH>
  </Core>
  <MailServer>
        <send>
```

```
                        <hostname></hostname>
                        <portnumber></portnumber>
                        <protocol></protocol>
                        <fromAddress></fromAddress>
          </send>
   </MailServer>
   <UMS>
       <SMPP>
               <SmsAccountId></SmsAccountId>
               <SmsServerHost></SmsServerHost>
               <TransmitterSystemId></TransmitterSystemId>
               <ReceiverSystemId></ReceiverSystemId>
               <TransmitterSystemType></TransmitterSystemType>
               <ReceiverSystemType></ReceiverSystemType>
               <TransmitterSystemPassword></TransmitterSystemPassword>
               <ReceiverSystemPassword></ReceiverSystemPassword>
               <ServerTransmitterPort></ServerTransmitterPort>
               <ServerReceiverPort></ServerReceiverPort>
               <DefaultEncoding></DefaultEncoding>
                <SenderAddresses></SenderAddresses>
                <applicationName></applicationName>
       </SMPP>
       <EMAIL>
               <MailAccessProtocol></MailAccessProtocol>
               <OutgoingDefaultFromAddr></OutgoingDefaultFromAddr>
               <OutgoingMailServer></OutgoingMailServer>
               <OutgoingMailServerPort></OutgoingMailServerPort>
               <OutgoingMailServerSecurity></OutgoingMailServerSecurity>
               <OutgoingUsername></OutgoingUsername>
               <Outgoingpassword></Outgoingpassword>
               <IncomingUserIDs></IncomingUserIDs>
               <IncomingUserPasswords></IncomingUserPasswords>
              <applicationName></applicationName>
       </EMAIL>
   </UMS>
</OUNC>
</config>
```

XPATH		Description	Example
<OUNC>			
< modulename >		Name of the Integration Module	OUNC
<soapartition>		Name of the partition if wish to be different from module name	OUNC_SOA
<mdspartition>		Name of the MDS partition if wish to be different from module name	OUNC_MDS
<EdgeSystems>			
< CCB >			
	<enabled>	Boolean value Default is yes. This application is actively part of the integration	Yes
	<hostname>	Host Name of the CCB application housed.	ccb.company.com
	<portnumber>	port number at which the CCB application is listening.	1025
	<servername>	Admin Server name	
	<protocol>	The protocol at which the CCB can be accessed. It can be http or https	http

		<appcontext>	context root of the Application	Spl/XAIServer/xaiapp > For XAI services spl/webservices > For IWS services
		<username>	User name used to login to the application	SYSUSER
		<password>	password used to login to the application	
		<policy>	The security policy that CCB accepts when invoking its webservice	Use oracle/ wss_http_token_client_policy for XAI services or refer to Appendix I Security Policies section for more information when invoking IWS services.
	<MDM>			
		<enabled>	Boolean value Default is yes. This application is actively part of the integration	no
		<protocol>	The protocol at which the MDM can be accessed. It can be http or https	
		<hostname>	Host Name of the MDM application housed.	
		<portnumber>	port number at which the MDM application is listening.	
		<username>	User name used to login to the application	
		<password>	password used to login to the application	
		<policy>	The security policy that MDM accepts when invoking its webservice	Use oracle/ wss_http_token_client_policy for XAI services or refer to the Appendix I Security Policies section for more information when invoking IWS services.
	<NMS>			
	<enabled>		Boolean value Default is yes. This application is actively part of the integration	yes
	<DB>			
	<dbusername>		Database schema user name for OUNMS	
	<dbuserpassword>		Database schema password for OUNMS	
	<dbhostname>		Database host name for OUNMS	nms.company.com
	<dbportnumber>		Database listening port number for OUNMS	1521
	<dbsid>		Database service Id for OUNMS	nms
<Core>				
	<SOA>			
	<AdminServer>			
	<hostname>		Host name of the server where admin server is installed	soa.company.com
	<portnumber>		port number of the server where the admin server is installed.	7015
	<servername>		Admin Server name	
	<username>		User name used to login to the WebLogic console as administrator	
	<password>		password used to login to the WebLogic console	

		as administrator	
	<domainname>	WebLogic domain name hosting the SOA server	
	< ManagedServer >		
	<hostname>	Host name of the server where soa server is installed.Even in the case of Cluster, provide the host name of one of the SOA managed server	soa.company.com
	<portnumber>	Port number of the server where the soa server is installed. Even in the case of Cluster, provide the host name of one of the SOA managed server	8015
	<servername>	SOA Server name. Even in the case of Cluster, provide the host name of one of the SOA managed server	soa_server1
	<username>	User name used to login to the WebLogic console as administrator	
	<password>	Password used to login to the WebLogic console as administrator	
<OHSServer>			
<protocol>		The protocol with which theOracle HTTP Server can be accessed.If standalone single SOA server provide the protocol of the SOA Server	http
<hostname>		The hostname of the OHS Server if single SOA server provide the hostname of the SOA server	ohs.company.com
<mgdservernames>		Provide all the managed servers that are listed in the Mod_WL_OHS file that are to be load balanced.The preferred value would be name of the Cluster	Soa_server1,soa_server2 (or) soa_cluster1
<portnumber>		The portnumber of the OHS server.If standalone server provide the portnumber of the SOA server.	7777
	< mdsconfig>		
	<mdsdbusername>	User name used to login to the MDS schema	
	<mdsdbuserpassword>	Password used to login to the MDS schema	
	<mdsdbhostname>	Host name of the database containing the MDS schema	db.company.com
	<mdsdbportnumber>	Port number of the database containing the MDS schema	1521
	<mdsdbsid>	Service id of the database for the MDS schema	oucss
	<partition-name>	Partition name used for the MDS configurations	
	<DB>		
	<dba.dbusername>	DBA admin user name to create schemas for NC	
	<dba.dbuserpassword>	DBA password to create schemas for NC	
	<dbusername>	DB user name with which the schemas are created	
	<dbuserpassword>	DB password with which the schemas are created	
	<dbuser.createflag>	Re-installation of DB based on the flag.	
	<dbhostname>	schema user for the DB created for NC	
	<dbportnumber>	schema password for DB created for NC	
	<dbsid>	Service id of the database for NC	

<installedVersion>	Installed version
<EH>	
<dba.dbusername>	DBA admin user name to create schemas for Error Handling
<dba.dbuserpassword>	DBA password to create schemas for Error Handling
<dbusername>	DB user name with which the schemas are created
<dbuserpassword>	DB password with which the schemas are created
<dbuser.createflag>	Re-installation of DB based on the flag.
<dbhostname>	schema user for the DB created for EH
<dbportnumber>	schema password for DB created for EH
<dbsid>	Service id of the database for EH
<MailServer>	
<send>	
<hostname>	Mail server host name
<portnumber>	Mail server port number
<protocol>	
<fromAddress>	
< UMS >	
< SMPP >	
<SmsAccountId>	Account Identifier on SMSC
<SmsServerHost>	SMSC server host name (or IP address)
<TransmitterSystemId>	Account ID used to send out messages
<ReceiverSystemId>	Account ID used to receive messages
<TransmitterSystemType>	The type of transmitter system. The default value is 'Logica'
<ReceiverSystemType>	The type of receiver system. The default value is 'Logica'
<TransmitterSystemPassword>	Password of transmitter system.
<ReceiverSystemPassword>	Password of receiver system.
<ServerTransmitterPort>	TCP port number of transmitter server.
<ServerReceiverPort>	TCP port number of receiver server.
<DefaultEncoding>	Default encoding of driver. Default value is 'IA5'
<SenderAddresses>	Used in message routing, by matching against the sender address of the message. (Example: EMAIL:sender@example.com, EMAIL:sender@example2.com, etc.)
<applicationName>	this is the application name for the user messaging service-smpp
< EMAIL >	

<MailAccessProtocol>	E-mail receiving protocol. The possible values are IMAP and POP3. Required only if e-mail receiving is supported on the driver instance	
<OutgoingDefaultFromAddr>	The default FROM address (if one is not provided in the outgoing message).	
<OutgoingMailServer>	The name of the SMTP server. Mandatory only if e-mail sending is required.	
<OutgoingMailServerPort>	The port number of SMTP server. Typically 25.	
<OutgoingMailServerSecurity>	The security used by SMTP server. Possible values are None, TLS and SSL. Default value is None	
<OutgoingUsername>	The username used for SMTP authentication. Required only if SMTP authentication is supported by the SMTP server	
<Outgoingpassword>	The password used for SMTP authentication. Required only if SMTP authentication is supported by the SMTP server.	
<IncomingUserIDs>	The list of user names of the mail accounts the driver instance is polling from. Each name must be separated by a comma, for example, foo,bar. Required only if e-mail receiving is supported on the driver instance	
<IncomingUserPasswords>	The list of passwords corresponding to the user names. Each password is separated by a comma and must reside in the same position in the list as their corresponding user name appears on the usernames list. Required only if e-mail receiving is supported on the driver instance.	
<applicationName>	This is the application name for the user messaging service	usermessagingdriver-email
<capability>	Sets the driver's capability to send or receive messages.	The values are SEND, RECEIVE, and BOTH.

Appendix E

CSF-Key Creation Failure and Workarounds

This appendix describes workarounds for an issue that can occur if either of NMS or MDM is used when <username> and <password> elements under <NMS> are not populated in InstallProperties.xml.

Issue Description

OUCSS_INTG_BASIC_KEY is commonly used for both NMS- and MDM- related Integration calls (BPEL/SOA). If either NMS or MDM is used, then this key is required.

The OUCSS Install Script uses, by default, properties from the <NMS> element in InstallProperties.xml to create this key. If the <username> and <password> elements under <NMS> are not populated in InstallProperties.xml, the OUCSS_INTG_BASIC_KEY key creation fails and one of the following workarounds must be applied.

IMPORTANT: Apply only Workaround 1 or Workaround 2. Do not apply both.

Workaround 1

If you are using only MDM and *not* NMS, populate the <NMS> element in InstallProperties.xml with the same <username> and <password> values configured for the <MDM> element.

Workaround 2

The key can also be created manually in Enterprise Manager:

1. Select Domain > Security > Credentials.
2. Select or create key map **oracle.wsm.security**, then click the Create Key button.

3 Under the Map **oracle.wsm.security**, provide the key name as **OUCSS_INTG_BASIC_KEY** and enter the details for username and password (related to BPEL/SOA), then select **OK** to create the key.

Verify OUCSS Security Credential

To load the credential page, follow the steps in the Verify the OUCSS Security Credential section earlier in this document.

Known Issue/Workaround in OUCSS Portal Uninstall

Follow this procedure if the OUCSS Portal uninstall fails with error "ORA-01940: Cannot drop a user that is currently connected". This error occurs only if you are connected to the OUCSS database user using SQL Developer, SQL *Plus, or similar tools.

To kill connected sessions so that user gets dropped and uninstall may proceed, you must execute the required SQL query to kill the connected session to the OUCSS database user, or apply a query as follows:

```
SELECT s.sid, s.serial#, s.status, p.spid FROM v$session s, v$process p WHERE s.username
= '<OUCSSDBUSERNAME>' and p.addr (+) = s.paddr;
```

```
SELECT 'alter system kill session ''' || s.sid || ',' || s.serial# || ''';'  FROM
v$session s, v$process p WHERE s.username = ' <OUCSSDBUSERNAME> ' and p.addr (+) =
s.paddr;
```

```
SELECT * FROM v$session   WHERE USERNAME='<OUCSSDBUSERNAME>'
```

Note: <OUCSSDBUSERNAME> refers to the database user name which you are using for the OUCSS application.

Appendix F

Connection Management

Often it is required to change a single connection or set of connections (e.g., all CCB connections) with a new end point/host. Manually updating is time consuming and error prone.

This section discusses management of connections and connection sets for OUCSS Application (OUCSS Portal, OUCSS Inbound Services).

Configuration

Connection Mapping

All connections are mapped/grouped by EdgeApplication and ConnectionSet in <<PRODUCT_HOME>>/config/ConnectionMappings.xml. Do not modify the ConnectionMapping.xml entries and use it only for reference purposes.

CCB connections are mapped under ConditionalConnection name="CCBorSOA" to facilitate conditionally creating connections either to CCB or CSS_BPEL_CCB setting configured in InstallProperties.xml.

Edge Applications

OUCSS Connections are classified into sets depending on the edge application used for the connection. Connections details for each can be configured using InstallProperties.xml using /oucssInstall/oucssConnection/<<connectionSet>>/ tags.

OUCCB

Connections associated with CCB XAI services. Configure or Update /oucssInstall/oucssConnection/OUCCB tag in InstallProperties to de-tokenize CCB connections.

OUNMS

Connections associated with NMS. Configure or Update oucssInstall/oucssConnection/OUNMS tag in InstallProperties to de-tokenize NMS connections.

OUMDM

Connections associated with MDM services. Configure or Update /oucssInstall/oucssConnection/OUMDM tag in InstallProperties to de-tokenize CCB connections.

OUNC

Connections associated with OUNC services. Configure or Update /oucssInstall/oucssConnection/OUNC tag in InstallProperties to de-tokenize OUNC connections.

CCBorSOA

Alternative to directly configuring CSS directly to CCB, a SOA layer Integration layer can be used in between. This provides optional CSS – CCB integration layer. Configure or Update /oucssInstall/oucssConnection/OUCSS_BPEL_CCB tag in InstallProperties to de-tokenize OUCSS_BPEL_CCB connections.

MapViewer

Connection associated with MapViewer. Configure or Update /oucssInstall/oucssConnection/mapViewer tag in InstallProperties to de-tokenize MapViewer connections.

OUCSSMISC

Web Service Connections associated read and upload of Account Documents.

Connection Sets

Each edge application is further sub categorized with OUCSSCore to define the set of connections.

OUCSSCore

Connections associated with residential modules in OUCSS applications are aggregated as OUCSSCore.

OUCSSCoreCommercial

Connections associated with commercial modules in OUCSS applications are aggregated as OUCSSCoreCommercial.

Management

Each connection is identified by four primary attributes: Connection Name (e.g., AccountSummaryService), Edge Application (e.g., CCB, NMS, etc), ConnectSet (e.g., OUCSSCore, OUCSSCoreCommercial, etc), and Application Name

(e.g., OUCSSPortal, OUCSSInboundServices, etc.). By categorizing connections using the above four attributes, connections can be created/deleted using any combination.

Modifying all Edge Application Connections

To create all the Connections in a Single Command in order to validate with the Edge application details provided in the InstallProperties.xml file the below steps would leverage to ensure you with the all connections being refreshed with the changes.

1. Set up the environment by performing steps 3 through 6 in the the Installing OUCSS Portal section of this document.
2. Run the following command to create all the Edge Applications connections under OUCSSPortal Application as follows

   On Windows:

   For OUCSS Portal application Connection Management:

   ```
   ant -f InstallBuild.xml createPortalConnections -
   DInstallProperties=%PRODUCT_HOME%\config\InstallProperties.xml -l
   createConnection4Portal.log
   ```

   For OUCSS Inbound Services Connection Management:

   ```
   ant -f InstallBuild.xml createInboundConnections -
   DInstallProperties=%PRODUCT_HOME%\config\InstallProperties.xml -l createConnection4IB.log
   ```

   On UNIX/Linux:

   For OUCSS Portal application Connection Management:

   ```
   ant -f InstallBuild.xml createPortalConnections -
   DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml | tee
   createConnection4Portal.log
   ```

   For OUCSS Inbound Services Connection Management:

   ```
   ant -f InstallBuild.xml createInboundConnections -
   DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml | tee
   createConnection4IB.log
   ```

Updating Connections

Follow the steps below to update a connection/connection set:

1. Modify the InstallProperties.xml file with updated Edge Application details.
2. Create a single connection or connection set.

   - If the OUCSS application interacts directly with the CCB application, set the `oucssConnection.OUCSS_BPEL_CCB.enabled` property to false in the InstallationProperties.xml file.
   - If the optional flows are also deployed and you wish to route through the SOA-enabled OUCCB application, then set the `oucssConnection.OUCSS_BPEL_CCB.enabled` property to true.
   - If the OUCSS_BPEL_CCB Flows are not deployed, then setting the flag `oucssConnection.OUCSS_BPEL_CCB.enabled` to *true* will try to reach the non-existing endpoint address and can cause runtime errors.

Appendix G

Account Documents Web Server

From Account Documents screen in CSS, a customer can view certain documents available for the account from CCB. In CCB, the link to the account document is setup as a **File Location Value Characteristic Type**. These characteristic types are then defined in master configuration. If any of these characteristics are present on the account, the inbound service returns the description and URL of the document for display in CSS.

CSS user can click to read a document and BPEL integration flow returns the read document for CSS to render. When retrieving documents needed for CSS, the integration flow reads the document from the file system by default. By default, the file to read the account document from either exists or is mounted on to the integration file server. The folder for the account documents location is determined using a set of configuration properties in the BPEL ConfigurationProperties file. Refer to the *Oracle Utilities Customer Self Service Implementation Guide* for information on the specific properties required and how they need to be set.

For a CSR in CCB to be able to view the document, as an http URL link, they should be able to access the account document file located on the integration server. In order to do that, it is suggested to use a web server that allows mapping of URLs to file locations.

The implementation can use any web server to achieve this mapping (e.g., Apache HTTP Server; for details, see "Mapping URLs to Filesystem Locations" in the Apache 2.2 documentation at http://httpd.apache.org/docs/2.2/urlmapping.html).

Important specifications include the correct Document Root, which is the directory that forms the main document tree visible from the web (e.g., `/opt/apache2.2/htdocs`). The DocumentRoot directive is set in your main server configuration file (httpd.conf) and, possibly, once for each additional Virtual Host you create. For additional documentation about the DocumentRoot, see the Apache server documentation at http://httpd.apache.org/docs/2.2/mod/core.html#documentroot.

Appendix H

XAI to IWS Web Services

This chapter describes the steps necessary for OUCSS to connect to OUCCB services using JAX-WS based Inbound Web Services (IWS). Oracle Utilities Application Framework currently provides the capability to expose any object within the product as a web service via the XML Application Integration (XAI) component. OUCSS consumes these web services by directly connecting to CCB environment or through the Oracle SOA architecture.

In Oracle Utilities Application Framework V4.2.0.2.0, a new native Web Services facility was introduced that has several advanteages over XAI. This facilitates tracking and management of individual web services using Oracle Enterprise Manager, providing enhanced security features with compliance for WS-Policy standards, as well as providing access to a wide range of authentication and encryption mechanisms, including web service clustering capabilities. The following topics describe how to consume IWS based web services hosted in OUCCB from within the OUCSS application.

Configuration

This section describes the settings and procedures for consuming IWS based web services instead of using XAI based web services. The settings depend on whether CSS is directly connected to CCB, or is connected via Oracle SOA. Both approaches are described below.

If CSS is Directly Connected to CCB

1. Change the CCB URLs to point to IWS instead of XAI. For example, the URL `http://HOST:PORT/APPROOT/XAIApp/xaiserver/WXViewAccount` would be changed to `http://HOST:PORT/APPROOT/webservices/WXViewAccount`.
2. Login to Oracle Enterprise Manager and navigate to **Application Deployments > OUCSSPortal**.
3. Right click on **OUCSSPortal**. Choose **ADF > Configure ADF Connections**. to open the **ADF Connections Configuration** page.
4. Go to **Web Service Connections**.
5. Select a connection from the list, then click **Edit**.

6. Modify the **WSDL URL** to point to an IWS service.
7. Select the same service again and choose **Advanced Connection Configuration -> Service Name**.
8. Modify the **Endpoint Address** on the **Configuration** tab with the IWS service URL (e.g., `http://HOST:PORT/APPROOT /webservices/WXViewAccount` (note: don't include "WSDL" in the URL).
9. Select the **Attach/Detach Policies** link. The security policy attached to this IWS service should be configured from this screen.
10. Note the **Globally / Directly Attached Policies** for this web service. The policy should match the policy configured for this service on the CCB side.
11. If the policy declared on the CCB side is different that what is configured here, the policy must be changed. To change the policy, press the **Attach/Detach** button. A popup window will open to allow you to make the change.
12. Select the existing policy and click on **Detach**. Find the policy matching the configuration in CCB from within the **Available Policies** panel. If, for example, the policy `wss_username_token_client_policy` is configured for this service in CCB. When the policy is selected, press the **Attach** button to attach this policy to the service.
13. Click **OK** to return to the parent window. Select the tab **'Override Policy Configuration'** and make sure other **Security Configuration Details** are relevant and correct, (e.g., **csf-key**), then return to the **Configuration** tab and press **Apply**.
14. Repeat the procedure for all defined web services.
15. Restart the server hosting the OUCSSPortal web application.

If CSS is Connected to CCB Through SOA

1. If CSS is connected to CCB through Oracle SOA, then migration from XAI to IWS requires changes on the SOA end. Note that no change is required on the CSS end since CSS will continue to interact with SOA in the same manner it did with XAI.
2. When consuming IWS-based services, the SOA endpoint URLs need to be modified to point to IWS instead of XAI. For example, the URL `http://HOST:PORT/APPROOT/XAIApp/xaiserver/WXViewAccount` would be changed to `http://HOST:PORT/APPROOT/webservices/WXViewAccount`.
3. Changing an endpoint URL to a partner link can be done in SOA by modifying the CSSCCBConfigurationProperties.xml file (which contains links to XAI-based services) from MDS.
4. Once the endpoint URLs are changed, the security policy attached to those composites in SOA also need to be changed to match the policy set in IWS.
5. To make the changes, log in to Oracle Enterprise Manager on the WebLogic server that hosts the SOA composites, then navigate to the composite that needs to be modified.
6. Select the **Policies** tab from panel on the right side of the window.
7. Select the policy on the partner link to modify by clicking on '**Attach To/Detach From**' and selecting the policy.
8. If the attached policy does not match the WS-Policy set on the IWS service, select the policy and press **Detach**.
9. Choose the appropriate policy from the list of policies in the **Available Policies** panel, then press **Attach**.
10. Save this composite and repeat the procedure for all other composites.
11. Restart the SOA server after all composites are modified.

Using Scripts to Change XAI Connections to IWS

Changing XAI connections to IWS can also be done using provided scripts, as described in the following procedures:

If CSS is Directly Connected to CCB

1. Verify that InstallProperties.xml is updated as described elsewhere this Installation Guide.
2. Set up the environment by performing steps 3 to 6 in the Installing OUCSS Portal section.
3. Run the following ant scripts with the additional `-DisIWS.enabled` parameters to change CCB connections from XAI to IWS. Note that each of the commands is a single line, and may require copying to a text editor and modifying accordingly before pasting into your command window.

   *If no security annotation is enabled on the CCB IWS service, run the following commands to use the **oracle/wss_http_token_client_policy** OWSM policy for authentication:*

   On Linux/UNIX:

   ```
   ant -f InstallBuild.xml detokenizePortalConnections -
   DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml -DisIWS.enabled=true -l
   IWSConnections.log
   ```

   On Windows:

   ```
   ant -f InstallBuild.xml detokenizePortalConnections -
   DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -DisIWS.enabled=true -l
   IWSConnections.log
   ```

   If the Username token annotation is enabled in CCB IWS services, run the following command to replace the default policy with the oracle/wss_username_token_client_policy:

   On Linux/UNIX:

   ```
   ant -f InstallBuild.xml detokenizePortalConnections -
   DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml -DisIWS.enabled=true
   -Dpolicy.name=oracle/wss_username_token_client_policy –l IWSConnections.log
   ```

   On Windows:

   ```
   ant -f InstallBuild.xml detokenizePortalConnections -
   DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -DisIWS.enabled=true
   -Dpolicy.name= oracle/wss_username_token_client_policy –l IWSConnections.log
   ```

Appendix I

Security Policies

When a composite needs to invoke an edge application web service, an appropriate security policy should be attached to the reference web service of the composite.

- Invoking edge application XAI Service.

When calling an edge application XAI service, the security policy to attach to the reference web service of the composite is oracle/wss_http_token_client_policy.

- Invoking edge application Inbound Web Service (IWS).

When calling an edge application Inbound Web Service (IWS), the security policy to attach to the reference web service of the composite is dependent on the annotation specified in the IWS wsdl.

- If a security policy annotation is specified in the edge application's Inbound Web Service, use the policy specified.

Example 1: The policy defined in the IWS wsdl is UsernameToken. It means oracle/wss_username_token_client_policy should be attached to the composite's reference web service.

```
<wsp:UsingPolicy wssutil:Required="true"/>
- <ns0:Policy wssutil:Id="UsernameToken">
  - <ns1:SupportingTokens>
    - <ns0:Policy>
      - <ns1:UsernameToken ns1:IncludeToken="http://docs.oasis-open.org/ws-sx/ws-securitypolicy/200512/IncludeToken/AlwaysToRecipient">
        - <ns0:Policy>
            <ns1:WssUsernameToken10/>
          </ns0:Policy>
        </ns1:UsernameToken>
      </ns0:Policy>
    </ns1:SupportingTokens>
  </ns0:Policy>
```

Example 2: The policy defined in the IWS wsdl is Https-BasicAuth xml. It means HTTP Basic Authentication over SSL Including Timestamp is required, so oracle/wss_http_token_over_ssl_client_policy should be attached to the composite's reference web service.

```
  <wsp:UsingPolicy wssutil:Required="true"/>
- <ns0:Policy wssutil:Id="Wssp1.2-2007-Https-BasicAuth.xml">
  - <ns1:TransportBinding>
    - <ns0:Policy>
      - <ns1:TransportToken>
```

- If no security policy annotation is specified in the edge application's Inbound Web Service and the edge application is using Framework4.3.0.2.0 or higher, a default security policy oracle/wss_http_token_over_ssl_client_policy will be use by the edge application's Inbound Web Service. The default policy can be changed in the edge application's Feature Configuration Menu. Refer to edge application's implementation guide for more information.
- If the edge application is using Framework 4.2.0, a security policy annotation has to be specified in the edge application's Inbound Web Service. In this version of Framework, there is no default security policy specified. oracle/wss_http_token_client_policy has to be specified in the edge application's Inbound Web Service security policy annotation.