

# Oracle Communications Digital BSS Reference Solution Installation Guide

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# Executive Summary

The Oracle Communications Digital BSS Reference Solution is a set of Concept-to-Cash reference and sample materials, which enables service providers to rapidly monetize their customer engagements with a modern customer buying, order delivery and personalized usage experience. Key capabilities are: Offer Design, Order Capture, Order Delivery, and Customer & Billing Care.

## Document Audience

This document provides detailed installation and configuration instructions required to set up Oracle Communications Digital BSS Reference Solution stack.

The document is divided into two major sections:

1. Installing RODOD Applications with or without using unattended installation scripts
  - BRM
  - PDC
  - Billing Care
  - OSM
  - AIA
2. Installing CX Integration Pack Reference Solution Bundle, which contains the following Oracle Communications Digital BSS Reference Solution components
  - Oracle Integration Cloud Service (ICS) integrations package
  - Oracle Configure, Price, and Quote (CPQ) Cloud extensions package
  - Oracle Application Integration Architecture (AIA) SOA composites

This document assumes that you have already completed the pre-requisite steps from the *RODOD Reference Solution Getting Started Guide* including the setup of the Media Server and the preparation of the Linux Target Hosts.

# 1. Installing the RODOD Applications

After configuring the Installer Workstation and Media Server, you can install the RODOD applications on the Target Hosts in the recommended sequence. See the following sections for application-specific installation instructions. **All instructions and unattended install scripts are based on the installation guides for the specific RODOD applications; if any clarifications on installation are required please consult the application install guides.**

These documents can be found on: <http://docs.oracle.com>

- Oracle Database Quick Installation Guide
- Fusion Middleware Installation Guide for Oracle WebLogic Server
- Oracle Communications Billing and Revenue Management Installation Guide
- Oracle Communications Pricing Design Center Installation and System Administration Guide
- Oracle Communications Billing Care Installation Guide
- Oracle Communications Order and Service Management Installation Guide
- Oracle Communications Order and Service Management Cartridge Guide for Oracle Application Integration Architecture
- Oracle Communications Design Studio Installation Guide
- Oracle Application Integration Architecture Installation Guide

All of the installation steps from the above set of documents have been distilled into a greatly simplified installation procedure that is assisted by the unattended install scripts. An installation process that has historically needed weeks of effort and hard-learned expertise is now compressed into a simple set of steps that can be accomplished relatively easily by a new user in only a couple of days.

- 1) Download the unattended install scripts to the **Installer Workstation** and extract the ZIP file contents to a local directory (identified by environment variable `MANAGEABLE_INSTALL_TOOL_DIR` or `MIK_HOME` in Install scripts and documents):

```
/bin/mkdir -p /private/downloads/aiacom_manageable_install
```

Download the **rodod\_install\_kit.zip** file to the  
**/private/downloads/aiacom\_manageable\_install** directory:

```
/usr/bin/unzip -d /private/downloads/aiacom_manageable_install  
/private/downloads/aiacom_manageable_install/rodod_install_kit.zip
```

Start with installing the applications as follows:

- [Installing BRM](#) (Billing and Revenue Management)

- [Installing PDC](#) (Pricing Design Center). The PDC installer installs PDC Middleware and the BRM Integration Pack. PDC should be installed only after the BRM installation is completed and the BRM Modules are up and running.
- [Installing Billing Care](#)

Continue with the following installation steps, which can be performed in parallel with the BRM install:

- [Installing OSM](#) (Order and Service Management)
- [Installing FMW for AIA Integration Packs](#) (Application Integration Architecture)

The AIA PIPs (Process Integration Packs) should be installed after all of the above applications are installed and their corresponding processes are up and running. See the following sections for AIA PIP installation instructions, which should be performed sequentially.

- [Installing the O2C Integration Pack](#) (Order to Cash Process Integration Pack)

Apart from installing the O2C PIP on the AIA Host, the unattended install scripts also install the Order to Activate (O2A) Cartridge on OSM and set up JMS/AQ communications between AIA and the edge applications. This is the step that **interconnects the standalone BSS applications to integrate the Digital BSS Reference Solution**.

After AIA O2C PIP is installed, CX Reference Solution Bundle components can be installed and configured. Follow steps mentioned in [Installing CX Integration Pack Reference Solution Bundle](#).

Once CX Reference Solution Bundle is installed and configured, the Digital BSS reference data can be imported. See [Importing and Enriching Reference Data](#).

See the *Digital BSS Reference Solution Release Notes* for known issues and workarounds.



## 1.1. Installing BRM

Install BRM version 12 by following *Oracle Communications Billing and Revenue Management Installation Guide*.

## 1.2. Installing PDC

Install PDC version 12 by following *Oracle Communications Pricing Design Center Installation and System Administration Guide*.

## 1.3. Installing Billing Care

Install Billing Care version 12 by following *Oracle Communications Billing Care Installation Guide*.

## 1.4. Installing OSM

A running OSM application includes these major components:

- WebLogic Admin server
- OSM managed server
- Repository database

Choose an application topology from the following topologies supported by the unattended install scripts:

- A WebLogic Admin server, an OSM managed server, and a repository database on a single OSM host.
- A WebLogic Admin server, an OSM managed server, and a pre-installed repository database (i.e. a database not provisioned by this installation process) on a single OSM host.

To install OSM (Skip steps 1-4 if already done in Installer Workstation):

- 1) Download the unattended install scripts to the **Installer Workstation**; unzip it to a local directory (identified by environment variable `MANAGEABLE_INSTALL_TOOL_DIR` or `MIK_HOME` in Install scripts and documents).

```
/bin/mkdir -p /private/downloads/aiacom_manageable_install
```

Download the **rodod\_install\_kit.zip** file to the  
**/private/downloads/aiacom\_manageable\_install** directory:

```
/usr/bin/unzip -d /private/downloads/aiacom_manageable_install  
/private/downloads/aiacom_manageable_install/rodod_install_kit.zip
```

- 2) Download the installer media files related to OSM on the **Media Server**. See the worksheet for OSM in the *Digital BSS Reference Solution Media Map Software Locations* document to get

details of what all installer media to download and how to arrange them in the local directory structure.

For a report of the requisite media for OSM and the expected media structure see step 8.

- 3) On the Installer Workstation where the unattended install scripts are extracted, perform the following steps by editing the <MIK\_HOME>/common/media\_map file:

```
vi /private/downloads/aiacom_manageable_install/common/media_map
```

In the media map file, set CGBU\_SCP\_MEDIA\_HOST to the fully qualified domain name of the Media Server. Modify the value of every variable that begins with CGBU\_SCP\_MEDIA to reflect the download location where the installation media can be found on the media server machine.

Save and Close the file.

- 4) On the Installer Workstation where the unattended install scripts are extracted, review the <MIK\_HOME>/common/media\_pack\_config.properties file:

```
vi /private/downloads/aiacom_manageable_install/common/  
media_pack_config.properties
```

OSM install or patch media information is now present in media\_pack\_config.properties in the OSM section.

For example:

```
MEDIA_NAME_OSM=p27735873_73500_Linux-x86-64.zip
```

No other tags about this media are present in media\_map since they are generated dynamically on running config\_access.sh which is described in step 7.

Review the file.

Save and Close the file.

- 5) On the Installer Workstation, review the default installation configuration for OSM using your choice of text editor.

```
vi /private/downloads/aiacom_manageable_install/common/rodod_poc
```

Edit the **rodod\_poc** file by changing the corresponding entries:

- replacing <OSM\_HOST> with the target host (FQDN) for OSM

- replacing <OSM\_HOST simple name> with the target host for OSM without the domain name

For example:

```
RODOD_OSM_HOST=<OSM_HOST>
RODOD_OSM_HOST_NAME=<OSM_HOST simple name>
```

- 6) If you do not want to install a new Database and choose to install OSM using an existing Oracle pre-installed repository database, follow the instructions in [Appendix A: Installing RODOD Applications Using an Oracle Pre-Installed Database](#).

Review the **rodod\_apps\_share\_existing\_db** for OSM by using your choice of text editor.

```
vi /private/downloads/aiacom_manageable_install/common/rodod_apps_share_existing_db
```

Edit the **rodod\_apps\_share\_existing\_db** file by changing the corresponding entries:

- replacing <OSM\_HOST> with the target host (FQDN) for OSM
- replacing <OSM\_HOST simple name> with the target host for OSM without the domain name
- replacing <OSM\_DB\_HOST> with the target OSM database host (FQDN) for OSM
- replacing <OSM\_DB\_HOST simple name> with the target database host for OSM without the domain name

For example:

```
RODOD_OSM_HOST=<OSM_HOST>
RODOD_OSM_HOST_NAME=<OSM_HOST simple name>
RODOD_OSM_DATABASE_HOST=<OSM_DB_HOST>
RODOD_OSM_DATABASE_HOST_NAME=<OSM_DB_HOST simple name>
```

Save and Close the file.

```
vi /private/downloads/aiacom_manageable_install/osm_scripts/common/knobs
```

Set the following entries:

```
DATABASE_INSTALL=0 since the database is preinstalled.
```

Sample host details listing:

```
DATABASE_HOST=den00opm.us.oracle.com
DATABASE_HOST_NAME= den00opm
DATABASE_SID=orcl1
```

```
DATABASE_SID_UPPERCASE=ORCL1
DATABASE_PORT=1521
DATABASE_GLOBAL_NAME=orcl.us.oracle.com
```

- 7) Configure OS user access (including remote access depending on the topology) and generate media variables in media\_map for OSM installer by executing the **config\_access.sh** file for OSM:

```
/private/downloads/aiacom_manageable_install/osm_scripts/common/config_access.sh
```

**Every time any configuration file is edited for OSM, you must rerun config\_access.sh file.**

- 8) Generate a report of the requisite media for OSM and the expected media structure:

```
/private/downloads/aiacom_manageable_install/osm_scripts/common/print_media_inventory.sh
```

Before running print\_media\_inventory.sh, config\_access.sh has to be run which is described in step 7. This is for collecting media information regarding the OSM installer.

This inventory will indicate the media to collect via media tags and where to position the media in a media download structure for the unattended install scripts to find. The media tags can be found in **/private/downloads/aiacom\_manageable\_install/common/media\_map** and **/private/downloads/aiacom\_manageable\_install/common/media\_pack\_config.properties** along with the expected location of the media.

After the media is lawfully acquired, build the media structure by placing the acquired media in the location indicated in the media map.

- 9) Execute the OSM installer script and redirect the output to a log file:

```
/private/downloads/aiacom_manageable_install/osm_scripts/osm/go.sh 2>&1 | tee /private/osm_install.log
```

This script will install OSM, restart the servers, and deploy the three productized cartridges for Asset, Account, and Job automatically.

- 10) You can generate a listing of the important system parameters (i.e., connection and access information) for OSM using the **print\_tear\_sheet.sh** in the **admin** directory:

```
/private/downloads/aiacom_manageable_install/osm_scripts/admin/print_tear_sheet.sh
```

- 11) There is a set of administration scripts to start/stop the OSM and related database from OSM Host. The database administration scripts will work only if the database was installed using the unattended install scripts. These scripts should be executed only from the OSM host machine and not from the MIK workstation.

To start OSM only:

```
/private/downloads/aiacom_manageable_install/osm_scripts/admin/do_start_osm.sh
```

To stop OSM only:

```
/private/downloads/aiacom_manageable_install/osm_scripts/admin/do_stop_osm.sh
```

To start DATABASE only (associated with OSM):

```
/private/downloads/aiacom_manageable_install/osm_scripts/admin/do_start_osm_db.sh
```

To stop DATABASE only (associated with OSM):

```
/private/downloads/aiacom_manageable_install/osm_scripts/admin/do_stop_osm_db.sh
```

To start both OSM and Database:

```
/private/downloads/aiacom_manageable_install/osm_scripts/admin/start_osm.sh
```

To stop both OSM and Database:

```
/private/downloads/aiacom_manageable_install/osm_scripts/admin/stop_osm.sh
```

12) To uninstall the OSM and its database, execute the **ungo.sh** scripts in the following sequence:

```
/private/downloads/aiacom_manageable_install/osm_scripts/osm/ungo.sh
```

```
/private/downloads/aiacom_manageable_install/osm_scripts/database/ungo.sh
```

## 1.5. Installing FMW for AIA Integration Packs

A running AIA system includes two major components:

- WebLogic Server (with an admin domain, managed server and SOA Suite installed)
- Repository database

Choose an application topology from the following topologies supported by the unattended install kit:

- A WebLogic Server (with an admin domain, managed server and SOA Suite installed) and a repository database on a single AIA host.
- A WebLogic Server (with an admin domain, managed server and SOA Suite installed) and a pre-installed repository database (i.e., a database not provisioned by this installation process) on a single AIA host.

To install AIA Middleware (Skip steps 1-4 if already done in Installer Workstation):

- 1) Download the unattended install scripts to the **Installer Workstation**; unzip it to a local directory (identified by environment variable `MANAGEABLE_INSTALL_TOOL_DIR` or `MIK_HOME` in Install scripts and documents).

```
/bin/mkdir -p /private/downloads/aiacom_manageable_install
```

Download the **rodod\_install\_kit.zip** file to the  
**/private/downloads/aiacom\_manageable\_install** directory:

```
/usr/bin/unzip -d /private/downloads/aiacom_manageable_install  
/private/downloads/aiacom_manageable_install/rodod_install_kit.zip
```

- 2) Download the installer media files related to AIA Middleware on the **Media Server**. See the worksheet for AIA Middleware in the *Digital BSS Reference Solution Media Map Software Locations* document to get details of what all installer media to download and how to arrange them in the local directory structure.

For a report of the requisite media for AIA Middleware and the expected media structure see step 11.

- 3) On the Installer Workstation where the unattended install scripts are extracted, perform the following steps by editing the `<MIK_HOME>/common/media_map` file:

```
vi /private/downloads/aiacom_manageable_install/common/media_map
```

In the media map file, set `CGBU_SCP_MEDIA_HOST` to the fully qualified domain name of the Media Server. Modify the value of every variable that begins with `CGBU_SCP_MEDIA` to reflect

the download location where the installation media can be found on the media server machine.  
Save and Close the file.

- 4) On the Installer Workstation where the unattended install scripts are extracted, review the <MIK\_HOME>/common/media\_pack\_config.properties file:

```
vi /private/downloads/aiacom_manageable_install/common/
media_pack_config.properties
```

For example: In AIA section of media\_pack\_config.properties:

```
MEDIA_NAME_AIA_PIPS= aiapip-12.2.0.2.0.zip
```

Review the file.

Save and Close the file.

- 5) On the Installer Workstation, review the default installation configuration for AIA Middleware in local **rodod\_poc** configuration file using your choice of text editor.

```
vi /private/downloads/aiacom_manageable_install/common/rodod_poc
```

Edit the **rodod\_poc** file by changing the corresponding entries:

- replacing <AIA\_HOST> with the target host (FQDN) for AIA Middleware
- replacing <AIA\_HOST simple name> with the target host for AIA Middleware without the domain name
- **specify rodod\_topology=3**

For example:

```
RODOD_AIA_HOST=<AIA_HOST>
RODOD_AIA_HOST_NAME=<AIA_HOST simple name>

rodod_topology=3
```

Save and Close the file.

- 6) Modify AIAPIPConfig.rsp.template to turn off Siebel installation.

```
vi
/private/downloads/aiacom_manageable_install/aiapip_o2c/aiapip_o2c/AIAPIPConfig
.rsp.template

Order2Cash_Siebel=false

#Comment all the Siebel details
#SIEBEL Application details
#####

#SBL_VERSION=%%SIEBEL_VERSION%%
#SBL_HOST=%%SIEBEL_HOST%%
#SBL_PROTOCOL=http://
#SBL_EAI_USER=%%SIEBEL_USER%%
```

```
#SBL_EAI_PSWD=%%SIEBEL_PASSWORD%%
#SBL_LANG=enu
#SBL_ENTERPRISE_SERVER_NAME=%%SIEBEL_INTERNAL_ID%%
#SBL_PORT=%%SIEBEL_PORT%%
#SBL_DB_HOST=%%SIEBEL_DATABASE_HOST%%
#SBL_DB_PORT=%%SIEBEL_DATABASE_PORT%%
#SBL_DB_USER=%%SIEBEL_USER%%
#SBL_DB_PSWD=%%SIEBEL_PASSWORD%%
#SBL_DB_SID=%%SIEBEL_DATABASE_SID%%
```

- 7) At the end of the <MIK\_HOME>/aiapip\_o2c/aiapip\_o2c/install\_o2c\_pip.sh file comment below lines:

```
#cd $AIA_HOME_DIR/comms_home/pips/Communications
#sh setupO2C.sh $AIA_MIDDLEWARE_WEBLOGIC_ADMIN_USER
$AIA_MIDDLEWARE_WEBLOGIC_ADMIN_USER_PASSWORD
```

- 8) Add below lines in that place:

```
cd $AIA_HOME_DIR/comms_home/pips/Communications/O2CBase/DeploymentPlans
ant -f
$COMMS_HOME/pips/Communications/O2CBase/DeploymentPlans/O2CBaseDeploy.xml -
DUsername=$AIA_MIDDLEWARE_WEBLOGIC_ADMIN_USER -
DPassword=$AIA_MIDDLEWARE_WEBLOGIC_ADMIN_USER_PASSWORD
echo "O2CBase Deployed"

cd $AIA_HOME_DIR/comms_home/pips/Communications/O2COSM/DeploymentPlans
ant -f $COMMS_HOME/pips/Communications/O2COSM/DeploymentPlans/O2COSMDeploy.xml
-DUsername=$AIA_MIDDLEWARE_WEBLOGIC_ADMIN_USER -
DPassword=$AIA_MIDDLEWARE_WEBLOGIC_ADMIN_USER_PASSWORD
echo "O2COSM Deployed"

cd $AIA_HOME_DIR/comms_home/pips/Communications/O2CBRM/DeploymentPlans
ant -f $COMMS_HOME/pips/Communications/O2CBRM/DeploymentPlans/O2CBRMDeploy.xml
-DUsername=$AIA_MIDDLEWARE_WEBLOGIC_ADMIN_USER -
DPassword=$AIA_MIDDLEWARE_WEBLOGIC_ADMIN_USER_PASSWORD
echo "O2CBRM Deployed"
```

- 9) If you do not want to install a new Database and choose to install AIA using an existing Oracle pre-installed repository database, follow the instructions in [Appendix A: Installing RODOD Applications Using an Oracle Pre-Installed Database](#).

Review the **rodod\_apps\_share\_existing\_db** for AIA using your choice of text editor.

```
vi
/private/downloads/aiacom_manageable_install/common/rodod_apps_share_existing_db
```

Edit the **rodod\_apps\_share\_existing\_db** file by changing the corresponding entries:

- replacing <AIA\_HOST> with the target host (FQDN) for AIA Middleware
- replacing <AIA\_HOST simple name> with the target host for AIA Middleware without the domain name
- adding the entries for <RODOD\_AIA\_DATABASE\_HOST> with the target host (FQDN) for AIA Middleware Database host



- adding the entries for <RODOD\_AIA\_DATABASE\_HOST\_NAME> with the target host for AIA Middleware database without the domain name

For example:

```
RODOD_AIA_HOST=<AIA_HOST>
RODOD_AIA_HOST_NAME=<AIA_HOST simple name>
RODOD_AIA_DATABASE_HOST=<RODOD_AIA_DATABASE_HOST>
RODOD_AIA_DATABASE_HOST_NAME=<RODOD_AIA_DATABASE_HOST_NAME>
```

Save and Close the file.

- 10) Configure OS user access (including remote access depending on the topology) and generate media variables in media\_map for AIA FP and SOA patches by executing the **config\_access.sh** file for AIA Middleware.

```
/private/downloads/aiacom_manageable_install/aia_middleware_scripts/common/config_access.sh
```

**Every time any configuration file is edited for AIA Middleware, you must rerun config\_access.sh file.**

- 11) Generate a report of the requisite media for AIA Middleware and the expected media structure:

```
/private/downloads/aiacom_manageable_install/aia_middleware_scripts/common/print_media_inventory.sh
```

Before running print\_media\_inventory.sh, config\_access.sh has to be run which is described in step 7. This is to be done for media information regarding the SOA and AIA FP Patches.

This inventory will indicate the media to collect via media tags and where to position the media in a media download structure for the unattended install scripts to find. The media tags can be found in **/private/downloads/aiacom\_manageable\_install/common/media\_map** and **/private/downloads/aiacom\_manageable\_install/common/media\_pack\_config.properties** along with the expected location of the media.

After the media is lawfully acquired, build the media structure by placing the acquired media in the location indicated in the media map.

- 12) Execute the AIA Middleware installer and redirect the output to a log file:

```
/private/downloads/aiacom_manageable_install/aia_middleware_scripts/aiafp/go.sh
2>&1 | tee /private/aiafp_install.log
```

- 13) You can generate a listing of the important system parameters (i.e., connection and access information) for AIA Middleware using the **print\_tear\_sheet.sh** in the **admin** directory.

```
/private/downloads/aiacom_manageable_install/aia_middleware_scripts/admin/print_tear_sheet.sh
```

- 14) There is a set of administration scripts to start/stop the AIA Middleware and related database from AIA Host. The database administration scripts will work only if the database was installed using the unattended install scripts. These scripts should be executed only from the AIA host machine and not from the MIK workstation.

To start AIA Middleware only:

```
/private/downloads/aiacom_manageable_install/aia_middleware_scripts/admin/do_start_aiamw.sh
```

To stop AIA Middleware only:

```
/private/downloads/aiacom_manageable_install/aia_middleware_scripts/admin/do_stop_aiamw.sh
```

To start DATABASE only (associated with AIA Middleware):

```
/private/downloads/aiacom_manageable_install/aia_middleware_scripts/admin/do_start_aiamw_db.sh
```

To stop DATABASE only (associated with AIA Middleware):

```
/private/downloads/aiacom_manageable_install/aia_middleware_scripts/admin/do_stop_aiamw_db.sh
```

To start both AIA Middleware and Database:

```
/private/downloads/aiacom_manageable_install/aia_middleware_scripts/admin/start_aiamw.sh
```

To stop both AIA Middleware and Database:

```
/private/downloads/aiacom_manageable_install/aia_middleware_scripts/admin/stop_aiamw.sh
```

- 15) To uninstall the AIA Middleware and its database, execute the **ungo.sh** scripts in the following sequence:

```
/private/downloads/aiacom_manageable_install/aia_middleware_scripts/aiafp/ungo.sh
```

```
/private/downloads/aiacom_manageable_install/aia_middleware_scripts/database/ungo.sh
```

- 16) To apply any new patches on AIA SOA, follow the AIA SOA patch instructions in [Appendix B: Apply New Patches](#).

## 1.6. Installing O2C Integration Pack

O2C (Order to Cash) AIA PIP installation integrates the standalone applications listed in previous sections to setup the RODOD reference solution.

Before starting the O2C AIA PIP installation, you must ensure that the AIA Middleware, BRM, and OSM applications have been installed successfully and corresponding processes are up and running.

To install O2C AIA PIP (Skip steps 1-4 if already done in Installer Workstation):

- 1) Download the unattended install scripts to the **Installer Workstation**; unzip it to a local directory (identified by environment variable `MANAGEABLE_INSTALL_TOOL_DIR` or `MIK_HOME` in Install scripts and documents).

```
/bin/mkdir -p /private/downloads/aiacom_manageable_install
```

Download the **rodod\_install\_kit.zip** file to the  
**/private/downloads/aiacom\_manageable\_install** directory:

```
/usr/bin/unzip -d /private/downloads/aiacom_manageable_install  
/private/downloads/aiacom_manageable_install/rodod_install_kit.zip
```

- 2) Download the installer media files related to O2C AIA PIP on the **Media Server**. See the worksheet for AIA in the *Digital BSS Reference Solution Media Map Software Locations* document to get details of what all installer media to download and how to arrange them in the local directory structure.

For a report of the requisite media for O2C AIA PIP and the expected media structure see step 7.

- 3) On the Installer Workstation where the unattended install scripts are extracted, perform the following steps by editing the `<MIK_HOME>/common/media_map` file:

```
vi /private/downloads/aiacom_manageable_install/common/media_map
```

In the media map file, set `CGBU_SCP_MEDIA_HOST` to the fully qualified domain name of the Media Server. Modify the value of every variable that begins with `CGBU_SCP_MEDIA` to reflect the download location where the installation media can be found on the media server machine.

Save and Close the file.

- 4) On the Installer Workstation where the unattended install scripts are extracted, review the `<MIK_HOME>/common/media_pack_config.properties` file:

```
vi /private/downloads/aiacom_manageable_install/common/  
media_pack_config.properties
```

- 5) On the Installer Workstation, review the default installation configuration for O2C AIA PIP in local `rodod_poc` configuration file using your choice of text editor.

```
vi /private/downloads/aiacom_manageable_install/common/rodod_poc
```

Edit the **rodod\_poc** file by changing the corresponding entries:

- replacing `<BRM_HOST>` with the target host (FQDN) for BRM
- replacing `<BRM_HOST simple name>` with the target host for BRM without the domain name
- replacing `<OSM_HOST>` with the target host (FQDN) for OSM
- replacing `<OSM_HOST simple name>` with the target host for OSM without the domain name
- replacing `<AIA_HOST>` with the target host (FQDN) for AIA Middleware
- replacing `<AIA_HOST simple name>` with the target host for AIA Middleware without the domain name

For example:

```
RODOD_BRM_HOST=<BRM_HOST>
RODOD_BRM_HOST_NAME=<BRM_HOST simple name>
RODOD_OSM_HOST=<OSM_HOST>
RODOD_OSM_HOST_NAME=<OSM_HOST simple name>
RODOD_AIA_HOST=<AIA_HOST>
RODOD_AIA_HOST_NAME=<AIA_HOST simple name>
```

Edit the **knobs** configuration file to reflect any installation options you would like to adjust:

```
vi /private/downloads/aiacom_manageable_install/aiapip_o2c/common/knobs
```

- 6) Configure OS user access (including remote access depending on the topology) and generate media variables in `media_map` for AIA O2C RUP patches by executing the **config\_access.sh** file for O2C AIA PIP:

```
/private/downloads/aiacom_manageable_install/aiapip_o2c/common/config_access.sh
```

**Every time the knobs configuration file is edited for O2C AIA PIP, you must rerun config\_access.sh file.**

- 7) Generate a report of the requisite media for O2C AIA PIP and the expected media structure:

```
/private/downloads/aiacom_manageable_install/aiapip_o2c/common/print_media_inventory.sh
```

Before running `print_media_inventory.sh`, `config_access.sh` has to be run which is described in step 6. This is to be done for media information regarding the AIA O2C RUP Patches.

This inventory will indicate the media to collect via media tags and where to position the media in a media download structure for the unattended install scripts to find. The media tags can be found in **/private/downloads/aiacom\_manageable\_install/common/media\_map** and **/private/downloads/aiacom\_manageable\_install/common/media\_pack\_config.properties** along with the expected location of the media.

After the media is lawfully acquired, build the media structure by placing the acquired media in the location indicated in the media map.

- 8) Edit aiapip\_o2c/go.sh and comment out the line **go\_prepare\_brm.sh**. BRM preparation needs to be done manually by following steps mentioned in Preparing BRM.
- 9) Execute the O2C AIA PIP installer and redirect the output to a log file:

```
/private/downloads/aiacom_manageable_install/aiapip_o2c/aiapip_o2c/go.sh 2>&1 |  
tee /private/aiapip_o2c_install.log
```

The **go.sh** script provided in aiapip\_o2c has component scripts that deploy add-ons to the core applications (BRM, OSM, and AIA Middleware):

- **go\_prepare\_osm.sh**  
Configure topology support and different settings for O2A in this file  
**/private/downloads/aiacom\_manageable\_install/osm\_o2a\_scripts/osm\_o2a/build.properties.template**
- **go\_prepare\_aiamw.sh** - executed only after the prior go\_prepare scripts have finished successfully.

The component scripts may be executed individually under certain scenarios. Example: when **go.sh** was attempted previously go\_prepare\_osm.sh can be re-run. But go\_prepare\_aiamw.sh cannot be run again once o2c pips are configured. If in any case, o2c pips have to be reconfigured, AIA middleware has to be uninstalled and installed again to run go\_prepare\_aiamw.sh again.

- 10) There are no administration scripts to manage O2C AIA PIP as these are add-ons installed on top of the core applications (BRM, OSM, and AIA Middleware).
- 11) To uninstall the O2C AIA, no separate scripts are provided by the unattended install scripts. Recommended method is to re-install the core applications and retry O2C AIA PIP installation.

### 1.6.1. Preparing BRM

1. Login to host where BRM is installed.
2. Locate **Infranet.properties** in **<DIR>/opt/portal/BRM/sys/eai\_js**. Verify following lines in the file, add if not present.

```
#defines config file for payload generator
infranet.eai.configFile=./payloadconfig_crm_sync.xml
```

3. Locate `aq_queueNames` in `<DIR>/opt/portal/BRM/sys/dm_aq`. This file specifies queues and the events redirection to advance queues. Users need to redirect all events to this `aq`. Uncomment following line.

```
# Queue name without database link -- queue is on database to which DM connects.
AQ_QUEUE
{
    # Uncomment if all events should go to this queue.
    ALL
    ...
}
```

4. Verify executable permissions are there for `aq_queueNames`.
5. Locate `OracleBRMJCA15Adapter.rar` in `<DIR>/opt/portal/BRM/apps/brm_integrations/jca_adapter`.
6. Extract contents of `OracleBRMJCA15Adapter.rar` to a temporary directory say `TEMP_DIR`.
7. Locate `ra.xml` and find the wallet location mentioned in the property `SslWalletLocation`.

```
<config-property>
    <config-property-name>SslWalletLocation</config-property-name>
    <config-property-type>java.lang.String</config-property-type>
    <config-property-value>WALLET_LOCATION</config-property-value>
</config-property>
```

8. Locate the wallet in the `WALLET_LOCATION` and copy the wallet contents to AIA host in a different directory say `AIA_BRM_WALLET_LOC`. This directory should be accessible by AIA weblogic server.
9. Edit `ra.xml` and verify BRM fully qualified host url, BRM root password and AIA wallet location in the following elements. If not present add the elements

```
<config-property>
    <config-property-name>ConnectionString</config-property-name>
    <config-property-type>java.lang.String</config-property-type>
    <config-property-value>ip BRM_HOST 11960</config-property-value>
</config-property>

<config-property>
    <config-property-name>FailoverConnectionString</config-property-name>
    <config-property-type>java.lang.String</config-property-type>
    <config-property-value>root.0.0.0.1:BRM_ROOT_PASSWORD@BRM_HOST:11960,root.0.0.0.1:
BRM_ROOT_PASSWORD@BRM_HOST:11960</config-property-value>
</config-property>

<config-property>
    <config-property-name>Password</config-property-name>
    <config-property-type>java.lang.String</config-property-type>
    <config-property-value>BRM_ROOT_PASSWORD</config-property-value>
</config-property>

<config-property>
    <config-property-name>SslWalletLocation</config-property-name>
```

```

    <config-property-type>java.lang.String</config-property-type>
    <config-property-value>AIA_BRM_WALLET_LOC</config-property-value>
</config-property>

```

10. Locate weblogic-ra.xml and verify BRM fully qualified host url and root password in the following elements. If not present add the elements

```

<property>
  <name>ConnectionString</name>
  <value>ip BRM_HOST 11960</value>
</property>
<property>
  <name>FailoverConnectionString</name>
  <value>root.0.0.0.1: BRM_ROOT_PASSWORD@BRM_HOST:11960,root.0.0.0.1:
BRM_ROOT_PASSWORD@BRM_HOST:11960</value>
</property>
<property>
  <name>Password</name>
  <value>BRM_ROOT_PASSWORD</value>
</property>
<property>
  <name>SslWalletLocation</name>
  <value>AIA_BRM_WALLET_LOC</value>
</property>

```

11. Repackage TEMP\_DIR contents to OracleBRMJCA15Adapter.rar.

12. Deploy OracleBRMJCA15Adapter.rar to AIA server.

12.1. Login to AIA console.

12.2. Go to Deployments.

12.3. Install OracleBRMJCA15Adapter.rar with default values.

Note: If already existing any old BRM adapter, delete the existing adapter before deploying the BRM adapter.

## 2. Installing CX Integration Pack Reference Solution Bundle

The Customer Experience (CX) Integration Pack Reference Bundle is a collection of reusable and deployable solution components, scripts and other artifacts. Download the CX Integration Pack Reference Bundle from Oracle Technology Network (OTN). The content of the CX Integration Pack Reference Bundle is as follows:

```
CX-IntegrationPackReference.zip
• CX
  ○ CPQ
    ▪ DataTables Data
      • CommsC3_ConfigurationData.zip
        ○ OC_ADDRESS.csv
        ○ OC_CONFIGURATION.csv
        ○ Oracle_aboPart2Model.csv
        ○ Status.csv
      • CommsC3_EthernetServicesData.zip
        ○ Oracle_BomAttrDef.csv
        ○ Oracle_BomAttrMap.csv
        ○ Oracle_BomItemMap.csv
    ▪ CommsC3_DataTables.zip
    ▪ CommsC3_EmailnDocDesigner.zip
    ▪ CommsC3_EthernetServices.zip
    ▪ CommsC3_Files.zip
    ▪ CommsC3_OracleQuote2Order.zip
    ▪ CommsC3_UtilLibrary.zip
  • ICS
    ○ oracle.communications.c3.ics.par
      ▪ COMMSAIAUPDATESALESORDERBATCH_01.00.0000.iar
      ▪ COMMSAIAUPDATESALESORDER_01.00.0000.iar
      ▪ COMMSBRMTOCPQPRODUCTSYNC_01.00.0009.iar
      ▪ COMMSBRMTOCXDISCSYNC_01.00.0004.iar
      ▪ COMMSBRMTOCXPRODSYNC_01.00.0000.iar
      ▪ COMMSC3PDCOPERATIONS_01.00.0000.iar
      ▪ COMMSC3_AIAGETTTDETAILS_01.00.0001.iar
      ▪ COMMSC3_CATALOG_01.00.0000.iar
      ▪ COMMSC3_CPQBOMHIERANDATT_01.00.0000.iar
      ▪ COMMSC3_CPQCATALOGATTRIB_01.00.0000.iar
      ▪ COMMSC3_CPQCATALOG_01.00.0000.iar
      ▪ COMMSC3_CPQCREATESALESOR_01.00.1001.iar
      ▪ COMMSC3_CPQUPDATEBOM_01.00.0000.iar
      ▪ COMMSC3_CPQUPDATEPRODUCT_01.00.0000.iar
      ▪ COMMSC3_CREATESALESORDER_01.00.2002.iar
      ▪ COMMSC3_ICSSYNCAccounts_01.00.9000.iar
      ▪ COMMSC3_OECACCOUNTUPDATE_01.00.3000.iar
      ▪ COMMSC3_OECCONTACTUPDATE_01.00.4000.iar
      ▪ COMMSC3_PDCCATALOG_01.00.0000.iar
      ▪ COMMSC3_QUERYAIAXR_POST_01.00.0000.iar
      ▪ COMMSC3_UPDATEBRMACCOUNT_01.00.2000.iar
      ▪ COMMSC3_UPDATEBRMBILLUNI_01.00.0000.iar
      ▪ COMMSC3_UPDATEBRMPAYMETH_01.00.0000.iar
      ▪ COMMSCPQRETRIEVEACCOUNTS_01.01.1005.iar
      ▪ COMMSCPQUPDATESALESORDER_01.00.0017.iar
      ▪ COMMSOSCRETRIEVEBILLINGPROFILE_01.00.3000.iar
      ▪ COMMS_AIA2CXQUERYACCOU_01.04.0100.iar
    ○ ICSAgent
      ▪ set_java.sh
      ▪ start.sh
      ▪ installAgent.sh
      ▪ upgradeAgent.sh
```



- OnPremiseApps
  - AIA
    - composites
      - c3\_composites\_cfgplan.xml
      - sca\_QueryCustomerPartyListICSMConsumer.jar
      - sca\_QueryCustomerPartyListICSPProvABCSImpl.jar
      - sca\_UpdateSalesOrderICSBatchCommsFileReader.jar
      - sca\_UpdateSalesOrderICSBatchCommsJMConsumer\_rev1.0.jar
      - sca\_UpdateSalesOrderICSBatchCommsProvABCSImpl\_rev1.0.jar
      - schemas.zip
        - schemas
          - AccountEntity.wsdl
          - CustomerAccount.wsdl
          - CustomerAccount.xsd
          - QueryCustomerPartyListICSPProvABCSImpl.wsdl
    - XrefRestWS.war
  - BRM
    - ProductSync.zip
      - dbscripts
        - create\_monitor\_table.sql
      - wlst
        - jmsaq.py
        - jmsaq.py.properties
      - plan.xml
      - product-sync-ear-1.0-SNAPSHOT.ear
  - OSM
    - CommsC3\_FulfillmentPattern
    - CommsC3\_FulfillmentStateMap
    - CommsC3\_OSM\_O2A\_Carrier\_Ethernet\_Cartridges
      - CommsC3\_Model\_O2A\_CE\_CFS
      - CommsC3\_Model\_O2A\_CE\_PS
      - CommsC3\_OSM\_O2A\_COM\_CSO\_CE\_CFS
    - CommsC3\_OSM\_O2A\_ICO\_ORR\_Cartridge
      - CommsC3\_OSM\_O2A\_COMSOM\_CSO\_ICORecognition
    - SoapWrapper.jar
- ReferenceData
  - PDC
    - referenceDiscountOffers.xml
    - referenceChargeOffers.xml
    - pdc\_metadata.xml
    - pdc\_config.xml
  - CatalogOperations
    - IBCMarketOffer.json

Refer to the instructions provided in this document to install and deploy the complete CX Integration Pack Reference solution components.

Extract the package in your local system.

## 2.1. Installing CX Integration Pack Reference Solution for AIA SOA Composites

There are additional AIA SOA composites to be installed and deployed for the CX Integration Pack Reference Solution. These composites are to be deployed manually on the same host as the O2C (Order to Cash) AIA PIP.

Locate **c3\_composites\_cfgplan.xml** in **CX Integration Pack Reference Bundle** and update it with corresponding AIA\_HOST\_NAME, ~~AIA\_PORT~~ AIA\_PORT, ICS\_URL\_PREFIX and ICS\_URL\_SUFFIX ~~and~~ INSTANCE\_NAME\_DOMAIN\_ID where:

- AIA\_HOST\_NAME is the full machine name where AIA is installed, and AIA\_PORT is the AIA (managed) server port number. It is required to provide the AIA server URL.
- ~~INSTANCE\_NAME\_DOMAIN\_ID is the ICS domain and instance name.~~

For example, the replace tag in the following snippet needs to be changed across the xml.

```
<searchReplace>
  <search>http://AIA_HOSTNAME:AIA_PORT</search>
  <replace>http://example.com:8001</replace>
</searchReplace>
```

For example, following is the ICS endpoint URL. PREFIX means URL part before integration name and SUFFIX means URL part after integration name in URL.

ICS\_URL\_PREFIX/COMMSAIAUPDATESALESORDERBATCH/ICS\_URL\_SUFFIX/?wsdl

```
<searchReplace>
  <search>ICS_URL_PREFIXINSTANCE_NAME_DOMAIN_ID</search>
  <replace>example.compart before integration name in actual URL</replace>
</searchReplace>
<searchReplace>
  <search>ICS_URL_SUFFIX</search>
  <replace>version number after integration name in actual URL</replace>
</searchReplace>
```

## 2.1.1. Configuring Synchronize Customer Composites

### *QueryCustomerPartyListICSJMSConsumer*

This composite is responsible for consuming QueryCustomerPartyListEBM messages from AIA\_QRYACCT\_GENERIC\_JMSQ queue, and forwarding the message to QueryCustomerPartyListICSProvABCSImpl.

Follow deployment steps mentioned in [Deploying Synchronize Customer Composites](#) after configuring all composites using configuration plan c3\_composites\_cfgplan.xml.

### *QueryCustomerPartyListICSProvABCSImpl*

This composite receives 2 messages:

- QueryCustomerPartyListEBM
- QueryCustomerAccount

Upon receiving QueryCustomerPartyListEBM, this composite transforms the EBM message and sends the result to the ICS integration project to query the billing account, service account and billing profile details. The composite waits for ICS to respond and transform the result to

QueryCustomerPartyListEBMResponse message. The query result is sent to CommsProcessBillingAccountListEBF.

To install and deploy the QueryCustomerPartyListICSProvABCSImpl composite:

- 1) Locate **schemas.zip** in **CX Integration Pack Reference Bundle** and copy it to local system.
- 2) Extract schemas.zip file, and edit the **AccountEntity.wsdl** file to provide CommsC3\_AIARetrieveAcctDetails ICS integration project WSDL endpoint URL (<INSTANCE\_NAME\_DOMAIN\_ID>) as follows:
- 3) The Following URL need to be replaced with actual ICS Endpoint URL for COMMS\_AIA2CXQUERYACCOU integration. Go to ICS and search for COMMS\_AIA2CXQUERYACCOU and get ICS Endpoint URL and replace it.

https://<INSTANCE\_NAME\_DOMAIN\_ID>.integration.us2.oraclecloud.com:443/integration/flowsvc/soap/COMMS\_AIA2CXQUERYACCOU/v01

```
<wsdl:service name="CustomerAccountService">
  <wsdl:port binding="optcustmr:CustomerAccountServiceBinding" name="CustomerAccountWebServicePort">
    <soap:address location="https://<INSTANCE_NAME_DOMAIN_ID>.integration.us2.oraclecloud.com:443/integration/flowsvc/soap/COMMS_AIA2CXQUERYACCOU/v01/">
    </soap:address>
  </wsdl:port>
```

- 4) AIA installation generates and deploys AIAConfigurationProperties.xml with configuration supporting AIA PIP. Update the existing AIAConfigurationProperties.xml located in SOA server to add the following Service Configuration. Provide the ICS Integration Endpoint URL for "Routing.ICSProductionService.EndpointURI". The Following URL need to be replaced with actual ICS Endpoint URL for COMMS\_AIA2CXQUERYACCOU integration. Go to ICS and search for COMMS\_AIA2CXQUERYACCOU and get ICS Endpoint URL and replace it.

https://<INSTANCE\_NAME\_DOMAIN\_ID>.integration.us2.oraclecloud.com:443/integration/flowsvc/soap/COMMS\_AIA2CXQUERYACCOU/v01

```
<ServiceConfiguration
  serviceName="{http://xmlns.oracle.com/AIAPIPSource/QueryCustomerPartyListICSProvABCSImpl/QueryCustomerPartyListBpelProcess}QueryCustomerPartyListBpelProcess">
  <Property
    name="Routing.ICSProductionService.EndpointURI">https://<INSTANCE_NAME_DOMAIN_ID>.integration.us2.oraclecloud.com:443/integration/flowsvc/soap/COMMS_AIA2CXQUERYACCOU/v01/</Property>
  <Property name="Default.SystemID">CPQ_01</Property>
</ServiceConfiguration>
```

4)5)QueryCustomerPartyListICSPProvABCImpl uses several DVMs to lookup data queried from Oracle Engagement Cloud to the expected value in BRM.

a. Note: These DVM files already exist in SOA MDS.

3)6)Locate DVM files on the AIA server.

4)7)Verify "CPQ\_01" column exists in the following DVM(s) and provide data supported in Oracle Engagement Cloud for each DVM file. Please see the following tables for sample data to include in each DVM file.

/apps/AIAMetaData/dvm/STATE.dvm

CPQ_01	BRM_01
District of Columbia	DC
Illinois	IL

/apps/AIAMetaData/dvm/ADDRESS\_COUNTRYID.dvm

CPQ_01	BRM_01
CA	Canada
US	USA

/apps/AIAMetaData/dvm/CUSTOMERPARTY\_ACCOUNTTYPECODE.dvm

CPQ_01	BRM_01
Residential	1
Business	2

/apps/AIAMetaData/dvm/CUSTOMERPARTY\_BILLPROFILE\_FREQUENCYCODE.dvm

CPQ_01	BRM_01
ORA_ATC_BILL_FREQUENCY_MONTHLY	1
ORA_ATC_BILL_FREQUENCY_QURTRLY	3
ORA_ATC_BILL_FRQUNCY_SEMI_YRLY	6
ORA_ATC_BILL_FREQUENCY_YEARLY	12

/apps/AIAMetaData/dvm/CUSTOMERPARTY\_PAYPROFILE\_PAYMETHODCODE.dvm

CPQ_01	BRM_01
ORA_ATC_PAY_METHOD_BILL	10001
ORA_ATC_PAY_METHOD_CREDIT	10003
ORA_ATC_PAY_METHOD_DEBIT	10005

/apps/AIAMetaData/dvm/CONTACT\_SALUTATION.dvm

CPQ_01	BRM_01
MRS.	Mrs.
MR.	Mr.
MISS.	Miss.

5)8)Follow deployment steps mentioned in [Deploying Synchronize Customer Composites](#) after configuring all composites using configuration plan c3\_composites\_cfgplan.xml.

## 2.1.2. Deploying Synchronize Customer Composites

There are two composites implemented in the CX Integration Pack Reference Solution to support the Synchronize Customer process flow:

- ~~QueryCustomerPartyListICSProvABCSImpl~~ ~~QueryCustomerPartyListICSJMSConsumer~~
- ~~QueryCustomerPartyListICSJMSConsumer~~ ~~QueryCustomerPartyListICSProvABCSImpl~~

Extract these composites from the CX Integration Pack Reference Solution Bundle, and extract schemas.zip and deploy the following files to SOA MDS:

- 1) /apps/AIAMetaData/AIAComponents/ApplicationConnectorServiceLibrary/ICS/V1/ProviderABCS/QueryCustomerPartyListICSProvABCSImpl.wsdl
- 2) /apps/AIAMetaData/AIAComponents/ApplicationObjectLibrary/ICS/V1/schemas/CustomerAccount.xsd
- 3) /apps/AIAMetaData/AIAComponents/ApplicationObjectLibrary/ICS/V1/wsdl/AccountEntity.wsdl
- 4) /apps/AIAMetaData/AIAComponents/ApplicationObjectLibrary/ICS/V1/wsdl/CustomerAccount.wsdl

Upon updating the DVM and AIAConfigurationsProperties.xml, deploy the following files to SOA MDS. Refer to [Deploying AIA DVM and XREF Changes to Metadata Repository](#) for specific steps.

- 1) /apps/AIAMetaData/dvm/STATE.dvm
- 2) /apps/AIAMetaData/dvm/ADDRESS\_COUNTRYID.dvm
- 3) /apps/AIAMetaData/dvm/CUSTOMERPARTY\_ACCOUNTTYPECODE.dvm
- 4) /apps/AIAMetaData/dvm/CUSTOMERPARTY\_BILLPROFILE\_FREQUENCYCODE.dvm
- 5) /apps/AIAMetaData/dvm/CUSTOMERPARTY\_PAYPROFILE\_PAYMETHODCODE.dvm
- 6) /apps/AIAMetaData/dvm/CONTACT\_SALUTATION.dvm
- 7) /soa/configuration/default/AIAConfigurationProperties.xml

Please make sure pushing all dependent Schema, WSDL and Configuration to MDS before deploying Composites.

Deploy the two composites using Oracle Enterprise Manager.

- 1) Login to Oracle Enterprise Manager
- 2) Navigate to SOA > soa\_infra
- 3) Select "Deployed Composites" tab
- 4) Select "Deploy.." button
- 4)5) Select the sca QueryCustomerPartyListICSProvABCSImpl.jar.
- 5) ~~Select the sca\_QueryCustomerPartyListICSJMSConsumer.jar file~~
- 6) Select the updated configuration plan **c3\_composites\_cfgplan.xml** file for Configuration File
- 7) Select "Next" and select "default" SOA Folder
- 8) Select "Next" to deploy
- 9) ~~Repeat Steps 4-9 to deploy sca\_QueryCustomerPartyListICSProvABCSImpl.jar.~~
- 9) Repeat the steps 4-9 to deploy the sca QueryCustomerPartyListICSJMSConsumer.jar
- 10) Follow additional steps in [Configure ICS Security for SOA](#) to configure user credentials to connect and authenticate to ICS.
- 11) Follow additional steps in [Configure ICS Security for SOA](#) to configure ICS SSL certificates for successful secured connections from AIA to ICS.

### 2.1.3. Deploying AIA DVM and XREF Changes to Metadata Repository

AIA uses Fusion Middleware Metadata Repository (MDS) to store and retrieve configuration and other information required at runtime. Refer to *Oracle Fusion Middleware Administering Oracle Fusion Middleware, **Managing the MDS Repository*** for more details.

As a post installation step for the Digital BSS Reference Solution, the admin user needs to modify several DVM and XREF files which are being stored in the MDS repository. These DVMs and XREFs are stored in hierarchical structure in the MDS repository as follows and replica source files are maintained in the AIA installation local filesystem.

- apps
  - AIAMetaData
    - dvm
    - xref

In order to update the above files, the user needs to first update the specific file in the local filesystem before importing into the MDS repository. The following are example steps to update the MDS repository using the command line option.

- 1) Login to AIA host server.
- 2) Setup environment variables to run AIA scripts.

Example:

```
source /private/aiacom_test_install/commsOracleHome/comms_home/bin/commsenv.sh
```

- 3) Update the required DVM or XREF files (for example PRICELINE\_ID.xref) in AIA installation local file system.

Example:

```
vi $SERVICES_LOCATION/AIAMetaData/xref/PRICELINE_ID.xref
```

- 4) Modify \$DOMAIN\_LOCATION/soa/aia/MDSUtils/UpdateMetaDataFileDP.xml for following values:

- a. mdslocation
  - i. For XREF: apps/AIAMetaData/xref
  - ii. For DVM: apps/AIAMetaData/dvm
- b. <fileset dir="">
  - i. For XREF: \${SERVICES\_LOCATION}/AIAMetaData/xref
  - ii. For DVM: \${SERVICES\_LOCATION}/AIAMetaData/dvm
- c. <include name="">

Example:

```
<include name="PRICELINE_ID.xref">
```

5) **Modify** \$SOA\_HOME/aiafp/Install/config/UpdateMetaData.xml:

- a. Set project default to updateMDSFile.

Example:

```
<project name="updateMetaData" default="updateMDSFile" basedir=".">
```

- b. There are 3 target in UpdateMetaData.xml file.

- i. enable <target name="updateMDSFile">
- ii. disable <target name="updateMDSData">
- iii. disable <target name="uploadMAR">

6) Run ant script to import the DVM or XREF file changes into MDS.

Example:

```
ant -f $SOA_HOME/aiafp/Install/config/UpdateMetaData.xml
```

## 2.1.4. Configuring Update Sales Order Status Composites

### *UpdateSalesOrderICSBatchCommsJMSConsumer*

This is the composite responsible for consuming the UpdateSalesOrder messages that are published in AIA\_UPDSO\_OUT\_GENERIC\_JMSQ JMS Queue. This composite will consume, transform and batch the messages produced in this queue, and save into a temporary file to be picked up by a different composite later, and send to the target ICS integration.

This composite is responsible for consuming individual messages from the AIA\_UPDSO\_OUT\_GENERIC\_JMSQ so that the EBM message can be re-formatted to a simplified message format (ABM) that is intended for ICS. In addition this composite consumes one or more UpdateSalesOrderEBM, and batches them into temporary files containing multiple messages on the local filesystem. The local filesystem is used here as an example reference implementation. Additional SOA Suite capabilities can be utilized to implement better approaches for storing transient batch files for further processing.

To install and deploy the UpdateSalesOrderICSBatchCommsJMSConsumer composite:

- 1) Extract **sca\_UpdateSalesOrderICSBatchCommsJMSConsumer\_rev1.0.jar** from the CX Integration Pack Reference Solution Bundle.
- 2) Repackage this jar file after the following updates.
- 3) Update **Adapters\UpdateSalesOrderICSBatchCommsJMSConsumer\_jms.jca**.
- 4) Provide DestinationName as follows to refer to the correct JMS queue name if not using the default AIA\_UPDSO\_OUT\_GENERIC\_JMSQ queue:

```
<property name="DestinationName" value="jms/aia/AIA_UPDSO_OUT_GENERIC_JMSQ"/>
```

- 5) Update **Adapters\UpdateSalesOrderICSBatchCommsFileProducer\_file.jca** if necessary to change the current file adapter writer configuration:

Current file adapter writer configuration:

- batching window - 1 second
- file server JNDI Name: eis/FileAdapter
- filepath: /tmp
- filename: UpdateSalesOrder\_%yyyyMMddHHmmss%.txt
- append to file: true

```
<connection-factory location="eis/FileAdapter"/>

<property name="LogicalDirectory" value="filepath"/>
<property name="Append" value="true"/>
<property name="FileNamingConvention"
value="UpdateSalesOrder_%yyyyMMddHHmmss%.txt"/>
```

- 6) Update the **c3\_composites\_cfgplan.xml** deployment configuration plan to provide the desired value for filepath as follows:

```
<!--Add search and replace rules for the component properties-->
<reference name="*">
    <property name="filepath">
        <replace>/tmp</replace>
    </property>
</reference>
```

- 7) Follow deployment steps mentioned in [Deploying Update Sales Order Composites](#) after configuring all composites using configuration plan c3\_composites\_cfgplan.xml.

### *UpdateSalesOrderICSBatchCommsFileReader*

This is the composite responsible for processing the batched UpdateSalesOrder messages in file format that are created by the UpdateSalesOrderICSBatchCommsJMSConsumer composite. This composite is responsible for producing batched messages to send to ICS using the UpdateSalesOrderICSBatchCommsProvABCSImpl service provider. The content of the message files containing batched messages are read by the producer, validated and transformed before forwarding on to the service provider for sending to ICS.

As messages are successfully consumed by the JMS Consumer off the generic JMS queue, these messages would be batched according to the desired configuration. Then as the batched message files are made available and visible to the File Producer, these message files would be forwarded to the Provider ABCS for forwarding on to ICS.

UpdateSalesOrderICSBatchCommsJMSConsumer is currently configured to batch messages that are retrieved from the JMS queue in a 1-sec time window. Any messages received in the queue within this



window would be batched together in the same file to be delivered to ICS via the File Producer and Provider ABCS. This batching window, along with the file name and path, can be configured by updating the UpdateSalesOrderICSBatchCommsJMSConsumer and UpdateSalesOrderICSBatchCommsFileReader.

To install and deploy the UpdateSalesOrderICSBatchCommsFileReader composite:

- 1) Extract **sca\_UpdateSalesOrderICSBatchCommsFileReader.jar** from the CX Integration Pack Reference Solution Bundle.
- 2) Repackage this jar file after the following updates.
- 3) Update **Adapters\UpdateSalesOrderICSBatchCommsFileReader\_file.jca** if necessary to change the current file adapter reader configuration:

Current file adapter reader configuration:

- Poll every 1 second, file age > 5 seconds
- file server JNDI Name: eis/FileAdapter
- filepath: /tmp
- filepath\_archive: /tmp/archive
- filename: UpdateSalesOrder\_.\*\..txt
- Recursive read into directory: false
- Delete file after read: true

```
<connection-factory location="eis/FileAdapter"
UIincludeWildcard="UpdateSalesOrder_.*.txt"/>

<property name="DeleteFile" value="true"/>
<property name="LogicalArchiveDirectory" value="filepath_archive"/>
<property name="MinimumAge" value="5"/>
<property name="Recursive" value="false"/>
<property name="PollingFrequency" value="3"/>
<property name="LogicalDirectory" value="filepath"/>
<property name="IncludeFiles" value="UpdateSalesOrder_.*\..txt"/>
<property name="UseHeaders" value="false"/>
```

- 4) Follow deployment steps mentioned in [Deploying Update Sales Order Composites](#) after configuring all composites using configuration plan c3\_composites\_cfgplan.xml.

### *UpdateSalesOrderICSBatchCommsProvABCSImpl*

This composite is responsible for forwarding the transformed UpdateSalesOrderEBM messages as ABMs to the provider ABCS interface in ICS. The implementation of this ABCS is done by calling an ICS interface exposed via a SOAP adapter. Specific URL and user credentials are configured in the Provider ABCS to successfully invoke an intended target integration in ICS (CommsAIAUpdateSalesOrderBatch).

Follow deployment steps mentioned in [Deploying Update Sales Order Composites](#) after configuring all composites using configuration plan c3\_composites\_cfgplan.xml.

### 2.1.5. Deploying Update Sales Order Status Composites

There are three composites implemented in the CX Integration Pack Reference Solution to support the Update Sales Order Status process flow:

- UpdateSalesOrderICSBatchCommsJMSConsumer
- UpdateSalesOrderICSBatchCommsFileReader
- UpdateSalesOrderICSBatchCommsProvABCSImpl

Deploy these composites using Oracle Enterprise Manager.

- 1) Login to Oracle Enterprise Manager
- 2) Navigate to SOA > soa\_infra
- 3) Select "Deployed Composites" tab
- 4) Select "Deploy.." button
- 5) Select the updated and repackaged **sca\_UpdateSalesOrderICSBatchCommsJMSConsumer\_rev1.0.jar** file SOA Archive
- 6) Select the updated configuration plan **c3\_composites\_cfgplan.xml** file for Configuration File
- 7) Select "Next" and select "default" SOA Folder
- 8) Select "Next" to deploy
- 9) Repeat Step 4 - 7 to deploy **sca\_UpdateSalesOrderICSBatchCommsProvABCSImpl\_rev1.0.jar** and **sca\_UpdateSalesOrderICSBatchCommsFileReader.jar**
- 10) **Note that for UpdateSalesOrderICSBatchCommsFileReader, the target filepath and filepath\_archive directories must be created on the target host first before the composite can be deployed successfully. Also the UpdateSalesOrderICSBatchCommsProvABCSImpl composite must be deployed first.**
- 11) Follow additional steps in [Configure ICS Security for SOA](#) to configure user credentials to connect and authenticate to ICS.
- 12) Follow additional steps in [Configure ICS Security for SOA](#) to configure ICS SSL certificates for successful secured connections from AIA to ICS.

### 2.1.6. Fallout Enablement in CPQ

To enable CPQ to capture fallout message sent by OSM,

**CreateTroubleTicketOSMCFSCCommsJMSConsumer** composite in AIA has to be retired or shutdown.

Then **COMMSC3\_AIAGETTTDETAILS** integration in ICS consumes the fallout message and sends it to CPQ.

### 2.1.7. Configuring ICS Security for SOA

To enable an SSL secured connection from the AIA SOA server to the ICS server, follow these steps to setup ICS credentials and install the certificate:

## ICS Credentials

To invoke ICS integration, ICS credentials setup is required.

- 1) Login to Oracle Enterprise Manager
- 2) Select Weblogic Domain > Security > Credentials
- 3) Open "oracle.wsm.security" folder and select "Create Key"
- 4) Enter "ics.cloud.credentials" in **Key** field
- 5) Provide ICS login username and password

## Install ICS SSL Certificate

- 1) Use a web browser and go to ICS service instance website
- 2) Follow browser instructions to export ICS certificate (for instance, save the file as icscert.crt)
- 3) Login to AIA SOA server
- 4) Import certificate (icscert.crt) into  
/private/aiaom\_test\_install/Middleware\_wls/wlserver/server/lib/DemoTrust.jks

```
keytool -import -trustcacerts -alias icscert -file icscert.crt -keystore  
DemoTrust.jks
```

(Default password: DemoTrustKeyStorePassPhrase)

- 5) Edit  
/private/aiaom\_test\_install/Middleware\_wls/user\_projects/domains/aiafp/bin/setDomainEnv.  
sh
- 6) Remove “-Djavax.net.ssl.trustStore=\${WL\_HOME}/server/lib/DemoTrust.jks” from  
setDomainEnv.sh
- 7) Login to WebLogic console
- 8) Navigate to Environment > Servers > soa\_server1 > SSL tab > Advanced link
- 9) In the Hostname Verification dropdown, select None to disable hostname verification, or  
Custom Hostname Verifier if one is available
- 10) Clear WebLogic server tmp and cache directories
- 11) Restart WebLogic

## 2.2. Installing CX Integration Pack Reference Solution for AIA XREF REST Application

The AIA XREF REST application is provided as a war archive file which has to be deployed on the WebLogic server where the AIA is deployed.

**Prerequisites:** The **XrefRestWS.war** application is dependent on the **jax-rs** library with minimum "2.0" specification and "2.22.1.0" implementation versions. As a readiness activity, deploy the jax-rs shared library to the AIA server if jax-rs shared library is not already deployed. The shared library can be

deployed using WebLogic console by navigating to deployments and choosing the library from <MIDDLEWARE\_HOME>/wlserver/common/deployable-libraries/jax-rs-2.0.war.

**Security:** By default, the XrefRestWS application is set up with **XREF\_Rest\_API** as the security role name. Therefore, as a post deployment activity the new security group **XREF\_Rest\_API** has to be created under the WebLogic security realm. A new user such as **XREFRestUser** with a specific password has to be created under the security realm by choosing group **XREF\_Rest\_API**. This would then require the client for the AIA XREF REST WS to authenticate with this user which belongs to this security group.

- 1) Deploy prerequisite jax-rs-2.0.war to provide the jax-rs dependent libraries.
- 2) Locate and Deploy the **XrefRestWS.war** from the WebLogic console to **aiafp** domain.
- 3) Target the deployment to the "soa\_server1" server.

## 2.3. Installing CX Integration Pack Reference Solution for Catalog Operations (Enhanced Offer Design)

### 2.3.1. ICS Integration Components

The CX Integration Pack Reference Solution for Catalog Operations (Enhanced Offer Design) uses the following ICS components. Refer to [Installing CX Integration Pack Reference Solution for ICS Integrations](#) for more details of configuring and deploying these components.

#### *ICS Connections*

- CommsC3\_Catalog
- CommsC3\_CPQCatalog
- CommsC3\_CPQBomHierAndAttributes
- CommsC3\_CPQCATALOGAttributes
- CommsC3\_UpdateCPQPartsAndBOM
- CommsC3\_CPQDataTables\_BOM
- CommsC3\_PDCCatalog
- CommsC3\_PDCOperations
- CommsC3\_CPQParts
- CommsC3\_CPQDataTable\_BomItemDef
- CommsC3\_CPQDataTable\_BomAttribute
- CommsC3\_CPQDataTable\_BomItemMap
- CommsC3\_CPQDataTable\_BomAttrMap
- CommsC3\_CPQDataTables\_OCBundle
- CommsC3\_CPQDataTable\_OCProdAttributes
- CommsC3\_CPQDataTables\_OCPartAttributes
- CommsC3\_AIAXREF\_REST
- CommsC3\_PDCPricingWebService

- CommsC3\_CPQCatalog\_Integration
- CommsC3\_PDCCatalog\_Integration
- CommsC3\_UpdateCPQProducts\_Intg
- CommsC3\_CPQBomHierAndAttributes\_Integration
- CommsC3\_CPQCatalogAttrIntg
- CommsC3\_CPQUpdateBomHierarchyIntegration
- CommsC3\_PDCOperations\_Integration

### *ICS Lookups*

- CommsC3\_CurrencyCode
- CommsC3\_PDCEventCodes
- CommsC3\_System\_Configuration

### *ICS Integrations*

- CommsC3\_Catalog
- CommsC3\_CPQCatalog
- CommsC3\_CPQBomHierAndAttributes
- CommsC3\_CPQCatalogAttributes
- CommsC3\_CPQUpdateProducts
- CommsC3\_CPQUpdateBOMTables
- CommsC3\_PDCCatalog
- CommsC3\_PDCOperations

**Note:** Due to an issue with ICS connection where it cannot communicate to ssl based on-premise webservice, User may need to remove ws-policy from PDC app. Steps to remove policy:

1. Apply weblogic patch "25735297" on PDC weblogic (p25735297\_122120\_Generic).
2. Login to weblogic console.
3. Go to Deployments.
4. Locate and expand PricingDesignCenter.
5. Locate and open PricingGateway Webservice.
6. Go to configuration tab > WS-Policy.
7. Remove the Wsspl.2-2007-Https-BasicAuth.xml from chosen endpoints policies.
8. Clicking on apply will save the changes to plan.xml.
9. Redeploy the PricingDesignCenter using the default Plan.xml(changed).
10. Verify by opening the PricingDesignCenter that changes are persistent (Due to a known issue in weblogic, user may need to repeat the above steps).

## 2.4.Installing CX Integration Pack Reference Solution for Synchronize Product Flow

### 2.4.1. ICS Integration Components

The CX Integration Pack Reference Solution for Synchronize Product flow uses the following ICS components. Refer to [Installing CX Integration Pack Reference Solution for ICS Integrations](#) for more details of configuring and deploying these components.

#### *ICS Connections*

- CommsC3\_CPQProductSync
- CommsC3\_CXProductSync
- CommsC3\_CXDiscountSync
- CommsC3\_CPQProdSyncIntegration
- CommsC3\_CPQParts
- CommsC3\_CPQDataTable\_OCPriceList
- CommsC3\_CPQDataTable\_OCProduct
- CommsC3\_AIAXREF\_REST

#### *ICS Lookups*

- CommsC3\_UsageEventType
- CommsC3\_CurrencyCode
- CommsC3\_BillingCode
- CommsC3\_EdgeApplications
- CommsC3\_PriceList

#### *ICS Integrations*

- CommsC3\_BRMToCPQProductSync
- CommsC3\_BRMToCXProductSync
- CommsC3\_BRMToCXDiscountSync

### 2.4.2. Deploying Synchronize Product Web Application

A new ProductSync Web Application is added to the CX Integration Pack Reference Solution to support publishing of Product and Discount Sync messages from PDC/BRM to CPQ using ICS. The ProductSync EAR can be deployed to a new WebLogic domain, or in the same one that PDC uses.

#### *Monitor Table in BRM DB*

- 1) Create the "**PRODSYNC\_MONITOR**" table into BRM database.
- 2) Extract ProductSync.zip from the CX Integration Pack Reference Solution Bundle and locate "create\_monitor\_table.sql". Copy the script to a temporary directory on the BRM DB server.
- 3) Execute the SQL script on the BRM database with the following command:

```
sqlplus BRM_USER/BRM_PASSWORD@BRM_SID / <create_monitor_table.sql
/>create_monitor_table.out
```

- 4) Make sure the BRM/PDC database user is granted with all the required permissions.
- 5) Please refer to *Fusion Middleware Configuring and Managing JMS for Oracle WebLogic Server, Configuring WebLogic Server to Interoperate with AQ JMS* for more details.

### WebLogic Startup Parameters

Add the following startup parameters to WebLogic startup script (<wls\_domain>/bin/startWebLogic.sh)

```
# Add Java options for ProdSync
export JAVA_OPTIONS="${JAVA_OPTIONS} -DUseSunHttpHandler=true"
export JAVA_OPTIONS="${JAVA_OPTIONS} -Dweblogic.jdbc.remoteEnabled=true"
export JAVA_OPTIONS="${JAVA_OPTIONS} -
Djavax.xml.soap.MessageFactory=com.sun.xml.internal.messaging.saa
j.soap.ver1_1.SOAPMessageFactory1_1Impl"
export JAVA_OPTIONS="${JAVA_OPTIONS} -
Djavax.xml.soap.SOAPOutputFactory=com.sun.xml.internal.messaging.saa
j.soap.ver1_1.SOAPOutputFactory1_1Impl"
```

### ICS User Credentials in FMW Credential Store

- 1) Refer to *Fusion Middleware Security Guide, Configuring the Credential Store* for more details.
- 2) Start WLST in FMW (not WEBLOGIC\_HOME) oracle\_common directory. Otherwise, FMW Credential Store functions are not available.

Example:  
/private/aiacom\_test\_install/Middleware\_wls/oracle\_common/common/bin/wlst.sh

- 3) In WLST, execute the following createCred command with the proper values:

```
connect('WLS_USERNAME', 'WLS_PASSWORD', 't3://<ip>:<port>')
createCred(map="pdc_productsync", key="ics", user="ICS_USERNAME",
password="ICS_PASSWORD")
```

- 4) If credentials are already created update them using commands:  
updateCred(map="pdc\_productsync", key="ics", user="ICS\_USERNAME ",  
password="ICS\_PASSWORD")
- 5) Grant permissions to Credential Store to product-sync app  
grantPermission(codeBaseURL="file:\${oracle.deployed.app.dir}/product-sync-  
ear/\${oracle.deployed.app.ext}",  
permClass="oracle.security.jps.service.credstore.CredentialAccessPermission",  
permTarget="context=SYSTEM,mapName=pdc\_productsync,keyName=\*",  
permActions="read")

### AIA DVM, XREF Table and Composites Update

- 1) Create an extra CPQ\_01 column in AIA database table XREF\_PRICELINE\_ID. This is required for Synchronize Product Flow.

Property	Value
Column Name	CPQ_01
Type	VARCHAR2 (2000 BYTE)

- 2) Create an extra column in /apps/AIAMetaData/dvm/PRICELIST.dvm. This is required for Order processing to support multiple price lists. Refer to [Deploying AIA DVM and XREF Changes to Metadata Repository](#) for specific steps.

The following table shows example data to populate manually into PRICELIST.dvm when two specific price lists are used in PDC Synchronize Product flow using different price list names in CPQ. DEFAULT price list is always required.

COMMON	BRM_01	PDC_01	CPQ_01
DEFAULT	*	*	DEFAULT
ConsumerPL	ConsumerPL	ConsumerPL	Consumer Pricelist
BusinessPL	BusinessPL	BusinessPL	Business Pricelist

- 3) Deactivate the following AIA composites so that the BRM AQ entries will not be impacted.
  - SyncProductInfoChangeBRMAQ
  - SyncDiscountInfoChangeBRMAQ

### JMS Objects for AQ

- 1) Refer to *Fusion Middleware Configuring and Managing JMS for Oracle WebLogic Server, Configuring WebLogic Server to Interoperate with AQ JMS* for more details.
- 2) Extract from the CX Integration Pack Reference Solution Bundle to copy both files "jmsaq.py" and "jmsaq.py.properties" into a temporary directory on the weblogic server.
- 3) Edit the "jmsaq.py.properties" file and change the default values with the proper values for the target WebLogic server.
- 4) Set WLS Environment variables

```
source <wl_home>/wlserver/server/bin/setWLSEnv.sh
```
- 5) Launch the WLST script "jmsaq.py" with the following command:

```
java weblogic.WLST jmsaq.py
```

### Deploy EAR

- 1) Extract from the CX Integration Pack Reference Solution Bundle to copy "plan.xml" and "product-sync-ear-1.0-SNAPSHOT.ear" in the bundle to a directory in PDC server
- 2) Modify plan.xml for following values:



- a. icsSynchronizeProductUri : URI for the ICS end point for Product Sync
  - b. icsSynchronizeDiscountUri : URI for the ICS end point for Discount Sync
- 3) Deploy the product-sync-ear-1.0-SNAPSHOT.ear using this plan.xml. Select the AdminServer as the target.
- 4) Refer to WebLogic deployment plan provided in the CX Integration Pack Reference Solution Bundle as a sample to override ICS URIs and other configuration values.
- 5) Optionally, the following configurations can be added to plan.xml to override defaults for ConsumerEventTimerServiceBean which is the main process for consuming events from BRM AQ.

Name	Type	Default	Description
mapName	java.lang.String	pdv_product_sync	Credential store map name. It manages user password.
icsKeyName	java.lang.String	ics	Credential store key to retrieve user name and password to access ICS.
maxMessageCount	java.lang.Integer	10	The maximum number of messages to be processed by one timer instance.
timerTimeoutInterval	java.lang.Long	60000	Internal (milliseconds) timer is timedout.
icsSynchronizeProductUri	java.lang.String		URI for the ICS end point for Product Sync (Mandatory)
icsSynchronizeDiscountUri	java.lang.String		URI for the ICS end point for Discount Sync (Mandatory)

- 6) Install the EAR first. Make sure the application name is product-sync-ear to match the codesource/url in system-jazn-data.xml.
- 7) Update the EAR with the deployment plan to override the following configuration values.

## 2.5.Installing CX Integration Pack Reference Solution for Process Sales Order and TSQ Flow

### 2.5.1. ICS Integration Components

The CX Integration Pack Reference Solution for Process Sales Order flow uses the following ICS components. Refer to [Installing CX Integration Pack Reference Solution for ICS Integrations](#) for more details of configuring and deploying these components.

#### ICS Connections

- CommsC3\_CPQCommerce\_SOAP
- CommsC3\_AIAXREF\_REST
- CommsC3\_OSMOptimizedSalesOrderQueue

#### ICS Lookups

- CommsC3\_System\_Configuration

## ICS Integrations

- CommsC3\_CPQCreateSalesOrder

### 2.5.2. Deploying SoapWrapper Component

The SoapWrapper Component is provided as a JAR file, to be installed into WebLogic on the same server as OSM. Once OSM is installed and configured, perform the following steps to install the SoapWrapper:

- 1) Login to WebLogic console for OSM server.
- 2) Navigate to Services > Messaging > JMS Modules.
- 3) Select the oms\_jms\_module. (Optionally, a new JMS module can be created and used)
- 4) Create a "New" connection factory "SoapWrapperCreateOrderConnectionFactory" with JNDI name "oracle.communications.c3.WebServiceSoapForwardingConnectionFactory".
- 5) The connection factory must have XA Connection Factory Enabled set.
- 6) From the module again, create a new queue called "SoapWrapperCreateOrderQueue" with JNDI name "oracle.communications.c3.WebServiceSoapForwarding".
- 7) From the queue configuration, create a new subdeployment "WebServiceSoapForwardingSub".
- 8) Extract the CX Integration Pack Reference Solution Bundle and copy the SoapWrapper JAR file to the OSM host.
- 9) From the WebLogic console, select Deployments, then "Install".
- 10) Choose the directory where the SoapWrapper JAR file was copied to earlier.
- 11) Select the SoapWrapper.jar and select "Next".
- 12) Choose to install it as an application, then select "Next".
- 13) Choose the OSM server, OSM\_MS1.
- 14) On the next screen, pick "Copy this application onto every target for me" under Source Accessibility, and "Copy this plan onto every target for me" under Plan Source Accessibility.
- 15) Once this is completed, the SoapWrapper should become active.

### 2.5.3. Assign SOMUpdateOLMRole role to "osm" user

CPQ uses OLM user interface of OSM to track the order progress. To enable it for access for completed order, "osm" user need to be provided with SOMUpdateOLMRole role. Once OSM is installed and configured, perform following steps to add the role to user:

- 1) Login to OSM orchestration web client.
- 2) Navigate to Administer Users.
- 3) Add SOMUpdateOLMRole role to osm user.
- 4) Save the changes.

### 2.5.4. Deploying O2A Cartridge for Carrier Ethernet

#### Importing O2A 2.1.2 Cartridges

#### Configuring the Design Studio

Refer **Order-to-Activate Cartridge Pre-Installation Tasks** section in *Oracle Communications Order and Service Management Cartridges for Oracle Application Integration Architecture* Release 2.1.2 guide for configuring the Design Studio Preferences

### **Importing O2A 2.1.2 Cartridges**

Refer Installing the Order-to-Activate Cartridges section in Oracle Communications Order and Service Management Cartridges for Oracle Application Integration Architecture Release 2.1.2 guide for Importing O2A 2.1.2 Cartridges

### **Importing C3 ICS Order Recognition Cartridge**

1. Locate C3 Carrier Ethernet (CE) Extension project **CommsC3\_OSM\_O2A\_ICS\_ORR\_Cartridge** in **CX Integration Pack Reference Bundle** and extract it to local system directory.
2. From the File menu, select **“Import Studio Project”**.  
The Import Projects dialog box is displayed.  
Select **“Select root directory”** and browse the extracted **CommsC3\_OSM\_O2A\_ICS\_ORR\_Cartridge** and click **“Ok”** and then Click **“Finish”**.
3. The cartridge **CommsC3\_OSM\_O2A\_ICS\_ORR\_Cartridge** is imported to workspace.

### **Importing CommsC3\_FulfillmentStateMap**

1. Locate C3 Carrier Ethernet (CE) Extension project **CommsC3\_FulfillmentStateMap** in **CX Integration Pack Reference Bundle** and extract it to local system directory.
2. From the File menu, select **“Import Studio Project”**.  
The Import Projects dialog box is displayed.  
Select **“Select root directory”** and browse the extracted **CommsC3\_FulfillmentStateMap** and click **“Ok”** and then Click **“Finish”**.
3. The cartridge **CommsC3\_FulfillmentStateMap** is imported to workspace.

### **Importing CommsC3\_FulfillmentPattern**

1. Locate C3 Carrier Ethernet (CE) Extension project **CommsC3\_FulfillmentPattern** in **CX Integration Pack Reference Bundle** and extract it to local system directory.
2. From the File menu, select **“Import Studio Project”**.  
The Import Projects dialog box is displayed.  
Select **“Select root directory”** and browse the extracted **CommsC3\_FulfillmentPattern** and click **“Ok”** and then Click **“Finish”**.
3. The cartridge **CommsC3\_FulfillmentPattern** is imported to workspace.

### **Importing C3 Carrier Ethernet (CE) Extensions**

1. Locate C3 Carrier Ethernet (CE) Extension project **CommsC3\_OSM\_O2A\_Carrier\_Ethernet\_Cartridges** in **CX Integration Pack Reference Bundle** and extract it to local system directory.
2. From the File menu, select **“Import Studio Project”**.

The Import Projects dialog box is displayed.

- Select **“Select archive file”** and browse and select the **CommsC3\_OSM\_O2A\_Carrier\_Ethernet\_Cartridges.zip** and click **“Open”**.

The following CE extension projects are displayed and selected in the Projects field.

- CommsC3\_Model\_O2A\_CE\_CFS
- CommsC3\_Model\_O2A\_CE\_PS
- CommsC3\_OSM\_O2A\_COM\_CSO\_CE\_CFS

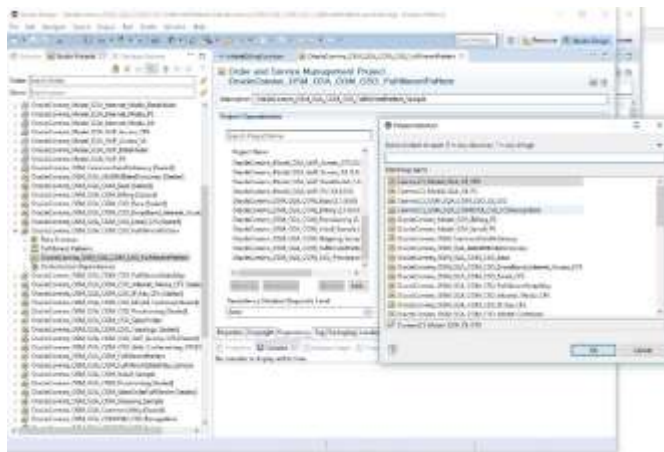
Click **“Finish”**

The cartridges are imported to the workspace.

## **Updating O2A Cartridge Components with Carrier Ethernet (CE) support**

### **Cartridge: OracleComms\_OSM\_O2A\_COM\_CSO\_FulfillmentPattern**

1. In the Design studio, in Studio Projects, browse and select **OracleComms\_OSM\_O2A\_COM\_CSO\_FulfillmentPattern**
2. Double click the **OracleComms\_OSM\_O2A\_COM\_CSO\_FulfillmentPattern** to open project window.
3. In the Project select **“Dependency”** tab.  
This list the available project dependency.
4. In the **“Project Dependency”** click **“Add”**.  
This brings up the Project Selection window. Select **“CommsC3\_Model\_O2A\_CE\_CFS”** from the list.



5. Click **“OK”** and Save the changes.

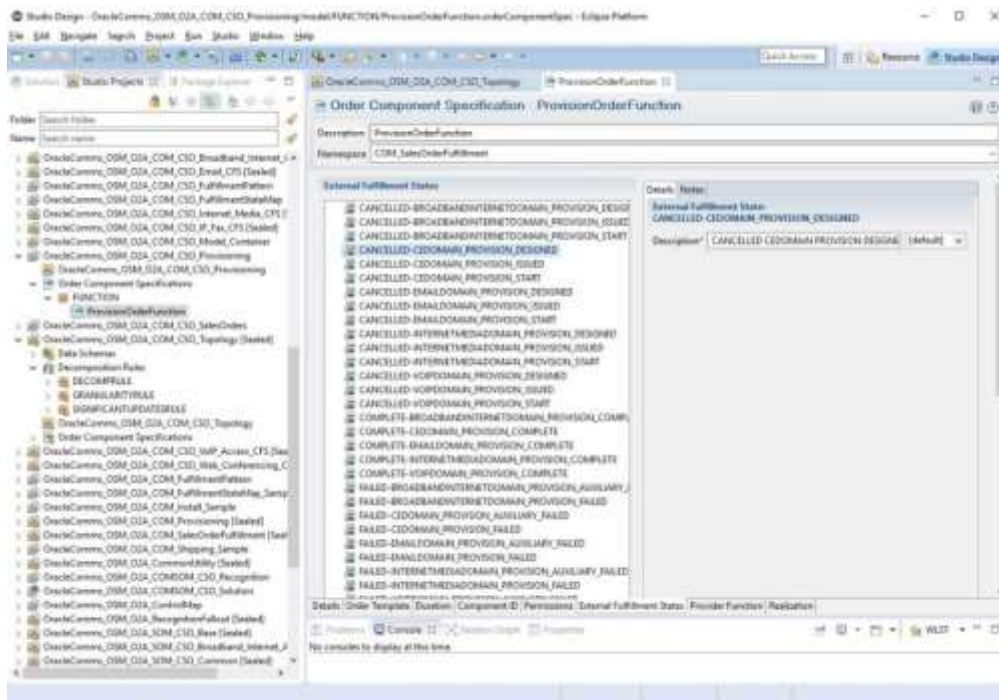
### **Cartridge: OracleComms\_OSM\_O2A\_COM\_CSO\_Provisioning**

1. In the Design studio, in Studio Projects, browse and select **OracleComms\_OSM\_O2A\_COM\_CSO\_Provisioning**
2. Double click the **OracleComms\_OSM\_O2A\_COM\_CSO\_Provisioning** to open project window.
3. In the Properties tab, click **“Unseal”** and click **“OK”** to confirm to unseal the cartridge.

4. Expand **OracleComms\_OSM\_O2A\_COM\_CSO\_Provisioning** and select **ProvisionOrderFunction (Order Component Specifications->FUNCTION->ProvisionOrderFunction)**
5. Double click to open the **“Order Component Specification”** Editor.
6. Select the tab **“External Fulfillment States”**
7. Scroll down and **“Add”** the following **“External Fulfillment States”**
  - CANCELLED-CEDOMAIN\_PROVISION\_DESIGNED
  - CANCELLED-CEDOMAIN\_PROVISION\_ISSUED
  - CANCELLED-CEDOMAIN\_PROVISION\_START
  - COMPLETE-CEDOMAIN\_PROVISION\_COMPLETE
  - FAILED-CEDOMAIN\_PROVISION\_AUXILIARY\_FAILED
  - FAILED-CEDOMAIN\_PROVISION\_FAILED
  - IN\_PROGRESS-CEDOMAIN\_PROVISION\_DESIGNED
  - IN\_PROGRESS-CEDOMAIN\_PROVISION\_ISSUED
  - TSQ\_Failed-CEDOMAIN\_PROVISION\_DESIGNED
  - TSQ\_Passed-CEDOMAIN\_PROVISION\_DESIGNED

**Note:** Automatically the description will be generated by Design Studio.

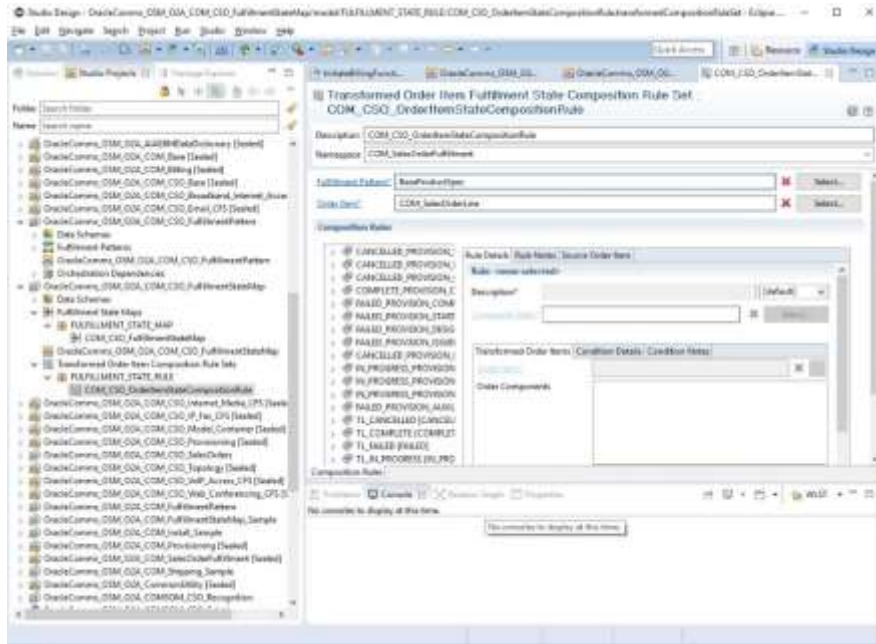
8. Save Changes



#### Cartridge: OracleComms\_OSM\_O2A\_COM\_CSO\_FulfillmentStateMap

1. In the Design studio, in Studio Projects, browse and select **OracleComms\_OSM\_O2A\_COM\_CSO\_FulfillmentStateMap**

- Expand **OracleComms\_OSM\_O2A\_COM\_CSO\_FulfillmentStateMap** and select **COM\_CSO\_OrderItemStateCompositionRule(Transformed Order Item Composition Rule Sets ->FULFILLMENT\_STATE\_RULE->COM\_CSO\_OrderItemStateCompositionRule).**
- Double click to open **“Transformed Order Item Composition Rule Sets”** Editor.



- For each of the Rules specified, please click **“Source Order Item”** tab and select the resources as follows.

S-No	Rule	Source Order Item - Conceptual Model Entity
1	CANCELLED PROVISION START	<ul style="list-style-type: none"> <li>• CE_CoS_Bandwidth_PS</li> <li>• CE_Endpoint_PS</li> <li>• CE_Service_PS</li> <li>• CE_SLA_PS</li> </ul>
2	CANCELLED PROVISION DESIGNED	<ul style="list-style-type: none"> <li>• CE_CoS_Bandwidth_PS</li> <li>• CE_Endpoint_PS</li> <li>• CE_Service_PS</li> <li>• CE_SLA_PS</li> </ul>
3	CANCELLED PROVISION COMPLETE	<ul style="list-style-type: none"> <li>• CE_CoS_Bandwidth_PS</li> <li>• CE_Endpoint_PS</li> <li>• CE_Service_PS</li> <li>• CE_SLA_PS</li> </ul>
4	COMPLETE PROVISION COMPLETE	<ul style="list-style-type: none"> <li>• CE_CoS_Bandwidth_PS</li> <li>• CE_Endpoint_PS</li> <li>• CE_Service_PS</li> <li>• CE_SLA_PS</li> </ul>

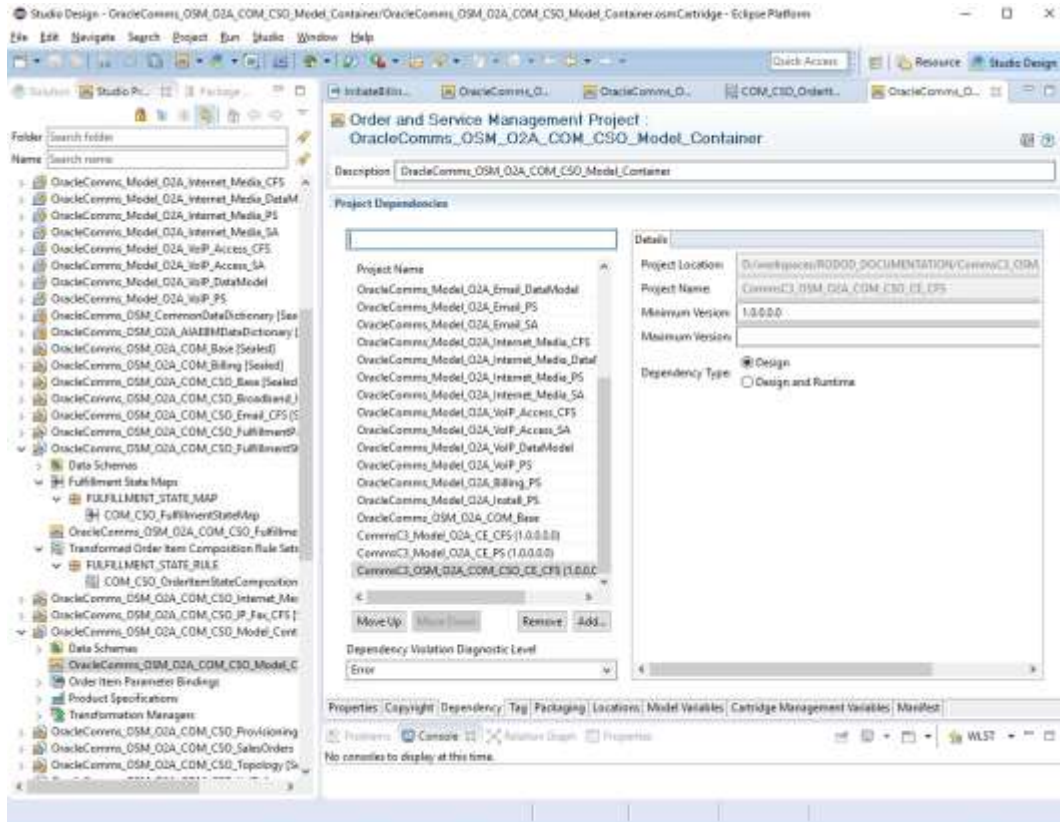
5	FAILED PROVISION COMPLETE	<ul style="list-style-type: none"> <li>• CE_CoS_Bandwidth_PS</li> <li>• CE_Endpoint_PS</li> <li>• CE_Service_PS</li> <li>• CE_SL_A_PS</li> </ul>
6	FAILED PROVISION START	<ul style="list-style-type: none"> <li>• CE_CoS_Bandwidth_PS</li> <li>• CE_Endpoint_PS</li> <li>• CE_Service_PS</li> <li>• CE_SL_A_PS</li> </ul>
7	FAILED PROVISION DESIGNED	<ul style="list-style-type: none"> <li>• CE_CoS_Bandwidth_PS</li> <li>• CE_Endpoint_PS</li> <li>• CE_Service_PS</li> <li>• CE_SL_A_PS</li> </ul>
8	FAILED PROVISION ISSUED	<ul style="list-style-type: none"> <li>• CE_CoS_Bandwidth_PS</li> <li>• CE_Endpoint_PS</li> <li>• CE_Service_PS</li> <li>• CE_SL_A_PS</li> </ul>
9	CANCELLED PROVISION ISSUED	<ul style="list-style-type: none"> <li>• CE_CoS_Bandwidth_PS</li> <li>• CE_Endpoint_PS</li> <li>• CE_Service_PS</li> <li>• CE_SL_A_PS</li> </ul>
10	IN PROGRESS PROVISION DESIGNED	<ul style="list-style-type: none"> <li>• CE_CoS_Bandwidth_PS</li> <li>• CE_Endpoint_PS</li> <li>• CE_Service_PS</li> <li>• CE_SL_A_PS</li> </ul>
11	IN PROGRESS PROVISION ISSUED	<ul style="list-style-type: none"> <li>• CE_CoS_Bandwidth_PS</li> <li>• CE_Endpoint_PS</li> <li>• CE_Service_PS</li> <li>• CE_SL_A_PS</li> </ul>
12	IN PROGRESS PROVISION START	<ul style="list-style-type: none"> <li>• CE_CoS_Bandwidth_PS</li> <li>• CE_Endpoint_PS</li> <li>• CE_Service_PS</li> <li>• CE_SL_A_PS</li> </ul>
12	FAILED PROVISION AUXILIARY	<ul style="list-style-type: none"> <li>• CE_CoS_Bandwidth_PS</li> <li>• CE_Endpoint_PS</li> <li>• CE_Service_PS</li> <li>• CE_SL_A_PS</li> </ul>

## 5. Save Changes

### Cartridge: OracleComms\_OSM\_O2A\_COM\_CSO\_Model\_Container

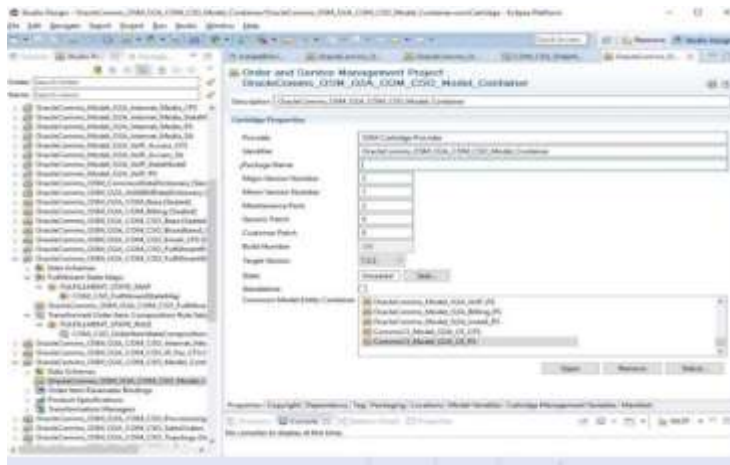
1. In the Design studio, in Studio Projects, browse and select **OracleComms\_OSM\_O2A\_COM\_CSO\_Model\_Container**
2. Double click the **OracleComms\_OSM\_O2A\_COM\_CSO\_Model\_Container** to open project window.

3. In the Properties tab, click **"Unseal"** and click **"OK"** to confirm to unseal the cartridge.
4. In the Project select **"Dependency"** tab.  
This list the available project dependency.
5. In the **"Project Dependency"** click **"Add"**.  
This brings up the Project Selection window. Select the following from the list one by one.
  - CommsC3\_Model\_O2A\_CE\_CFS
  - CommsC3\_Model\_O2A\_CE\_PS
  - CommsC3\_OSM\_O2A\_COM\_CSO\_CE\_CFS
6. Save the Changes

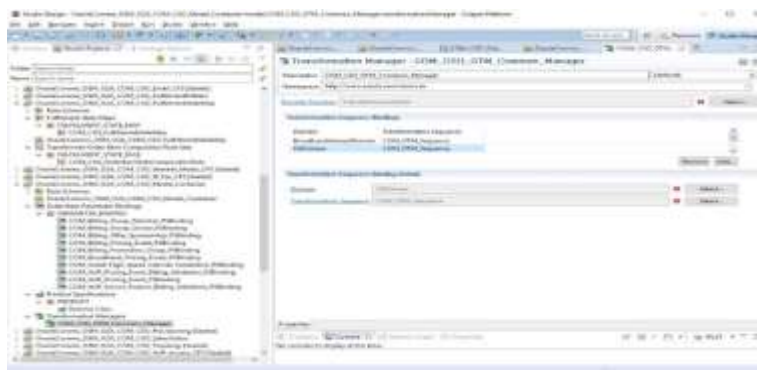


7. In the Properties tab, for the **"Common Model Entity Container"** select the following from the list one by one.
  - CommsC3\_Model\_O2A\_CE\_CFS
  - CommsC3\_Model\_O2A\_CE\_PS
8. Save the Changes





9. Expand the Cartridge **OracleComms\_OSM\_O2A\_COM\_CSO\_Model\_Container** and select **COM\_CSO\_OTM\_Common\_Manager** (TransformationManager->COM\_CSO\_OTM\_Common\_Manager).
10. Double click the **COM\_CSO\_OTM\_Common\_Manager** to open the “Transformation Manager” editor.
11. In the “Transformation Sequence Bindings” click “Add”  
Select “CEDomain” for Domain and “COM\_OTM\_Sequence” for Transformation Sequence and Click “OK”



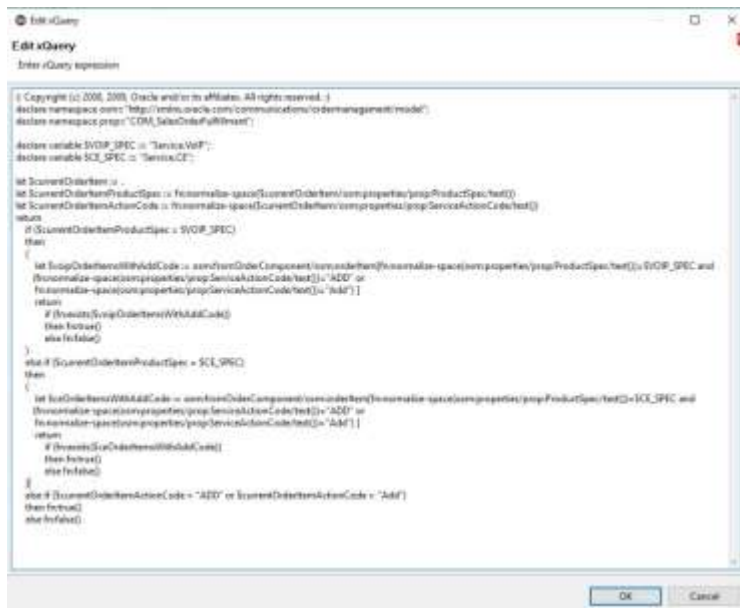
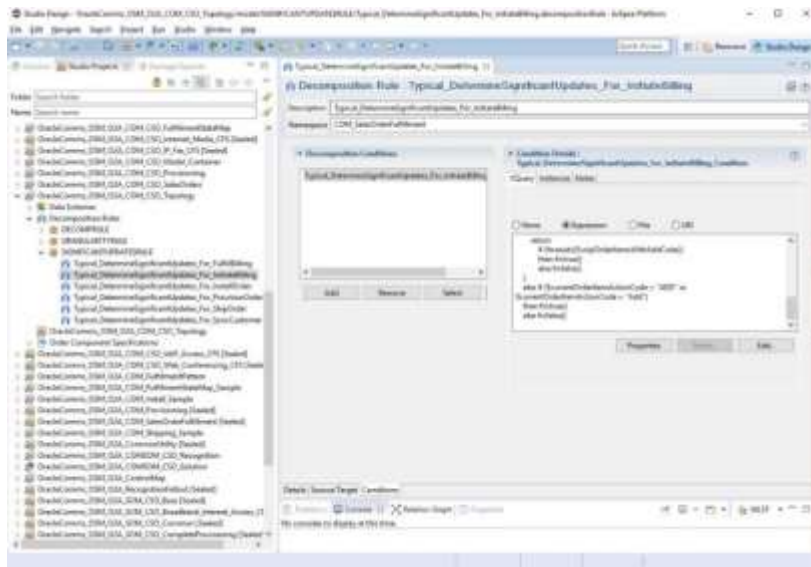
Save Changes

#### Cartridge: OracleComms\_OSM\_O2A\_COM\_CSO\_Topology

1. In the Design studio, in Studio Projects, browse and select **OracleComms\_OSM\_O2A\_COM\_CSO\_Topology**
2. Double click the **OracleComms\_OSM\_O2A\_COM\_CSO\_Topology** to open project window.
3. In the Properties tab, click “Unseal” and click “OK” to confirm to unseal the cartridge.
4. For each of the following Decomposition Rules under (Decomposition Rule->DECOMPRULE), double click the decomposition rule to open the “Decomposition Rule” editor and select the “Fulfillment Pattern” Service.CE.
  - DecompFulfillBilling\_To\_BRM-ALL
  - DecompInitiateBilling\_To\_BRM-ALL

- 
- The screenshot shows the Eclipse IDE interface. The top menu bar includes File, Edit, Navigate, Search, Project, Run, Studio, Windows, and Help. The left sidebar contains a 'Studio Projects' view showing a project hierarchy for 'OracleCommerce\_OSM\_OSA\_CDM\_CSD'. The 'Data Schemas' folder is expanded, showing a 'Decomposition Rules' folder with a sub-folder 'DECDMPRULE'. The main editor area displays the 'Decomposition Rule: DecompFullBillTo\_BRM-ALL'. The rule's description is 'DecompFullBillTo\_BRM-ALL', and its name is 'COM\_SalesOrderSplitment'. The 'FullService Partners' list includes: HardService Offer, HardService BillingPlan, HardService BillingPlanItem, Service Mail, Service CPE ToIF, Service Broadband, Service CPE Broadband, Service Inland, and Service CE. The bottom of the editor shows the 'Details: Source/Target, Conditions' tab, which is currently empty, displaying the message 'No content to display at this time.'

- 45



- Include the **Service.CE** condition logic in the existing XQuery.

```
(: Copyright (c) 2008, 2009, Oracle and/or its affiliates. All rights reserved. :)
declare namespace osm="http://xmlns.oracle.com/communications/ordermanagement/model";
declare namespace prop="COM_SalesOrderFulfillment";

declare variable $VOIP_SPEC := "Service.VoIP";
declare variable $CE_SPEC := "Service.CE";

let $currentOrderItem := .
let $currentOrderItemProductSpec := fn:normalize-space($currentOrderItem/osm:properties/prop:ProductSpec/text())
let $currentOrderItemActionCode := fn:normalize-space($currentOrderItem/osm:properties/prop:ServiceActionCode/text())
return
  if ($currentOrderItemProductSpec = $VOIP_SPEC)
  then
    (
      let $currentOrderItemWebCode := fn:normalize-space($currentOrderItem/osm:properties/prop:ProductSpec/text())=$VOIP_SPEC and
      (fn:normalize-space($currentOrderItem/osm:properties/prop:ServiceActionCode/text())="ADD" or
      (fn:normalize-space($currentOrderItem/osm:properties/prop:ServiceActionCode/text())="Add"))
      return
        if ($currentOrderItemWebCode="Add")
        then fn:true()
        else fn:false()
    )
  else if ($currentOrderItemProductSpec = $CE_SPEC)
  then
    (
      let $currentOrderItemWebCode := fn:normalize-space($currentOrderItem/osm:properties/prop:ProductSpec/text())=$CE_SPEC and
      (fn:normalize-space($currentOrderItem/osm:properties/prop:ServiceActionCode/text())="ADD" or
      (fn:normalize-space($currentOrderItem/osm:properties/prop:ServiceActionCode/text())="Add"))
      return
        if ($currentOrderItemWebCode="Add")
        then fn:true()
        else fn:false()
    )
  else if ($currentOrderItemActionCode="ADD" or $currentOrderItemActionCode="Add")
  then fn:true()
  else fn:false()
```

```

let $voipOrderItemsWithAddCode := osm:fromOrderComponent/osm:orderItem[fn:normalize-
space(osm:properties/prop:ProductSpec/text())=$VOIP_SPEC and
  (fn:normalize-space(osm:properties/prop:ServiceActionCode/text())="ADD" or
  fn:normalize-space(osm:properties/prop:ServiceActionCode/text())="Add") ]
return
  if (fn:exists($voipOrderItemsWithAddCode))
  then fn:true()
  else fn:false()
)
else if ($currentOrderItemProductSpec = $CE_SPEC)
then
(
  let $ceOrderItemsWithAddCode := osm:fromOrderComponent/osm:orderItem[fn:normalize-
space(osm:properties/prop:ProductSpec/text())=$CE_SPEC and
  (fn:normalize-space(osm:properties/prop:ServiceActionCode/text())="ADD" or
  fn:normalize-space(osm:properties/prop:ServiceActionCode/text())="Add") ]
  return
    if (fn:exists($ceOrderItemsWithAddCode))
    then fn:true()
    else fn:false()
)
else if ($currentOrderItemActionCode = "ADD" or $currentOrderItemActionCode = "Add")
then fn:true()
else fn:false()

```

- Save Changes

#### 8. Go to Package Explorer View & Expand

**OracleComms\_OSM\_O2A\_COM\_CSO\_Topology\resources** folder

- Double click “**decomp\_initiate\_billing\_all.xquery**” to edit it.
- In the method “**local:decomp\_orderItem**” to include the logic for “**Service.CE**”

```

(:
  Function to determine the decomp condition for the order item to be relevant for the target system
:~)
declare function local:decomp_orderItem($osmRoot as element()) as xs:boolean
{
  $osmRoot/osm:properties/prop:ProductSpec="Service.VoIP"
  or
  (
    (
      $osmRoot/osm:properties/prop:ProductSpec="NonService.BillingInitiatedItem" and
      (
        (: Check if PrimaryClassificationCode is PROMOTION_VoIP_Broadband :)
        $osmRoot/osm:properties/prop:PrimaryClassificationCode=$compconstants:PROMOTION_VOIP_BROADBAND
        or
        (: Check if PrimaryClassificationCode is PROMOTION_VoIP :)
        $osmRoot/osm:properties/prop:PrimaryClassificationCode=$compconstants:PROMOTION_VOIP
        or
        $osmRoot/osm:properties/prop:PrimaryClassificationCode="BILLING_VoIP"
        or
        $osmRoot/osm:properties/prop:PrimaryClassificationCode="DISCOUNT_VoIP"
      )
    )
    or
    (

```

```

        $osmRoot/osm:properties/prop:ProductSpec="NonService.BillingInitiatedItem" and
        (
            $osmRoot/osm:properties/prop:PrimaryClassificationCode="BILLING_VoIP"
            or
            $osmRoot/osm:properties/prop:PrimaryClassificationCode="DISCOUNT_VoIP"
        )
    )
    or
    (
        $osmRoot/osm:properties/prop:ProductSpec="NonService.Offer" and
        ($osmRoot/osm:properties/prop:PrimaryClassificationCode="OFFER_VoIP_Broadband" or
        $osmRoot/osm:properties/prop:PrimaryClassificationCode="OFFER_VoIP" )
    )
    )
    or
    (
        $osmRoot/osm:properties/prop:ProductSpec="Service.CPE.VoIP" and
        fn:exists($osmRoot/osm:properties/prop:ParentLineId) and
        (
            let $cpeParentLineId := $osmRoot/osm:properties/prop:ParentLineId/text()
            return

            fn:exists($osmRoot/osm:fromOrderComponent/osm:orderItem[$osmRoot/osm:properties/prop:LineId/text()=$cpeParentLineId and $osmRoot/osm:properties/prop:ProductSpec/text()="Service.VoIP"])
        )
    )
    or
    (
        $osmRoot/osm:properties/prop:ProductSpec="NonService.BillingItem" and
        fn:exists($osmRoot/osm:properties/prop:ParentLineId) and
        (
            let $billingItemParentLineId := $osmRoot/osm:properties/prop:ParentLineId/text()
            return

            fn:exists($osmRoot/osm:fromOrderComponent/osm:orderItem[$osmRoot/osm:properties/prop:LineId/text()=$billingItemParentLineId and $osmRoot/osm:properties/prop:ProductSpec/text()="Service.VoIP"])
        )
    )
    or
    (
        $osmRoot/osm:properties/prop:ProductSpec="Service.CE"
    )
};

```

9. Open OracleComms\_OSM\_O2A\_COM\_CSO\_Topology->Dependency tab->Add
  - CommsC3\_OSM\_O2A\_COM\_CSO\_CE\_CFS
  - CommsC3\_FulfillmentPattern

#### Cartridge: OracleComms\_OSM\_O2A\_COM\_SalesOrderFulfillment

1. In the Design studio, in Studio Projects, browse and select  
**OracleComms\_OSM\_O2A\_COM\_SalesOrderFulfillment**

2. Double click the **OracleComms\_OSM\_O2A\_COM\_SalesOrderFulfillment** to open project window.
3. In the Properties tab, click **"Unseal"** and click **"OK"** to confirm to unseal the cartridge.
4. Go to Package Explorer view and Expand **OracleComms\_OSM\_O2A\_COM\_SalesOrderFulfillment\resources\ComponentDependency** and Select **"DoublePlayComponentDependency.xquery"**.
5. Double click the xquery file to **Edit** it.
  - This file contains the list of dependency resolving methods
6. Include the following xquery methods into the file.

```

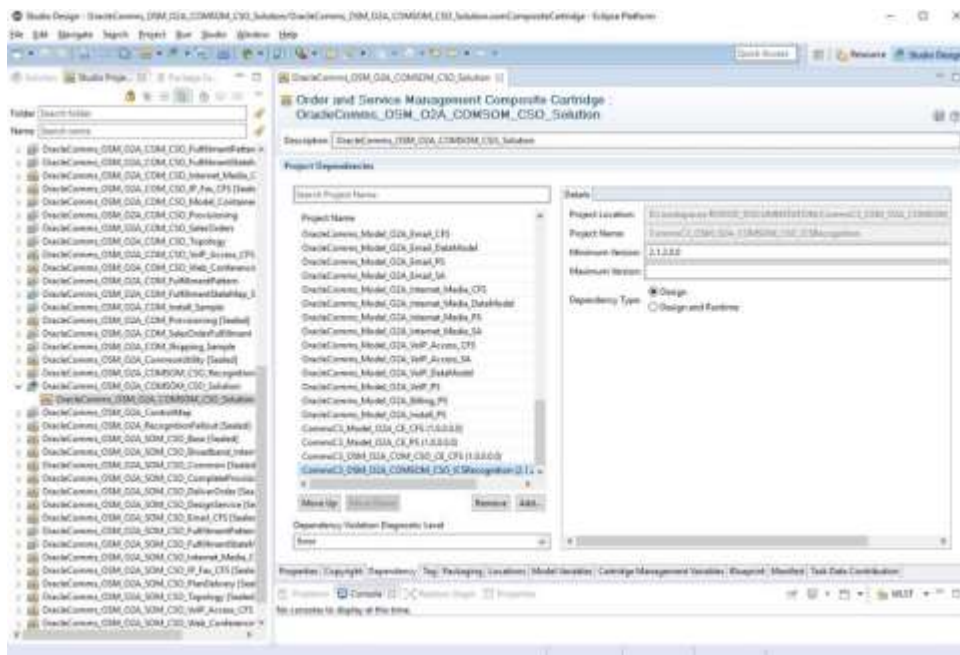
declare function compdependencyfn:Service.CE.InitiateBillingFunction.FulfillBillingFunction(
  $plan as element()) as element()*
{
  compdependencyfn:DependsOnSameTagertSystem($plan)
};

declare function compdependencyfn:Service.CE.SyncCustomerFunction.InitiateBillingFunction(
  $plan as element()) as element()*
{
  compdependencyfn:DependsOnSameTagertSystem($plan)
};

```

#### Cartridge: OracleComms\_OSM\_O2A\_COMSOM\_CSO\_Solution

1. In the Design studio, in Studio Projects, browse and select **OracleComms\_OSM\_O2A\_COMSOM\_CSO\_Solution**
2. Double click the **OracleComms\_OSM\_O2A\_COMSOM\_CSO\_Solution** to open project window.
3. Select the **"Dependency"** tab
4. Add the following projects into the Dependency
  - CommsC3\_Model\_O2A\_CE\_CFS
  - CommsC3\_Model\_O2A\_CE\_PS
  - CommsC3\_OSM\_O2A\_COM\_CSO\_CE\_CFS
  - CommsC3\_OSM\_O2A\_COMSOM\_CSO\_ICSRognition
  - CommsC3\_FulfillmentPattern
  - CommsC3\_FulfillmentStateMap
5. Select **"Model variables"** tab->click on add->add CommsC3\_VERSION in Name field and 1.0.0.0.0 in Value field.
6. Go to package explorer view and Expand **OracleComms\_OSM\_O2A\_COMSOM\_CSO\_Solution/resources/SolutionConfig/SolutionModelProperties.xml**  
Add `<oms:property name="CommsC3_VERSION">1.0.0.0.0</oms:property>`
7. Save the Changes



8. Go to package explorer view and Expand OracleComms\_OSM\_O2A\_COMSOM\_CSO\_Solution/resources/SolutionConfig/OrderStatusMap.xml  
Search for **<oms:Component type="OrderLifecycleManagement" systemType="CRM" fulfillmentMode="TSQ">**  
Replace IN PROGRESS with TSQ IN PROGRESS in the below ExternalStatus section.

```
<oms:StatusMap>
  <oms:ExternalStatus>TSQ IN PROGRESS</oms:ExternalStatus>
  <oms:OsmStatus>IN_PROGRESS</oms:OsmStatus>
</oms:StatusMap>
<oms:StatusMap>
  <oms:ExternalStatus>TSQ IN PROGRESS</oms:ExternalStatus>
  <oms:OsmStatus>IN PROGRESS</oms:OsmStatus>
</oms:StatusMap>
```

#### Project: OracleComms\_OSM\_O2A\_Configuration

1. Go to package explorer view
2. Expand **OracleComms\_OSM\_O2A\_Configuration** project
3. Select **solution-config\ComponentMilestoneMap.xml** file
4. Double click it to edit it.
5. For the **ProvisionOrder** Component, There will be **PONR** configuration as follows in that file.  
Change that to include **Service.CE** fulfillment pattern

#### Original entry

```
<oms:MilestoneMap systemType="OSMPROV" systemName="" execMode="do redo amend_do">
```

```

    <oms:ComponentMilestone>COMPONENT-UPDATE</oms:ComponentMilestone>
    <oms:ExternalMilestone>PROVISION ISSUED</oms:ExternalMilestone>
    <oms:Milestone>PROVISION ISSUED</oms:Milestone>
    <oms:PONR fulfilmentPattern="Service.Broadband Service.VoIP"
fulfillmentMode="DELIVER">true</oms:PONR>
</oms:MilestoneMap>

```

**Needs to be modified as**

```

<oms:MilestoneMap systemType="OSMPROV" systemName="*" execMode="do redo
amend_do">
    <oms:ComponentMilestone>COMPONENT-UPDATE</oms:ComponentMilestone>
    <oms:ExternalMilestone>PROVISION ISSUED</oms:ExternalMilestone>
    <oms:Milestone>PROVISION ISSUED</oms:Milestone>
    <oms:PONR fulfilmentPattern="Service.Broadband Service.VoIP Service.CE"
fulfillmentMode="DELIVER">true</oms:PONR>
</oms:MilestoneMap>

```

6. For the same **ProvisionOrder** Component, there will be “<!-- DO REDO Broadband Domain -->”. After that include the following.

```

<!-- DO REDO CE Domain -->
    <oms:MilestoneMap systemType="OSMPROV" systemName="Provisioning-ALL"
execMode="do redo amend_do">
        <oms:ComponentMilestone>COMPONENT-
UPDATE</oms:ComponentMilestone>
        <oms:ExternalMilestone>CEDomain_PROVISION
DESIGNED</oms:ExternalMilestone>
        <oms:AugmentedMilestone>CEDOMAIN PROVISION
DESIGNED</oms:AugmentedMilestone>
        <oms:Milestone>PROVISION DESIGNED</oms:Milestone>
    </oms:MilestoneMap>
    <oms:MilestoneMap systemType="OSMPROV" systemName="Provisioning-ALL"
execMode="do redo amend_do">
        <oms:ComponentMilestone>COMPONENT-
UPDATE</oms:ComponentMilestone>
        <oms:ExternalMilestone>CEDomain_PROVISION
ISSUED</oms:ExternalMilestone>
        <oms:AugmentedMilestone>CEDOMAIN PROVISION
ISSUED</oms:AugmentedMilestone>
        <oms:Milestone>PROVISION ISSUED</oms:Milestone>
    </oms:MilestoneMap>
    <oms:MilestoneMap systemType="OSMPROV" systemName="Provisioning-ALL"
execMode="do redo amend_do">
        <oms:ComponentMilestone>COMPONENT-
UPDATE</oms:ComponentMilestone>
        <oms:ExternalMilestone>CEDomain_PROVISION
COMPLETE</oms:ExternalMilestone>
        <oms:AugmentedMilestone>CEDOMAIN PROVISION
COMPLETE</oms:AugmentedMilestone>
        <oms:Milestone>PROVISION COMPLETE</oms:Milestone>
    </oms:MilestoneMap>
    <oms:MilestoneMap systemType="OSMPROV" systemName="Provisioning-
ALL" execMode="do redo amend_do">
        <oms:ComponentMilestone>COMPONENT-

```



```

UPDATE</oms:ComponentMilestone>
    <oms:ExternalMilestone>CEDomain_PROVISION AUXILIARY
FAILED</oms:ExternalMilestone>
    <oms:AugmentedMilestone>CEDOMAIN PROVISION AUXILIARY
FAILED</oms:AugmentedMilestone>
    <oms:Milestone>PROVISION FAILED</oms:Milestone>
</oms:MilestoneMap>
    <oms:MilestoneMap systemType="OSMPROV" systemName="Provisioning-ALL"
execMode="do redo amend_do">
    <oms:ComponentMilestone>COMPONENT-
UPDATE</oms:ComponentMilestone>
    <oms:ExternalMilestone>CEDomain_PROVISION
FAILED</oms:ExternalMilestone>
    <oms:AugmentedMilestone>CEDOMAIN PROVISION
FAILED</oms:AugmentedMilestone>
    <oms:Milestone>PROVISION FAILED</oms:Milestone>
</oms:MilestoneMap>

```

7. For the same **ProvisionOrder** Component, there will be milestone mapping for “<!-- UNDO Mode -->”, include the following milestone mappings there.

```

<oms:MilestoneMap systemType="OSMPROV" systemName="*" execMode="undo">
    <oms:ComponentMilestone>COMPONENT-UPDATE</oms:ComponentMilestone>
    <oms:ExternalMilestone>CEDomain_PROVISION
DESIGNED</oms:ExternalMilestone>
    <oms:AugmentedMilestone>CEDOMAIN PROVISION
DESIGNED</oms:AugmentedMilestone>
    <oms:Milestone>PROVISION DESIGNED</oms:Milestone>
    <oms:UpdateUpstreamSystem>false</oms:UpdateUpstreamSystem>
</oms:MilestoneMap>

<oms:MilestoneMap systemType="OSMPROV" systemName="*" execMode="undo">
    <oms:ComponentMilestone>COMPONENT-UPDATE</oms:ComponentMilestone>
    <oms:ExternalMilestone>CEDomain_PROVISION
ISSUED</oms:ExternalMilestone>
    <oms:AugmentedMilestone>CEDOMAIN PROVISION
ISSUED</oms:AugmentedMilestone>
    <oms:Milestone>PROVISION ISSUED</oms:Milestone>
</oms:MilestoneMap>

<oms:MilestoneMap systemType="OSMPROV" systemName="*" execMode="undo">
    <oms:ComponentMilestone>COMPONENT-UPDATE</oms:ComponentMilestone>
    <oms:ExternalMilestone>CEDomain_PROVISION
COMPLETE</oms:ExternalMilestone>
    <oms:AugmentedMilestone>CEDOMAIN PROVISION
COMPLETE</oms:AugmentedMilestone>
    <oms:Milestone>PROVISION COMPLETE</oms:Milestone>
</oms:MilestoneMap>

```

8. Save the changes

## Cartridge: OracleComms\_OSM\_O2A\_SOM\_CSO\_Common

1. In the Design studio, in Studio Projects, browse and select **OracleComms\_OSM\_O2A\_SOM\_CSO\_Common**
2. Double click the **OracleComms\_OSM\_O2A\_SOM\_CSO\_Common** to open project window.
3. In the Properties tab, click “Unseal” and click “OK” to confirm to unseal the cartridge.
4. Go to package explorer view
5. Expand OracleComms\_OSM\_O2A\_SOM\_CSO\_Common
6. Select “**resource\topology\topologyConfig.xml**”
7. Double click to edit the file
  - This file maps the different target systems associated with SRM & TOM.
  - For the SRM1, include the following service domains
    - EVC\_CFS
    - EVC\_Endpoint
    - UNI\_CFS
  - For the TOM1, include the following service domains
    - EVC\_CFS
    - EVC\_Endpoint
    - UNI\_CFS

```
<topology>
  <targetSystem>
    <SRM1>
      <serviceDomain>MobileService</serviceDomain>
      <serviceDomain>Smoke_Test_CFS</serviceDomain>

      <serviceDomain>Broadband_Internet_Access_CFS</serviceDomain>
      <serviceDomain>Internet_Media_CFS</serviceDomain>
      <serviceDomain>Email_CFS</serviceDomain>
      <serviceDomain>VoIP_Access_CFS</serviceDomain>
      <serviceDomain>IP_Fax_CFS</serviceDomain>
      <serviceDomain>Web_Conferencing_CFS</serviceDomain>
      <serviceDomain>EVC_CFS</serviceDomain>
      <serviceDomain>EVC_Endpoint_CFS</serviceDomain>
      <serviceDomain>UNI_CFS</serviceDomain>
    </SRM1>
    <TOM1>
      <serviceDomain>MobileService</serviceDomain>
      <serviceDomain>Smoke_Test_CFS</serviceDomain>

      <serviceDomain>Broadband_Internet_Access_CFS</serviceDomain>
      <serviceDomain>Internet_Media_CFS</serviceDomain>
      <serviceDomain>Email_CFS</serviceDomain>
      <serviceDomain>VoIP_Access_CFS</serviceDomain>
      <serviceDomain>IP_Fax_CFS</serviceDomain>
      <serviceDomain>Web_Conferencing_CFS</serviceDomain>
      <serviceDomain>EVC_CFS</serviceDomain>
      <serviceDomain>EVC_Endpoint_CFS</serviceDomain>
      <serviceDomain>UNI_CFS</serviceDomain>
    </TOM1>
  </targetSystem>
```

```
</topology>
```

## 8. Save the Changes

### Cartridge: OracleComms\_OSM\_O2A\_SOM\_CSO\_DesignService

1. In the Design studio, in Studio Projects, browse and select OracleComms\_OSM\_O2A\_SOM\_CSO\_DesignService
2. Double click the OracleComms\_OSM\_O2A\_SOM\_CSO\_DesignService to open project window. In the Properties tab, click **"Unseal"** and click **"OK"** to confirm to unseal the cartridge.
3. Expand Automated Tasks, click on Tasks and double click on TSQTask
  - a. Select automation tab->Click on properties->click on xquery tab-> change xquery path to <http://xmlns.oracle.com/communications/ordermanagement/o2asom/commsc3/CommsC3TSQLoopBack.xquery>
4. Go to Package Explorer view and Expand OracleComms\_OSM\_O2A\_SOM\_CSO\_DesignService/xmlCatalogs/core/catalog.xml

Add

```
<rewriteURI
uriStartString="http://xmlns.oracle.com/communications/ordermanagement/o2asom/commsc3
"
rewritePrefix="osmmode://CommsC3_OSM_O2A_COM_CSO_CE_CFS/{CommsC3_VERSION}/
resources/xquery/automators"/>
```

### Cartridge: OracleComms\_OSM\_O2A\_COM\_Base

1. In the Design studio, in Studio Projects, browse and select **OracleComms\_OSM\_O2A\_COM\_Base**
2. Double click the OracleComms\_OSM\_O2A\_COM\_Base to open project window.
3. In the Properties tab, click **"Unseal"** and click **"OK"** to confirm to unseal the cartridge.
4. Go to Package Explorer view and Expand OracleComms\_OSM\_O2A\_COM\_Base/resources/OrderStateHandler/OrderFailedStateHandler.xquery

Add the below Import and declare statements in the corresponding sections.

```
import module namespace transformation =
"http://xmlns.oracle.com/communications/ordermanagement/o2acombaseics/order_recognitio
n" at "http://xmlns.oracle.com/c
ommunications/ordermanagement/o2acombaseics/order_recognition/OptimizedMsgOrderT
ransformation.xquery";

declare namespace optord="http://xmlns.oracle.com/EnterpriseObjects/Industry/Com
munications/OptimizedSalesOrder/V1";
```

In the same file, modify getAttachedSalesOrderEBM() function as below.

```

declare function local:getAttachedSalesOrderEBM() as element()?
{
  let $names := context:getAllAttachmentFileNames($context)
  return
    if (fn:exists($names))
    then
      (
        let $name := $names[1]
        return
          if (fn:exists($name))
          then
            (
              let $ebm := saxon:parse(context:getAttachmentAsString($context,
xs:string($name)))/salesord:ProcessSalesOrderFulfillmentEBM
              return
                (
                  if(fn:exists($ebm))then
                    saxon:parse(context:getAttachmentAsString($context,
xs:string($name)))/salesord:ProcessSalesOrderFulfillmentEBM
                  else
                    (
                      let $OptimizedEbmHeader :=
saxon:parse(context:getAttachmentAsString($context,
xs:string($name)))/optord:SalesOrder
                      return
                        (
                          let $lineItems := $OptimizedEbmHeader/optord:Line
                          let $priorLineItems := ()
                          let $generatedEbm :=
transformation:createSalesOrderEBMPayload($log, $Op
timizedEbmHeader, $lineItems, $priorLineItems)
                          return
                            (
                              $generatedEbm
                            )
                        )
                    )
                  )
                )
            )
          else ()
        )
    else ()
};

```

In the same file, in local:generatePayload() function, replace accountName with the following code.

```

let $accountName :=
  if (fn:exists($customerPartyReference/corecom:CustomerPartyAccountName))
  then (

if($customerPartyReference/corecom:CustomerPartyAccountName/text()!="")then

$customerPartyReference/corecom:CustomerPartyAccountName/text()
      else ( "Unknown AccountName" )

  )

```

```
else ( "Unknown AccountName" )
```

Go to package explorer and expand

OracleComms\_OSM\_O2A\_SOM\_CSO\_Base/resources/xquery/ORR/SOM\_DataTransform.xqy

Add below import statement in corresponding section

```
import module namespace transformation =  
"http://xmlns.oracle.com/communications/ordermanagement/o2acombaseics/order_recognitio  
n" at  
"http://xmlns.oracle.com/communications/ordermanagement/o2acombaseics/order_recognitio  
n/OptimizedMsgOrderTransformation.xquery";
```

In the same file, replace external key with the following code

```
<ExternalOrderKey>  
  {  
    let $newOrderKey :=  
      transformation:tsqOrderKeyInternal($fulfillmentModeCode, $orderKey)  
    return $newOrderKey  
  }  
</ExternalOrderKey>
```

### **Configuring the Solution for Deployment**

Refer Configuring WebLogic Server Resources Cartridges in Oracle Communications Order and Service Management Cartridges for Oracle Application Integration Architecture Release 2.1.2 guide for Configuring the Solution for Deployment

While configuring the solution for deployment, also follow one of the below sections accordingly

Importing the OSM Order-to-Activate Cartridges for the Calculate Service Order Solution Option

Importing the OSM Order-to-Activate Cartridges for the Solution Option without Calculate Service Order

### **Building and Deploying the Order-to-Activate Cartridges**

Refer Building and Deploying the Order-to-Activate Cartridges in Oracle Communications Order and Service Management Cartridges for Oracle Application Integration Architecture Release 2.1.2 guide for building and deploying the Order-to-Activate Cartridges

## 2.6. Installing CX Integration Pack Reference Solution for Synchronize Customer Flow

### 2.6.1. ICS Integration Components

The CX Integration Pack Reference Solution for Synchronize Customer flow uses the following ICS components. Refer to [Installing CX Integration Pack Reference Solution for ICS Integrations](#) for more details of configuring and deploying these components.

#### *ICS Connections*

- CommsC3\_OSCRetrieveBillingProfileIntegration
- CommsC3\_AccountObject
- CommsC3\_QueryOSCAcctDetails
- CommsC3\_OSCAccountService
- CommsC3\_OSCAddressService
- CommsC3\_OSCContactService
- CommsC3\_OSCOpportunityService
- CommsC3\_AIACustomerAccount
- CommsC3\_AIAQueryAccountEntity

#### *ICS Lookups*

- CommsC3\_System\_Configuration
- CommsC3\_SampleAccount
- CommsC3\_SampleOpportunity
- CommsC3\_SampleBillingProfile

#### *ICS Integrations*

- CommsC3\_OSCRetrieveBillingProfile
- CommsC3\_CPQRetrieveAcctDetails
- CommsC3\_AIARetrieveAcctDetails

### 2.6.2. Updating Mock CDM Option

CommsC3\_System\_Configuration has a table lookup entry “MockCDM” which can be used to enable or disable the use of CDM Mock data from CommsC3\_SampleAccount and CommsC3\_SampleOpportunity lookup tables. Set this property to true to enable the use of the mock account and opportunity data.

### 2.6.3. Deploying AIA SOA Composites

The CX Integration Pack Reference Solution for Synchronize Customer flow uses the following AIA SOA Composites. Refer to [Installing CX Integration Pack Reference Solution for AIA SOA Composites](#) for more details of configuring and deploying these components.

### *AIA SOA Composites*

- QueryCustomerPartyListICSJMSConsumer
- QueryCustomerPartyListICSProvABCImpl

## **2.7.Installing CX Integration Pack Reference Solution for Update Sales Order Status Flow**

### **2.7.1. ICS Integration Components**

The CX Integration Pack Reference Solution for Update Sales Order Status flow uses the following ICS components. Refer to Installing CX Integration Pack Reference Solution ICS Integrations for more details of configuring and deploying these components.

#### *ICS Connections*

- CommsC3\_CPQCommerce\_SOAP
- CommsC3\_CPQCommerce\_REST
- CommsC3\_AIAUpdateSalesOrder\_SOAP
- CommsC3\_AIAUpdateSalesOrder\_JMS
- CommsC3\_CPQUpdateSalesOrder
- CommsC3\_CPQUpdateSalesOrderIntegration

#### *ICS Lookups*

- CommsC3\_System\_Configuration

#### *ICS Integrations*

- CommsC3\_AIAUpdateSalesOrderBatch
- CommsC3\_AIAUpdateSalesOrder
- CommsC3\_CPQUpdateSalesOrder

### **2.7.2. Deploying AIA SOA Composites**

The CX Integration Pack Reference Solution for Update Sales Order Status flow uses the following AIA SOA Composites. Refer to [Installing CX Integration Pack Reference Solution for AIA SOA Composites](#) for more details of configuring and deploying these components.

#### *AIA SOA Composites*

- UpdateSalesOrderICSBatchCommsJMSConsumer
- UpdateSalesOrderICSBatchCommsFileReader
- UpdateSalesOrderICSBatchCommsProvABCImpl

## 2.8. Installing CX Integration Pack Reference Solution for Synchronizing Account Updates from Oracle Engagement Cloud to BRM

### 2.8.1. Configuring Oracle Engagement Cloud for Event Subscriptions

The CX Integration pack reference integration uses Oracle Engagement Cloud event handler framework to receive update event. The CSF key must be created in Oracle Engagement Cloud to subscribe events. The key is required by event handler framework when it invokes the reference integration.

Refer to [Configuring Oracle Sales Cloud for Event Subscriptions](#) to create CSF key in Oracle Engagement Cloud.

### 2.8.2. Configuring Oracle Engagement Cloud User Interface

The Reference Integration returns synchronization status message to Oracle Engagement Cloud when account or contact update to BRM is completed. The status message is updated in *Synchronization Status* field.

To enable Oracle Engagement Cloud user interface to display the status message, refer to *Digital BSS Reference Implementation Guide - Display Synchronization Status* for details.

### 2.8.3. Enabling Echo Suppression in Oracle Engagement Cloud

Echo suppression filtering is implemented in CommsC3\_OECAccountUpdateEvent and CommsC3\_OECContactUpdateEvent reference integration to prevent unwanted event update. The filter evaluate *LastUpdatedBy* attribute in the payload, and the reference integrations do not accept events from Oracle Engagement Cloud when value of *LastUpdatedBy*=*FUSION\_APPS\_ICS\_APPID*.

Here are the filters implemented in the 2 respective reference integrations

CommsC3\_OECAccountUpdateEvent:

```
<xpathExpr xmlns:ns_0='http://xmlns.oracle.com/adf/svc/types/'
xmlns:ns_1='http://xmlns.oracle.com/apps/crmCommon/salesParties/accountService/t
ypes/'
xmlns:ns_5='http://xmlns.oracle.com/apps/crmCommon/salesParties/accountService/'
>$eventPayload/ns_1:result/ns_0:Value/ns_5:LastUpdatedBy !=
'FUSION_APPS_ICS_APPID'</xpathExpr>
```

CommsC3\_OECContactUpdateEvent:

```
<xpathExpr xmlns:ns_0='http://xmlns.oracle.com/adf/svc/types/'
xmlns:ns_5='http://xmlns.oracle.com/apps/crmCommon/salesParties/contactService/'
xmlns:ns_1='http://xmlns.oracle.com/apps/crmCommon/salesParties/contactService/t
ypes/'>$eventPayload/ns_1:result/ns_0:Value/ns_5:LastUpdatedBy !=
'FUSION_APPS_ICS_APPID'</xpathExpr>
```



If a different integration user account is use instead of FUSION\_APPS\_ICS\_APPID, the suppression filter configured in reference integrations need to be update.

To change integration user in CommsC3\_OECAccountUpdateEvent:

- Login to Integration Cloud Service
- Deactivate CommsC3\_OECAccountUpdateEvent and edit integration
- Edit *AccountUpdateEvent* action
- Select *Request* tab

**Configure Oracle Sales Cloud Endpoint**

Configure the Integration Service Endpoint to Receive Requests from the Oracle Sales Cloud Application  
Select the business object or event that you want to receive from the Oracle Sales Cloud application as a request document to start this integration flow.

**Basic Info**  
**Request**  
Response  
Summary

**Configure a Request** With Business Objects With Business Events

\* Business Event For Subscription Filter Expr for Account Updated Event

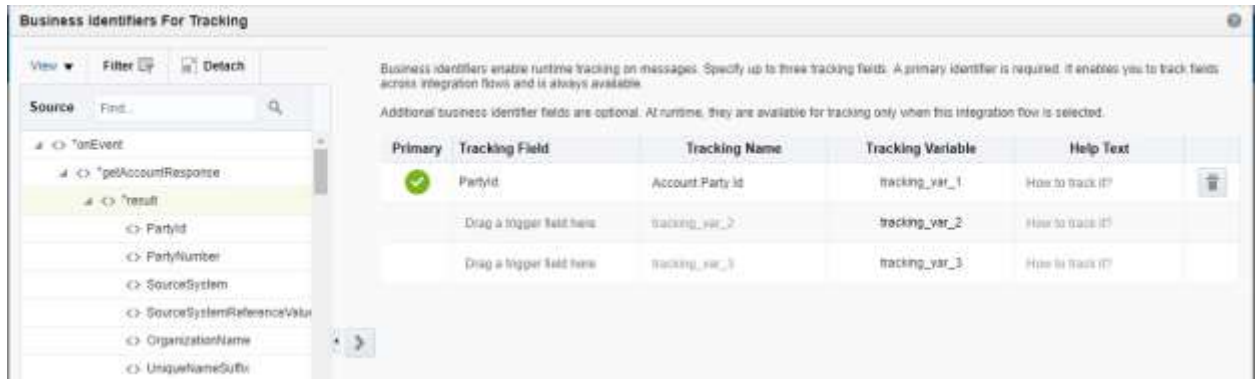
Filter by Event Name

- Activity Created Event
- Activity Deleted Event
- Activity Note Created Event
- Activity Note Deleted Event
- Activity Note Updated Event
- Activity Updated Event
- Advanced Shipment Notice Event
- Asset Created Event

Event Description  
This public event signals an account is updated

```
<xpathExpr
xmlns:ns_0='http://xmlns.oracle.com/adf/svc/types/'
xmlns:ns_1='http://xmlns.oracle.com/apps/crmCommon/salesParties/accountService/types/'
xmlns:ns_5='http://xmlns.oracle.com/apps/crmCommon/salesParties/accountService/'>$eventPayload/ns_1:result/ns_0:Value/ns_5:LastUpdatedBy != 'FUSION_APPS_ICS_APPID'</xpathExpr>
```

- In *Filter Expr For Account Update Event*, replace **FUSION\_APPS\_ICS\_APPID** with integration user supported in Oracle Engagement Cloud
- After changes is made, select *Next* -> *Next*-> *Done*
- Select *Actions* -> *Tracking*
- Select **PartyId** from left column to *Tracking Field column*
- Enter **Account Party Id** in *Tracking Name column*



- Save changes and activate integration

To change integration user in CommsC3\_OECContactUpdateEvent:

- Login to Integration Cloud Service
- Deactivate CommsC3\_OECContactUpdateEvent and edit integration
- Edit *ContactUpdateEvent* action
- Select *Request* tab
- In *Filter Expr For Contact Update Event*, replace **FUSION\_APPS\_ICS\_APPID** with integration user supported in Oracle Engagement Cloud
- After changes is made, select *Next* -> *Next* -> *Done*
- Select *Actions* -> *Tracking*
- Select **PartyId** from left column to *Tracking Field* column
- Enter **Contact Party Id** in *Tracking Name* column
- Save changes and activate integration

Refer to [Integration Cloud Service Enabling Echo Suppression Filters](#) for more details.

## 2.8.4. Deploying BRM Billing Care REST API

The CX Integration Pack Reference Solution for Synchronizing Account Update flow uses BRM Billing Care REST API to update accounts in BRM.

This BRM Billing Care REST API is not included in MIK installation script for Digital BSS 1.1.0. Execute the following steps to install the REST API:

- Extract BillingCareREST.war file from Oracle Communications Billing Care 12.0.0 Software (V974220-01.zip\BillingCare\_generic.jar\Disk1\stage\Components\BillingCareREST\12.0.0.0.0\DataFiles\filegroup1.jar\setup\)
- Login to BRM weblogic console
- Navigate to *Deployments*, and select **Lock & Edit**
- Select **Install**
- Provide the path to BillingCareREST.war file in **Path:** field and select BillingCareREST.war

- Select *Next* -> *Next* -> *Finish*

## 2.8.5. Deploying ICS Integration Components

The CX Integration Pack Reference Solution for Synchronizing Account Updates flow uses the following ICS components. Refer to Installing CX Integration Pack Reference Solution ICS Integrations for more details of configuring and deploying these components.

### *ICS Connections*

- CommsC3\_OECCConnection
- CommsC3\_BRMRestService
- CommsC3\_SyncBRMAccount
- CommsC3\_ICSSyncAccount
- CommsC3\_ICSSyncAccountIntegration
- CommsC3\_UpdateBRMAccountIntegration
- CommsC3\_UpdateBRMBillUnitsIntegration
- CommsC3\_UpdateBRMPayMethodsIntegration

### *ICS Lookups*

- CommsC3\_PAYPROFILE\_DELIVERY\_PREF
- CommsC3\_PHONETYPE
- CommsC3\_STATE
- CommsC3\_COUNTRYID
- CommsC3\_CONTACT\_SALUTATION
- CommsC3\_BILLPROFILE\_FREQUENCYCODE

### *ICS Integrations*

- CommsC3\_OECAccountUpdateEvent
- CommsC3\_OECContactUpdateEvent
- CommsC3\_ICSSyncAccounts
- CommsC3\_UpdateBRMAccount
- CommsC3\_UpdateBRMBillUnits
- CommsC3\_UpdateBRMPayMethods

## 2.9. Installing CX Integration Pack Reference Solution for ICS Integrations

### 2.9.1. Deploying ICS Integrations

There are several ICS components including connections, agent, integrations and lookups. Extract the CX Integration Pack Reference Solution Bundle to review these ICS integration components. The ICS Integrations will all be provided as part of a single ICS Package. The lookups can only be provided

through separate CSV files. In order for all the integrations to be packaged together, they must all be part of the same package (oracle.communications.c3.ics).

Installing the ICS components would involve the following high level activities:

- 1) Install an on premises ICS Connectivity Agent, CommsC3\_AgentGroup. This agent will be used for communicating with the on premises applications. See [Installing ICS Connectivity Agent](#) for more details.
- 2) Import the **oracle.communications.c3.ics.par** ICS Package. This will create the various ICS integrations, connections and lookups.  
*[In ICS 18.2.4 and below version there is a bug (ref# 3-17688828981) which may prevent importing of ICS package to ICS environment. Users can extract the iar file(s) from par file using any zip software and import them manually. Connections and DVMs are created automatically when integration archive (iar) files are imported]*
- 3) Configure the connections. Each will need to be configured with the correct target host and authentication information. See [Configuring ICS Connections](#) for more details.
- 4) Verify various ICS lookups - optional. The ICS Lookups should be imported automatically when the ICS Integrations are imported from the ICS Package. See [Verifying ICS Lookups](#) for more details.
- 5) Activate the integrations.

The following are all the ICS Integrations that is part of the **oracle.communications.c3.ics** package.

	Name	Description
1	CommsC3_Catalog	Sample integration to capture catalog from external sources
2	CommsC3_CPQCatalog	Reference integration to process products, discounts, bundles and promotions to CPQ system.
3	CommsC3_CPQBomHierAndAttributes	Sample integration to capture product hierarchy and attributes.
4	CommsC3_CPQCatalogAttributes	Sample integration to capture object attributes in OC_PROD_ATTRIBUTES and then populate the BOMItemAttrDef in BOM item exists for part.
5	CommsC3_CPQUpdateProducts	Reference Integration update part and related BOM details in CPQ after product sync has happened.
6	CommsC3_CPQUpdateBOMTables	Reference Integration to update the CPQ Data tables related to BOM items, attributes and mapping.
7	CommsC3_PDCCatalog	Sample integration which accepts json request for create/update chargeOffers(incl chargeratePlanSelectors, chargeRatePlans) and discountOffers(incl discountRatePlans) creates PDC compatible xml and calls PDCOperations integration.
8	CommsC3_PDCOperations	Sample integration which accepts PDC compatible xml, zips it, converts it to base64 encoded format and calls PDC webservice.
9	CommsC3_CPQCreateSalesOrder	Reference Integration to generate the OSM Create Sales Order request from CPQ transaction.
10	CommsC3_BRMTToCPQProductSync	Reference integration to create/update parts, insert/update records into data tables for BRM/PDC charge/discount offers.
11	CommsC3_BRMTToCXProductSync	Reference Integration to synchronize products from BRM/PDC to CX Apps.
12	CommsC3_BRMTToCXDiscountSync	Reference Integration to synchronize discounts from BRM/PDC to CX Apps
13	CommsC3_OSCRetrieveBillingProfile	Retrieve billing profile details including contacts and address associated with billing profile.
14	CommsC3_AIARetrieveAcctDetails	Integration from AIA to OSC to retrieve billing accounts and billing profile information.
15	CommsC3_CPQRetrieveAcctDetails	Reference integration for CPQ retrieval of account details based on opportunity
16	CommsC3_AIAUpdateSalesOrderBatch	Reference Integration to process one or more UpdateSalesOrder batched messages from AIA and call RI CommsC3_CPQUpdateSalesOrder.
17	CommsC3_AIAUpdateSalesOrder	Reference Integration to process single UpdateSalesOrder message from AIA JMS Queue, and call RI CommsC3_CPQUpdateSalesOrder.
18	CommsC3_CPQUpdateSalesOrder	Reference Integration to update CPQ Transactions based on one or more updates from UpdateSalesOrder.

19	CommsC3_OECAccountUpdateEvent	Reference Integration to receive account update event notification from Oracle Engagement Cloud
20	CommsC3_OECContactUpdateEvent	Reference Integration to receive contact update event notification from Oracle Engagement Cloud
21	CommsC3_ICSSyncAccounts	Integration to validate/enrich account and billing profile information received from Oracle Engagement Cloud
22	CommsC3_UpdateBRMAccount	Reference integration to update BRM account
23	CommsC3_UpdateBRMBillUnits	Reference integration to update BRM bill units
24	CommsC3_UpdateBRMPayMethods	Reference integration to update BRM payment methods
25	CommsC3_CreateSalesOrder	Reference Integration to populate XREF and enrich Optimized sales order.
26	CommsC3_PostAIARef	Cross reference lookup using REST.
27	CommsC3_AIAGetTTDetails	Reference integration is to consume fallout message sent by OSM and sends it to CPQ

The following are all the ICS Connections that is part of the oracle.communications.c3.ics package.

	Type	Name	Description
1	REST Adapter	CommsC3_AIAXREF_REST	<p>Invoke REST Connection using REST Adapter to connect to the XREF REST Web Service in the AIA server for lookup and populate.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties:</b> <ul style="list-style-type: none"> <li>• Connection URL: http://&lt;AIAHOST:PORT&gt;/AIA_WS</li> </ul> </li> <li>• <b>Security:</b> <ul style="list-style-type: none"> <li>• Security Policy: Basic Authentication</li> <li>• Username/Password: login credential for a AIA XREF User in the XREF_Rest_API group</li> </ul> </li> <li>• <b>Agent Group</b> <ul style="list-style-type: none"> <li>• Select an ICS Connectivity Agent that communicates with AIA host – e.g. CommsC3_AgentGroup</li> </ul> </li> </ul>
2	JMS Adapter	CommsC3_OSMOptimizedSalesOrderQueue	<p>Invoke JMS Connection to OSM queue which accepts the Optimized Sales Order.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties</b> <ul style="list-style-type: none"> <li>• Host: OSM Host</li> <li>• Port: OSM Managed Server Port</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> <li>• Username/Password - admin login credential to OSM host</li> </ul> </li> <li>• <b>Agent Group</b> <ul style="list-style-type: none"> <li>• Select an ICS Connectivity Agent that communicates with AIA host – e.g. CommsC3_AgentGroup</li> </ul> </li> </ul>
3	SOAP Adapter	CommsC3_OSCRetrieveBillingProfileIntegration	<p>Invoke SOAP Connection to CommsC3_OSCRetrieveBillingProfile ICS Integration to retrieve Billing Profile by ID. This is a reusable integration that query Oracle Engagement Cloud for Billing Profile details, including address and contact associated with the billing profile. Before updating this connection, ensure CommsC3_OSCRetrieveBillingProfile ICS Integration is imported into ICS and activated.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties:</b> <ul style="list-style-type: none"> <li>• WSDL URL: https://&lt;ICSHOST&gt;/integration/flowsvc/soap/COMMSOSCRETRIEVEBILLINGPROFILE/v01/?wsdl</li> </ul> </li> <li>• <b>Security:</b> <ul style="list-style-type: none"> <li>• Security Policy: Basic Authentication</li> <li>• Username/Password - login credential to ICS host</li> </ul> </li> </ul> <p><b>Activate CommsC3_OSCRetrieveBillingProfile ICS Integration before testing this connection.</b></p>
4	SOAP Adapter	CommsC3_OSCAccountService	<p>Invoke SOAP connection supporting Oracle Engagement Cloud Account Service.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties:</b> <ul style="list-style-type: none"> <li>• WSDL URL: https://&lt;OSCHOST:PORT&gt;/crmCommonSalesParties/AccountService?WSDL</li> </ul> </li> <li>• <b>Security:</b> <ul style="list-style-type: none"> <li>• Security Policy: Basic Authentication</li> <li>• Username/Password - login credential to Oracle Engagement Cloud</li> </ul> </li> </ul>
5	SOAP Adapter	CommsC3_OSCAddressService	<p>SOAP connection supporting Oracle Engagement Cloud Address Service.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties:</b></li> </ul>

			<ul style="list-style-type: none"> <li>WSDL URL: https://&lt;OSCHOST:PORT&gt;/crmCommonSalesParties/AddressService?WSDL</li> <li><b>Security:</b> <ul style="list-style-type: none"> <li>Security Policy: Basic Authentication</li> <li>Username/Password - login credential to Oracle Engagement Cloud.</li> </ul> </li> </ul>
6	SOAP Adapter	CommsC3_OSCContactService	<p>Invoke SOAP connection supporting Oracle Engagement Cloud Contact Service.</p> <ul style="list-style-type: none"> <li><b>Connection Properties:</b> <ul style="list-style-type: none"> <li>WSDL URL: https://&lt;OSCHOST:PORT&gt;/crmCommonSalesParties/ContactService?WSDL</li> </ul> </li> <li><b>Security:</b> <ul style="list-style-type: none"> <li>Security Policy: Basic Authentication</li> <li>Username/Password - login credential to Oracle Engagement Cloud</li> </ul> </li> </ul>
7	SOAP Adapter	CommsC3_OSCOpportunityService	<p>SOAP connection supporting Oracle Engagement Cloud Opportunity Service.</p> <ul style="list-style-type: none"> <li><b>Connection Properties:</b> <ul style="list-style-type: none"> <li>WSDL URL: https://&lt;OSCHOST:PORT&gt;/opptyMgmtOpportunities/OpportunityService?WSDL</li> </ul> </li> <li><b>Security:</b> <ul style="list-style-type: none"> <li>Security Policy: Basic Authentication</li> <li>Username/Password - login credential to Oracle Engagement Cloud</li> </ul> </li> </ul>
8	SOAP Adapter	CommsC3_QueryOSCAcctDetails	<p>Invoke SOAP Connection to Oracle Engagement Cloud Account Service..</p> <ul style="list-style-type: none"> <li><b>Connection Properties:</b> <ul style="list-style-type: none"> <li>WSDL URL: https://&lt;OSCHOST:PORT&gt;/crmCommonSalesParties/AccountService?WSDL</li> </ul> </li> <li><b>Security:</b> <ul style="list-style-type: none"> <li>Security Policy: Basic Authentication</li> <li>Username/Password - login credential to Oracle Engagement Cloud</li> </ul> </li> </ul>
9	SOAP Adapter	CommsC3_AccountObject	<p>Trigger SOAP connection to retrieve AIA account data</p> <ul style="list-style-type: none"> <li><b>Connection Properties:</b> <ul style="list-style-type: none"> <li>WSDL URL: OSCObject.wsdl</li> </ul> </li> <li><b>Security:</b> <ul style="list-style-type: none"> <li>Security Policy: Basic Authentication</li> </ul> </li> </ul>
10	SOAP Adapter	CommsC3_AIACustomerAccount	<p>SOAP connection to QueryCustomerPartyListICSPProvABCImpl to return detail customer data retrieved from OSC.</p> <ul style="list-style-type: none"> <li><b>Connection Properties:</b> <ul style="list-style-type: none"> <li>WSDL URL: http://&lt;AIAHOST:PORT&gt;/soa-infra/services/default/QueryCustomerPartyListICSPProvABCImpl/QueryCustomerPartyListICSPProvABCImpl?WSDL</li> </ul> </li> <li><b>Security:</b> <ul style="list-style-type: none"> <li>Security Policy: Username Password Token</li> <li>Username/Password - login credential to AIA WebLogic host</li> </ul> </li> <li><b>Agent Group</b> <ul style="list-style-type: none"> <li>Select an ICS Connectivity Agent that communicates with AIA host – e.g. CommsC3_AgentGroup</li> </ul> </li> </ul>
11	SOAP Adapter	CommsC3_AIAQueryAccountEntity	<p>Trigger SOAP connection invoked by AIA composite to query customer account and billing profile details.</p> <ul style="list-style-type: none"> <li><b>Connection Properties</b> <ul style="list-style-type: none"> <li>WSDL URL: AccountEntity.wsdl</li> </ul> </li> <li><b>Security</b> <ul style="list-style-type: none"> <li>Username Password Token</li> </ul> </li> </ul>
12	CPQ Adapter	CommsC3_CPQCommerce_SOAP	<p>Trigger and Invoke Connection to CPQ Commerce using SOAP.</p> <ul style="list-style-type: none"> <li><b>Connection Properties</b> <ul style="list-style-type: none"> <li>Connection Type: SOAP WSDL URL</li> <li>Connection URL: http://&lt;CPQHOST&gt;/v2_0/receiver/commerce/oraclecpqo?wsdl</li> </ul> </li> <li><b>Security</b> <ul style="list-style-type: none"> <li>Security Policy: Username Password Token</li> <li>Username/Password - admin login credential to CPQ.</li> </ul> </li> </ul>
13	CPQ Adapter	CommsC3_CPQCommerce_REST	<p>Invoke Connection to CPQ Commerce using REST.</p> <ul style="list-style-type: none"> <li><b>Connection Properties</b> <ul style="list-style-type: none"> <li>Connection Type: REST Catalog URL</li> </ul> </li> </ul>

			<ul style="list-style-type: none"> <li>• Connection URL: http://&lt;CPQ_URL&gt;/rest/v6/metadata-catalog</li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> <li>• Username/Password - admin login credential to CPQ host</li> </ul> </li> </ul>
14	SOAP Adapter	CommsC3_AIAUpdateSalesOrder_SOAP	<p>Trigger SOAP Connection from AIA Provider ABCS to ICS to send UpdateSalesOrder messages.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties</b> <ul style="list-style-type: none"> <li>• WSDL URL: CommsCPQUpdateSalesOrder.wsdl</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> </ul> </li> </ul>
15	JMS Adapter	CommsC3_AIAUpdateSalesOrder_JMS	<p>JMS Connection from JMS Queue in AIA to ICS to send UpdateSalesOrder messages.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties</b> <ul style="list-style-type: none"> <li>• Host: AIA Server Host</li> <li>• Port: AIA Managed Server Port</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> <li>• Username/Password - login credential to AIA WebLogic host</li> </ul> </li> <li>• <b>Agent Group</b> <ul style="list-style-type: none"> <li>• Select an ICS Connectivity Agent that communicates with AIA host – e.g. CommsC3_AgentGroup</li> </ul> </li> </ul>
16	SOAP Adapter	CommsC3_CPQUpdateSalesOrder Integration	<p>Invoke SOAP Connection to Reference Integration for CPQ UpdateSalesOrder.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties</b> <ul style="list-style-type: none"> <li>• WSDL URL: https://&lt;ICSHOST&gt;/integration/flowsvc/soap/COMMSCPQUPDATESALESORDER/v01/?wsdl</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> <li>• Username/Password - admin login credential to ICS host</li> </ul> </li> </ul> <p><b>Activate CommsC3_CPQUpdateSalesOrder ICS Integration before testing this connection.</b></p>
17	SOAP Adapter	CommsC3_CPQUpdateSalesOrder	<p>Trigger SOAP Connection for triggering Reference Integration to process UpdateSalesOrder for CPQ.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties</b> <ul style="list-style-type: none"> <li>• WSDL URL: CommsCPQUpdateSalesOrder.wsdl</li> <li>• Suppress insertion of timestamp into the request: Yes</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> </ul> </li> </ul>
18	CPQ Adapter	CommsC3_CPQDataTable_OCPriceList	<p>CPQ connection to OC_PRICE_LIST data table.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties</b> <ul style="list-style-type: none"> <li>• Connection Type: SOAP WSDL URL</li> <li>• Connection URL: https://&lt;CPQHOST&gt;/v2_0/receiver/dataTables/&lt;tableid&gt;?wsdl</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> <li>• Username/Password - admin login credential to CPQ host</li> </ul> </li> </ul>
19	CPQ Adapter	CommsC3_CPQDataTable_OCProduct	<p>CPQ connection to OC_PRODUCT data table.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties</b> <ul style="list-style-type: none"> <li>• Connection Type: SOAP WSDL URL</li> <li>• Connection URL: https://&lt;CPQHOST&gt;/v2_0/receiver/dataTables/&lt;tableid&gt;?wsdl</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> <li>• Username/Password - admin login credential to CPQ host</li> </ul> </li> </ul>
20	CPQ Adapter	CommsC3_CPQDataTable_BomItemDef	<p>CPQ connection to Oracle_BomItemDef data table.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties</b> <ul style="list-style-type: none"> <li>• Connection Type: SOAP WSDL URL</li> <li>• Connection URL: https://&lt;CPQHOST&gt;/v2_0/receiver/dataTables/&lt;tableid&gt;?wsdl</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> <li>• Username/Password - admin login credential to CPQ host</li> </ul> </li> </ul>
21	CPQ Adapter	CommsC3_CPQDataTable_BomAttribute	<p>CPQ connection to Oracle_BomAttrDef data table.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties</b></li> </ul>

			<ul style="list-style-type: none"> <li>• Connection Type: SOAP WSDL URL</li> <li>• Connection URL: https://&lt;CPQHOST&gt;/v2_0/receiver/dataTables/&lt;tableid&gt;?wsdl</li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> <li>• Username/Password - admin login credential to CPQ host</li> </ul> </li> </ul>
22	CPQ Adapter	CommsC3_CPQDataTable_BomItemMap	<p>CPQ connection to Oracle_BomItemMap data table.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties</b> <ul style="list-style-type: none"> <li>• Connection Type: SOAP WSDL URL</li> <li>• Connection URL: https://&lt;CPQHOST&gt;/v2_0/receiver/dataTables/&lt;tableid&gt;?wsdl</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> <li>• Username/Password - admin login credential to CPQ host</li> </ul> </li> </ul>
23	CPQ Adapter	CommsC3_CPQDataTable_BomAttrMap	<p>CPQ connection to Oracle_BomAttrMap data table.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties</b> <ul style="list-style-type: none"> <li>• Connection Type: SOAP WSDL URL</li> <li>• Connection URL: https://&lt;CPQHOST&gt;/v2_0/receiver/dataTables/&lt;tableid&gt;?wsdl</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> <li>• Username/Password - admin login credential to CPQ host</li> </ul> </li> </ul>
24	CPQ Adapter	CommsC3_CPQDataTables_OCBundle	<p>CPQ connection to OC_BUNDLE data table.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties</b> <ul style="list-style-type: none"> <li>• Connection Type: SOAP WSDL URL</li> <li>• Connection URL: https://&lt;CPQHOST&gt;/v2_0/receiver/dataTables/&lt;tableid&gt;?wsdl</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> <li>• Username/Password - admin login credential to CPQ host</li> </ul> </li> </ul>
25	CPQ Adapter	CommsC3_CPQDataTable_OCProductAttributes	<p>CPQ connection to OC_PROD_ATTRIBUTES data table.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties</b> <ul style="list-style-type: none"> <li>• Connection Type: SOAP WSDL URL</li> <li>• Connection URL: https://&lt;CPQHOST&gt;/v2_0/receiver/dataTables/&lt;tableid&gt;?wsdl</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> <li>• Username/Password - admin login credential to CPQ host</li> </ul> </li> </ul>
26	CPQ Adapter	CommsC3_CPQDataTables_OCPartAttributes	<p>CPQ connection to OC_PART_ATTRIBUTES data table.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties</b> <ul style="list-style-type: none"> <li>• Connection Type: SOAP WSDL URL</li> <li>• Connection URL: https://&lt;CPQHOST&gt;/v2_0/receiver/dataTables/&lt;tableid&gt;?wsdl</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> <li>• Username/Password - admin login credential to CPQ host</li> </ul> </li> </ul>
27	CPQ Adapter	CommsC3_CPQParts	<p>Invoke Connection to CPQ Parts.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties</b> <ul style="list-style-type: none"> <li>• Connection Type: SOAP WSDL URL</li> <li>• Connection URL: https://&lt;CPQHOST&gt;/v2_0/receiver/parts?wsdl</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> <li>• Username/Password - admin login credential to CPQ host</li> </ul> </li> </ul>
28	SOAP Adapter	CommsC3_CPQProductSyncIntegration	<p>Connection to reference integration used for syncing Product/Discount to CPQ.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties</b> <ul style="list-style-type: none"> <li>• WSDL URL: https://&lt;ICSHOST&gt;/integration/flowsvc/soap/COMMSBRMTOCPQPRODUCTSYNC/v01/?wsdl</li> <li>• Suppress insertion of timestamp into the request: No</li> <li>• Suppress insertion of timestamp in the response: Yes</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> <li>• Username/Password - login credential to ICS host</li> </ul> </li> </ul>



			<b>Activate CommsC3_BRMTToCPQProductSync ICS Integration before testing this connection.</b>
29	SOAP Adapter	CommsC3_CXProductSync	<p>SOAP Connection for triggering Reference Integration to process Product Sync to CX apps.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties</b> <ul style="list-style-type: none"> <li>• WSDL URL: SynchronizeProductInOut.wsdl</li> <li>• Suppress insertion of timestamp into the request: Yes</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> </ul> </li> </ul>
30	SOAP Adapter	CommsC3_CXDiscountSync	<p>SOAP Connection for triggering Reference Integration to process Discount Sync to CX apps.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties</b> <ul style="list-style-type: none"> <li>• WSDL URL: SynchronizeDiscountInOut.wsdl</li> <li>• Suppress insertion of timestamp into the request: Yes</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> </ul> </li> </ul>
31	SOAP Adapter	CommsC3_CPQProductSync	<p>SOAP Connection for triggering Reference Integration to process Product and Discount Sync to CPQ.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties</b> <ul style="list-style-type: none"> <li>• WSDL URL: SyncBRMProduct_REQUEST.wsdl</li> <li>• Suppress insertion of timestamp into the request: Yes</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> </ul> </li> </ul>
32	SOAP Adapter	CommsC3_SyncBRMAccount	<p>Trigger SOAP Connection for triggering Reference Integration to update BRM object.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties</b> <ul style="list-style-type: none"> <li>• WSDL URL: OptimizedAccounts.wsdl</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> </ul> </li> </ul>
33	REST Adapter	CommsC3_BRMRestService	<p>Invoke REST Connection supporting BRM REST API services.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties:</b> <ul style="list-style-type: none"> <li>• Connection Type: REST API Base URL</li> <li>• Connection URL: http://&lt;BRMHost:PORT&gt;/bcws/webresources/v1.0/</li> </ul> </li> <li>• <b>Security:</b> <ul style="list-style-type: none"> <li>• Security Policy: Basic Authentication</li> <li>• Username/Password: login credential to BRM</li> </ul> </li> <li>• <b>Agent Group</b> <ul style="list-style-type: none"> <li>• Select an ICS Connectivity Agent that communicates with BRM host– e.g. CommsC3_AgentGroup</li> </ul> </li> </ul>
34	SOAP Adapter	CommsC3_ICSSyncAccountIntegration	<p>Connection to reference integration used to enrich account and billing profile data from Oracle Engagement Cloud, destined for BRM.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties:</b> <ul style="list-style-type: none"> <li>• WSDL URL: https://&lt;ICSHOST&gt;/integration/flowsvc/soap/COMMSC3_ICSSYNACCOUNTS/v01/?wsdl</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> <li>• Username/Password - login credential to ICS host</li> </ul> </li> </ul> <p><b>Activate CommsC3_ICSSyncAccount ICS Integration before testing this connection.</b></p>
35	SOAP Adapter	CommsC3_UpdateBRMAccountIntegration	<p>Connection to reference integration used for updating account in BRM.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties:</b> <ul style="list-style-type: none"> <li>• WSDL URL: https://&lt;ICSHOST&gt;/integration/flowsvc/soap/COMMSC3_UPDATEBRMACCOUNT/v01/?wsdl</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Username Password Token</li> <li>• Username/Password - login credential to ICS host</li> </ul> </li> </ul> <p><b>Activate CommsC3_UpdateBRMAccount ICS Integration before testing this connection.</b></p>
36	SOAP Adapter	CommsC3_UpdateBRMBillUnitsIntegration	<p>Connection to reference integration used for updating bill units in BRM.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties:</b> <ul style="list-style-type: none"> <li>• WSDL URL: https://&lt;ICSHOST&gt;/integration/flowsvc/soap/COMMSC3_UPDATEBRMBILLUNIT/v01/?wsdl</li> </ul> </li> <li>• <b>Security</b></li> </ul>

			<ul style="list-style-type: none"> <li>Security Policy: Username Password Token</li> <li>Username/Password - login credential to ICS host</li> </ul> <b>Activate CommsC3_UpdateBRMBillUnits ICS Integration before testing this connection.</b>
37	SOAP Adapter	CommsC3_UpdateBRMPayMethodsIntegration	<p>Connection to reference integration used for payment methods in BRM.</p> <ul style="list-style-type: none"> <li><b>Connection Properties:</b> <ul style="list-style-type: none"> <li>WSDL URL: <a href="https://&lt;ICSHOST&gt;/integration/flowsvc/soap/COMMSC3_UPDATEBRMPAYMENTH/v01/?wsdl">https://&lt;ICSHOST&gt;/integration/flowsvc/soap/COMMSC3_UPDATEBRMPAYMENTH/v01/?wsdl</a></li> </ul> </li> <li><b>Security</b> <ul style="list-style-type: none"> <li>Security Policy: Username Password Token</li> <li>Username/Password - login credential to ICS host</li> </ul> </li> </ul> <b>Activate CommsC3_UpdateBRMPayMethods ICS Integration before testing this connection.</b>
38	Sales Cloud Adapter	CommsC3_OECConnection	<p>Oracle Engagement Cloud connection supporting Oracle Engagement Cloud Services</p> <ul style="list-style-type: none"> <li><b>Connection Properties:</b> <ul style="list-style-type: none"> <li>OSC Services Catalog WSDL URL: <a href="https://&lt;OSCHOST:PORT&gt;/fndAppCoreServices/ServiceCatalogService?WSDL">https://&lt;OSCHOST:PORT&gt;/fndAppCoreServices/ServiceCatalogService?WSDL</a></li> <li>OSC Events Catalog URL: <a href="https://&lt;OSCHOST:PORT&gt;/soa-infra">https://&lt;OSCHOST:PORT&gt;/soa-infra</a></li> </ul> </li> <li><b>Security:</b> <ul style="list-style-type: none"> <li>Security Policy: Username Password Token</li> <li>Username/Password - login credential to OSC host</li> </ul> </li> </ul>
39	JMS Adapter	CommsC3_AIATTMessage_JMS	<p>Trigger JMS Connection to AIA queue to consume fallout messages.</p> <ul style="list-style-type: none"> <li><b>Connection Properties</b> <ul style="list-style-type: none"> <li>Host: AIA Host</li> <li>Port: AIA Managed Server Port</li> </ul> </li> <li><b>Security</b> <ul style="list-style-type: none"> <li>Security Policy: Username Password Token</li> <li>Username/Password - login credential to AIA server</li> </ul> </li> <li><b>Agent Group</b> <ul style="list-style-type: none"> <li>Select an ICS Connectivity Agent that communicates with AIA host – e.g. CommsC3_AgentGroup</li> </ul> </li> </ul>
40	REST Adapter	CommsC3_Catalog	<p>REST Trigger Connection.</p> <ul style="list-style-type: none"> <li><b>Security:</b> <ul style="list-style-type: none"> <li>Security Policy: Basic Authentication</li> </ul> </li> </ul>
41	REST Adapter	CommsC3_CPQCatalog	<p>REST Trigger Connection.</p> <ul style="list-style-type: none"> <li><b>Security:</b> <ul style="list-style-type: none"> <li>Security Policy: Basic Authentication</li> </ul> </li> </ul>
42	REST Adapter	CommsC3_CPQBomHierAndAttributes	<p>REST Trigger Connection.</p> <ul style="list-style-type: none"> <li><b>Security:</b> <ul style="list-style-type: none"> <li>Security Policy: Basic Authentication</li> </ul> </li> </ul>
43	REST Adapter	CommsC3_CPQCATALOGAttributes	<p>REST Trigger Connection.</p> <ul style="list-style-type: none"> <li><b>Security:</b> <ul style="list-style-type: none"> <li>Security Policy: Basic Authentication</li> </ul> </li> </ul>
44	REST Adapter	CommsC3_UpdateCPQPartsAndBOM	<p>REST Trigger Connection.</p> <ul style="list-style-type: none"> <li><b>Security:</b> <ul style="list-style-type: none"> <li>Security Policy: Basic Authentication</li> </ul> </li> </ul>
45	REST Adapter	CommsC3_CPQDataTables_BOM	<p>REST Trigger Connection.</p> <ul style="list-style-type: none"> <li><b>Security:</b> <ul style="list-style-type: none"> <li>Security Policy: Basic Authentication</li> </ul> </li> </ul>
46	REST Adapter	CommsC3_PDCCatalog	<p>REST Trigger Connection.</p> <ul style="list-style-type: none"> <li><b>Security:</b> <ul style="list-style-type: none"> <li>Security Policy: Basic Authentication</li> </ul> </li> </ul>
47	SOAP Adapter	CommsC3_PDCOperations	<p>SOAP Trigger Connection</p> <ul style="list-style-type: none"> <li><b>Connection Properties:</b> <ul style="list-style-type: none"> <li>WSDL URL: PDCCoffers.wsdl</li> <li>Suppress insertion of timestamp into the request: Yes</li> </ul> </li> <li><b>Security:</b> <ul style="list-style-type: none"> <li>Security Policy: Username Password Token</li> </ul> </li> </ul>
48	SOAP Adapter	CommsC3_PDCPricingWebService	<p>SOAP connection supporting PDC pricing webservice.</p> <ul style="list-style-type: none"> <li><b>Connection Properties:</b> <ul style="list-style-type: none"> <li>WSDL URL: <a href="http://pdchost:pdcpport/pdc/PrincingGatewayPort?wsdl">http://pdchost:pdcpport/pdc/PrincingGatewayPort?wsdl</a></li> </ul> </li> </ul>

			<ul style="list-style-type: none"> <li>• Suppress insertion of timestamp into the request: Yes</li> <li>• Ignore timestamp in the response message: Yes</li> <li>• <b>Security:</b> <ul style="list-style-type: none"> <li>• Security Policy: No Security Policy</li> </ul> </li> <li>• <b>Agent Group</b> Select an ICS Connectivity Agent that communicates with PDC host – e.g. CommsC3_AgentGroup</li> </ul>
49	REST Adapter	CommsC3_CPQUpdateBomHierarchyIntegration	<p>Invoke Connection to reference integration used for capturing catalog objects in CPQ.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties:</b> <ul style="list-style-type: none"> <li>• Connection Type: REST API base URL</li> <li>• Connection URL: https://&lt;ICS_URL&gt;/integration/flowapi/rest/COMMSC3_CPQUPDATEBOM/v01/metadata</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Basic Authentication</li> <li>• Username/Password - login credential to ICS host</li> </ul> </li> </ul> <p><b>Activate CommsC3_CPQUpdateBOMTables ICS Integration before testing this connection.</b></p>
50	REST Adapter	CommsC3_UpdateCPQProducts_Intg	<p>Invoke Connection to reference integration used for capturing catalog objects in CPQ.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties:</b> <ul style="list-style-type: none"> <li>• Connection Type: REST API base URL</li> <li>• Connection URL: https://&lt;ICS_URL&gt;/integration/flowapi/rest/COMMSC3_CPQUPDATEPRODUCT/v01/metadata</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Basic Authentication</li> <li>• Username/Password - login credential to ICS host</li> </ul> </li> </ul> <p><b>Activate CommsC3_CPQUpdateProducts ICS Integration before testing this connection.</b></p>
51	REST Adapter	CommsC3_CPQCatalogAttrIntg	<p>Invoke Connection to reference integration used for capturing catalog objects in CPQ.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties:</b> <ul style="list-style-type: none"> <li>• Connection Type: REST API base URL</li> <li>• Connection URL: https://&lt;ICS_URL&gt;/integration/flowapi/rest/COMMSC3_CPQCATALOGATTRIB/v01/metadata</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Basic Authentication</li> <li>• Username/Password - login credential to ICS host</li> </ul> </li> </ul> <p><b>Activate CommsC3_CPQCatalogAttributes ICS Integration before testing this connection.</b></p>
52	REST Adapter	CommsC3_CPQBomHierAndAttributes_Integration	<p>Invoke Connection to reference integration used for capturing catalog objects in CPQ.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties:</b> <ul style="list-style-type: none"> <li>• Connection Type: REST API base URL</li> <li>• Connection URL: https://&lt;ICS_URL&gt;/integration/flowapi/rest/COMMSC3_CPQBOMHIERANDATTRIB/v01/metadata</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Basic Authentication</li> <li>• Username/Password - login credential to ICS host</li> </ul> </li> </ul> <p><b>Activate CommsC3_CPQBomHierAndAttributes ICS Integration before testing this connection.</b></p>
53	REST Adapter	CommsC3_CPQCatalog_Integration	<p>Invoke Connection to reference integration used for capturing catalog objects in CPQ.</p> <ul style="list-style-type: none"> <li>• <b>Connection Properties:</b> <ul style="list-style-type: none"> <li>• Connection Type: REST API base URL</li> <li>• Connection URL: https://&lt;ICS_URL&gt;/integration/flowapi/rest/COMMSC3_CPQCATALOG/v01/metadata</li> </ul> </li> <li>• <b>Security</b> <ul style="list-style-type: none"> <li>• Security Policy: Basic Authentication</li> </ul> </li> </ul>

			<ul style="list-style-type: none"> <li>Username/Password - login credential to ICS host</li> </ul> <b>Activate CommsC3_CPQCatalog ICS Integration before testing this connection.</b>
54	SOAP Adapter	CommsC3_PDCOperations_Integration	<p>Invoke Connection to reference integration used for capturing catalog objects in CPQ.</p> <ul style="list-style-type: none"> <li><b>Connection Properties:</b> <ul style="list-style-type: none"> <li>WSDL URL: https://&lt;ICS_URL&gt;/integration/flowsvc/soap/COMMSC3PDCOPERATIONS/v01/?wsdl</li> </ul> </li> <li><b>Security</b> <ul style="list-style-type: none"> <li>Security Policy: Basic Authentication</li> <li>Username/Password - login credential to ICS host</li> </ul> </li> </ul> <b>Activate CommsC3_PDCOperations ICS Integration before testing this connection.</b>
55	REST Adapter	CommsC3_PDCCatalog_Integration	<p>Invoke Connection to reference integration used for capturing catalog objects in CPQ.</p> <ul style="list-style-type: none"> <li><b>Connection Properties:</b> <ul style="list-style-type: none"> <li>Connection Type: REST API base URL</li> <li>Connection URL: https://&lt;ICS_URL&gt;/integration/flowapi/rest/COMMSC3_PDCCATALOG/v01/metadata</li> </ul> </li> <li><b>Security</b> <ul style="list-style-type: none"> <li>Security Policy: Basic Authentication</li> <li>Username/Password - login credential to ICS host</li> </ul> </li> </ul> <b>Activate CommsC3_PDCCatalog ICS Integration before testing this connection.</b>
56	SOAP Adapter	CommsC3_CreateSalesOrder	<p>Invoke SOAP connection to reference integration used for Creating Sales order.</p> <ul style="list-style-type: none"> <li><b>Connection Properties:</b> <ul style="list-style-type: none"> <li>WSDL URL: https://&lt;ICSHOST&gt;/integration/flowsvc/soap/COMMSC3_CREATESALESORDER/v01/?wsdl</li> </ul> </li> <li><b>Security</b> <ul style="list-style-type: none"> <li>Security Policy: Username Password Token</li> <li>Username/Password - login credential to ICS host</li> </ul> </li> </ul> <b>Activate CommsC3_CreateSalesOrder ICS Integration before testing this connection.</b>
57		CommsC3OptimizedSalesOrder	<p>Trigger SOAP Connection</p> <ul style="list-style-type: none"> <li><b>Connection Properties</b> <ul style="list-style-type: none"> <li>WSDL URL: OptimizedSalesOrder.wsdl</li> </ul> </li> <li><b>Security</b> <ul style="list-style-type: none"> <li>Username Password Token</li> </ul> </li> </ul>
58	REST Adapter	CommsC3_CPQCommerceTransactionREST	<p>Invoke REST connection to CPQ Commerce.</p> <ul style="list-style-type: none"> <li><b>Connection Properties:</b> <ul style="list-style-type: none"> <li>Connection Type: REST API base URL</li> <li>Connection URL: https://&lt;CPQ_REST_METADATA_URL&gt;/commerceDocumentsOraclecpqTransaction</li> </ul> </li> <li><b>Security</b> <ul style="list-style-type: none"> <li>Security Policy: Basic Authentication</li> <li>Username/Password – admin login credential to CPQ</li> </ul> </li> </ul>
59	REST Adapter	CommsC3_AIAAXREF_Query	<p>Trigger REST Connection.</p> <ul style="list-style-type: none"> <li><b>Security:</b> <ul style="list-style-type: none"> <li>Security Policy: Basic Authentication</li> </ul> </li> </ul>
60	SOAP Adapter	CommsC3_ICSSyncAccount	<p>Trigger SOAP Connection</p> <ul style="list-style-type: none"> <li><b>Connection Properties</b> <ul style="list-style-type: none"> <li>WSDL URL: OptimizedAccounts.wsdl</li> </ul> </li> <li><b>Security</b> <ul style="list-style-type: none"> <li>Username Password Token</li> </ul> </li> </ul>

## 2.9.2. Installing ICS Connectivity Agent

ICS Connectivity agent is used for allowing ICS running in Oracle Public Cloud domain to connect to and integrate with applications that are running in on-prem hosts that are not visible publically. That is,

these hosts are deployed behind a corporate firewall and cannot be accessed publically. The ICS connectivity agent allows applications running on these hosts to be integrated with Cloud SaaS application using ICS platform.

The CX Integration Pack Reference Solution uses a single ICS Agent named **CommsC3\_AgentGroup**. To install a connectivity agent instance for this group, first login into the ICS instance online, and download the connectivity agent.

### *Installation and Administration*

- 1) Extract from the CX Integration Pack Reference Solution Bundle to copy the set\_java.sh, installAgent.sh, upgradeAgent.sh and start.sh reference scripts to the ICS Agent target host server. Note that the installation steps below would auto-generate the startAgent.sh and stopAgent.sh scripts.
- 2) Login to ICS. Select Agents from the main ICS Home Page.
- 3) In the Agents page, create a new Agent group if not already created.
- 4) For example, create an agent group named CommsC3\_AgentGroup.
- 5) In the Agents page, select the Download drop down menu and download the Connectivity Agent package.
- 6) After download is completed, copy the zip file using SFTP or SCP to the target host to install the ICS agent.
- 7) Only one agent instance is required for connecting a given ICS instance to the same subnet of the on-premise application hosts. There is no need to install an agent per application host.
- 8) If ICS agent is upgraded in-place using an existing installation directory, then there is no need to first disassociate the agent from the ICS connections, and reassociate later after upgrade.
- 9) If ICS agent is installed in a new installation directory, then the existing agent must first be disassociated from any ICS connections using the agent.
  - a. Remove the connectivity agent group from any existing ICS connections using the agent.
  - b. Follow the instructions below to install the agent using the same agent group - use installAgent.sh script for convenience.
  - c. Re-associate the connectivity agent group to these connections.
- 10) Copy the package to an installation directory in the target host - for instance /private/icsagent/ics.install
- 11) Extract the provided ICS agent package.
  - a. There are two files provided in the package.
    - cloud-connectivity-agent-patcher.zip
    - cloud-connectivity-agent-installer.bsx
  - b. Installation would not run if there are other files and directories in the install directory.
  - c. Other files and directories are generated by the installation script when the installation is completed successfully.
    - startAgent.sh - generated default start script
    - stopAgent.sh - generated default stop script
    - agenthome - generated ICS agent appserver home directory

- agentInventory - generated ICS agent installation inventory directory
- 12) Source the set\_java.sh script file to setup Java path to reference Oracle JDK 1.7 or 1.8.
  - 13) Stop existing running agent if there are any.
  - 14) Run the installation script to install ICS Agent - use ../installAgent.sh to run the script in the current installation directory.
    - a. Note that ICS Agent should be installed and deployed in a dedicated host for production workload.
    - b. If sharing with another host, ensure that there is no running Derby DB and no conflict with ICS Agent port 7010 on the shared hosts.**
    - c. After installation is complete, stop and start the ICS agent to test connectivity again.
  - 15) Re-associate the ICS connectivity agent group to previous ICS connections using the agent.

#### Example script execution and output:

```
C:\Temp>scp ics_conn_agent_installer_171013.0000.1038.zip
friend@slc10abc:/private/icsagent/ics.install
friend@slc10abc's password:

[friend@slc10abc ~]$ cd /private/icsagent/ics.install
[friend@slc10abc ics.install]$ pwd
/private/icsagent/ics.install
[friend@slc10abc ics.install]$ ls -l
total 0

[friend@slc10abc install.ics]$ unzip ../ics_conn_agent_installer_171013.0000.1038.zip
Archive:  ../ics_conn_agent_installer_171013.0000.1038.zip
  inflating: cloud-connectivity-agent-patcher.zip
  inflating: cloud-connectivity-agent-installer.bsx
[friend@slc10abc install.ics]$
[friend@slc10abc ics.install]$ ls -l
total 1823492
-rwxr-xr-x 1 friend friend 1866888279 Oct 13 14:01 cloud-connectivity-agent-
installer.bsx
-rw-r--r-- 1 friend friend      360111 Oct 13 14:01 cloud-connectivity-agent-
patcher.zip
[friend@slc10abc install.ics]$

[friend@slc10abc ics.install]$ . ../set_java.sh
[friend@slc10abc ics.install]$ ../stopAgent.sh
Stopping Weblogic Server...
Picked up _JAVA_OPTIONS: -Dwlst.offline.log=disable
Initializing WebLogic Scripting Tool (WLST) ...
Welcome to WebLogic Server Administration Scripting Shell
Type help() for help on available commands
Connecting to t3://slc10abc.us.oracle.com:7010 with userid weblogic ...
Successfully connected to Admin Server "AdminServer" that belongs to domain "agent-
domain".
Warning: An insecure protocol was used to connect to the
server. To ensure on-the-wire security, the SSL port or
Admin port should be used instead.
```

```
Shutting down the server AdminServer with force=false while connected to AdminServer
...
.....
.....
```

```
[friend@slc10abc ics.install]$ ../installAgent.sh
...
[friend@slc10abc ics.install]$ cp *.sh ../
[friend@slc10abc ics.install]$ cd ..
[friend@slc10abc icsagent]$ ./stopAgent.sh
[friend@slc10abc icsagent]$ ./start.sh
```

### **Note**

If ICS agent is installed using proxy url, Users should verify all the on-premise edge systems have connectivity to ICS agent system using the proxy url. If edge systems are not connected to ICS agent system via proxy url but connectivity is via no-proxy then Users need to

- 1) Locate setDomainEnv.sh within agent installation
- 2) Add edge systems to no proxy by editing setDomainEnv.sh by finding nonProxyHosts element.

```
export JAVA_PROPERTIES="{JAVA_PROPERTIES} -
Dhttps.proxyHost=HTTPS_PROXY_URL -Dhttps.proxyPort=HTTPS_PROXY_PORT -
Dhttp.proxyHost=HTTP_PROXY_URL -Dhttp.proxyPort=HTTP_PROXY_PORT"

export JAVA_PROPERTIES="{JAVA_PROPERTIES} -
Dhttp.nonProxyHosts=localhost|127.0.0.1|host1|host1.url|host2|host2.url -
Dweblogic.security.SSL.ignoreHostnameVerification=true -
Djavax.net.ssl.trustStoreType=kss -
Djavax.net.ssl.trustStore=kss://system/trust"
```

- 3) Restart agent

## **2.9.3. Configuring ICS Connections**

After importing the ICS package which has all the ICS Integrations and Connections, each of the referenced connections need to be configured individually with URL endpoints and user credentials for authentication before these connections can be used for activating the integrations. The WSDL references in the ICS Connections should already be setup automatically from the imported ICS Integrations.

The ICS Connections must be updated and tested to satisfy all connectivity requirements before the status would change to 100% and can be used by the related ICS Integrations. If attempts are made to activate the ICS Integrations before the referenced ICS Connections are tested to 100%, the ICS Integrations may fail to activate due to the referenced endpoints being corrupted. Then, the ICS Integrations and Connections need to be reimported again to resolve data corruption.

- 1) Gather all the necessary hostname, URL, WSDL endpoints, and user credentials as described above for all the target host systems for AIA, BRM, PDC, OSM, ICS, CPQ, and OSC.
- 2) Login to ICS.

- 3) Select Connections in the main ICS homepage.
- 4) Select a given ICS Connection to verify and configure the settings.
- 5) Provide an optional Connection Administrator contact email address.
- 6) Update the Connection Properties
  - a. For JMS Adapter, provide or update the target hostname and port number (managed server).
  - b. For SOAP Adapter, provide or update the target hostname for WSDL URL.
  - c. For REST Adapter, provide or update the target hostname for Connection URL.
  - d. For CPQ Adapter, provide or update the target hostname for Connection URL.
- 7) Configure Security for the ICS Connection by specifying the Username and Password.
- 8) Associate the ICS Connection to the ICS Connectivity agent, if applicable. Only the following ICS Connections are using the ICS Connectivity Agent CommsC3\_AgentGroup.
  - a. CommsC3\_OSMOptimizedSalesOrderQueue
  - b. CommsC3\_AIAAXREF\_REST
  - c. CommsC3\_AIAUpdateSalesOrder\_JMS
  - d. CommsC3\_AIACustomerAccount
  - e. CommsC3\_AIATTMessage\_JMS
  - f. CommsC3\_BRMRestService
  - g. CommsC3\_PDCPricingWebService
- 9) Click on Test to test the ICS Connection – use Validate and Test if the option is provided.
- 10) Save the ICS Connection after successful test.
- 11) Repeat these steps for the other ICS Connections used by the ICS Integrations.
- 12) After configuring, updating, validating and saving all ICS Connections, return to ICS Integrations in the ICS homepage.
- 13) Select and edit an ICS Integration which use the updated ICS Connections.
- 14) In the ICS Integration, select Regenerate Endpoints if the option is enabled to refresh the ICS Connection configurations. Alternatively, select the individual ICS Connection in the ICS Integration to update and refresh the ICS Connection configurations.
- 15) Validate and save the ICS Integration.
- 16) Activate the ICS Integration.
- 17) Repeat the steps for the other ICS Integrations using the updated ICS Connections.

#### 2.9.4. Verifying ICS Lookups

- 1) Login to ICS.
- 2) Select Lookups in the main ICS homepage.
- 3) The following are all the ICS lookups currently used.
  - a. CommsC3\_System\_Configuration
  - b. CommsC3\_UsageEventType
  - c. CommsC3\_CurrencyCode



- d. CommsC3\_BillingCode
- e. CommsC3\_EdgeApplications
- f. CommsC3\_PriceList
- g. CommsC3\_SampleAccount
- h. CommsC3\_SampleOpportunity
- i. CommsC3\_SampleBillingProfile
- j. CommsC3\_PAYPROFILE\_DELIVERY\_PREF
- k. CommsC3\_PHONETYPE
- l. CommsC3\_STATE
- m. CommsC3\_COUNTRYID
- n. CommsC3\_CONTACT\_SALUTATION
- o. CommsC3\_BILLPROFILE\_FREQUENCYCODE
- p. CommsC3\_PDCEventCodes

## 2.10. Installing CX Integration Pack Reference Solution for CPQ Extensions

CPQ provides a feature where all of the implemented Reference Solution extensions can be exported into a ZIP file, and then imported into a different environment. Note that the extensions can only be imported into an environment of the same version. For instance, extensions exported out of CPQ 2018B cannot be imported into an older version of CPQ 2017D, and vice versa. The target environment version needs to match the source environment version before import can be executed. The current CPQ Extensions are implemented using CPQ 2018B version. If importing to a newer CPQ version, the CPQ Extensions package must be imported to a 2018B environment prior to upgrade to the newer CPQ version.

Before importing Digital BSS extensions, take a full snapshot of CPQ, for any risk mitigation during CPQ extensions import.

### 2.10.1. Create Snapshot

- 1) Go to Admin > Migration.
- 2) Click the Logs button at the bottom left to view and download previous exports.
- 3) Scroll to the bottom of the logs and select Create Snapshot to create a restore point before exporting or importing. Click OK to continue.
- 4) Scroll to the bottom of the logs and select Refresh to refresh the logs until the snapshot is fully created.
- 5) Once snapshot is completed, it can be used as a backup later for restoring. Close the Migration Logs popup window.

### 2.10.2. Export Data Tables content

- 4) Go to Admin > Data tables
- 5) Select all the Data Tables

- 6) Click on Files > Export.
- 7) Download the exported data tables.

### 2.10.3. Import Extensions

Locate following packages in the Digital BSS Reference package

- a. **CommsC3\_Files.zip**: Includes images, javascript files required by the solution.
- b. **CommsC3\_DataTables.zip**: Includes data table schema required by the solution. It doesn't contain any data.
- c. **CommsC3\_UtilLibrary.zip**: Includes BML libraries required by the solution.
- d. **CommsC3\_EmailnDocDesigner.zip**: Includes email designer and document designer.
- e. **CommsC3\_OracleQuote2Order.zip**: Includes CPQ transaction process Oracle Quote 2 Order extensions.
- f. **CommsC3\_EthernetServices.zip**: Includes Ethernet Services product.

Repeat following steps for all the extension packages to import complete Digital BSS package.

- 8) Login to CPQ as admin user.
- 2) Go to Admin > Migration.
- 3) Select Import Package option on the top right "Select a Mode" drop-down.
- 4) Click on Browse button and select the desired CPQ extension package.
- 5) Click on Upload button to upload the package content.
- 6) Select the desired CPQ extension items to import and click on Migrate button to begin migration import process.

During the import process, following errors can be encountered:

- 1) There is a change in number of method arguments in **ocPopulateBOMItemAttribute** method from DBSS 1.0.1 to DBSS 1.1. It might trigger an error while importing **CommsC3\_UtilLibrary**. To resolve this error we user must:
  - a) Check for rules/methods are using this utility method.
  - b) Take a backup of those rules and delete them.
  - c) In DBSS this method is used in Ethernet Services >> Multi Site Instant Business Connect, BOM Mapping rules, **"IBC BOM Advanced Mapping Rule – Attributes"** and **"IBC BOM Advanced Mapping Rule"** in Configuration to BOM. If no additional configuration is done to these rules, User can directly delete these rules because these will be imported with **CommsC3\_EthernetServices**.
- 2) CPQ Commerce extensions expect a specific name for the ICS integration. If in target CPQ environment there is already a configured ICS integration with a different name then **CommsC3\_OracleQuote2Order** import will error out. Please see manual configuration instructions below to create and configure the ICS integration in CPQ.

## 2.10.4. Manual Configuration

### BOM Configuration

- 1) After Migration package is imported successfully, there are several manual configurations that need to be enabled.
- 2) Go to Admin > Products section > BOM > BOM Declaration section > BOM Tables.
- 3) Verify all the BOM tables are setup accordingly - they should all have a Mapping Status of Complete.

Bills of Materials Tables			
Bills of Materials Tables			
Active	Name	Mapping Status	Description
<input checked="" type="checkbox"/>	<a href="#">BOM Item Definition</a>	Complete	This table stores the definitions of bills of materials imported from ERP systems.
<input checked="" type="checkbox"/>	<a href="#">BOM Item Mapping</a>	Complete	This table stores the mapping between configuration attributes and BOM items.
<input checked="" type="checkbox"/>	<a href="#">BOM Attribute Definition</a>	Complete	This table stores the attribute definitions of BOM item definitions.
<input checked="" type="checkbox"/>	<a href="#">BOM Attribute Mapping</a>	Complete	This table stores the mapping between configuration attributes and BOM attributes or commerce line attributes.
<input checked="" type="checkbox"/>	<a href="#">BOM Attribute Translation</a>	Complete	This table stores the translations of BOM attribute definitions.
<input type="checkbox"/> Select All			

- 4) Go to Admin > Products section > BOM > BOM Declaration section > Declare Util Function
- 5) Select `_ORCL_ABO.abo_delta` function as the BOM Util Function.

Declare BML Util Function	
BML Util Function:	<input type="text" value="_ORCL_ABO.abo_delta"/> Please select the BML Util Function which needs to be executed on Saving Configuration

### Product Family Configuration

- 1) Go to Admin > Products section > Catalog Definition
- 2) In the Navigation drop-down, select Product Families and click on List button.
- 3) Verify Ethernet Services is listed in the Supported Product Families.
- 4) If not, click on Add button to add the new Product Family.
- 5) Select Ethernet Services and click on Add.
- 6) In the Navigation drop-down for Ethernet Services, select Deployment Center and click on List button.
- 7) Click the Deploy button to deploy the Ethernet Services Product Family changes.
- 8) Click on Refresh button to get the latest deployment status until deployment is completed successfully.

### Home Page and Stylesheet Configuration

- 1) Go to Admin > Style and Templates section > Home Page.
- 2) Verify that Ethernet Services is imported as a new Product Family in the Catalog.
- 3) Click the Restrict Access icon to configure user access to the Ethernet Services Product Family as necessary.
- 4) Click the Refresh icon on the far right to refresh the Ethernet Services Product Family.

- 5) Click the Define XSL Template button on the Home Page Setup page to setup desired CSS stylesheet to use for the target site.
- 6) Select a different Alternate CSS Stylesheet to use on the target site if necessary. Backup and use the exiting stylesheet as a starting template.
- 7) Note that the default stylesheet has a style for #family-nav class to disable display of multiple Product Family.
- 8) Click Update and Back to save stylesheet changes.
- 9) Click the Deployment Center button on the Home Page Setup page to redeploy the changes.
- 10) Click the Deploy button to deploy the Home Page and stylesheet changes.
- 11) Go to Admin > Style and Templates section > Stylesheet.
- 12) Select a different Alternate CSS Stylesheet to use on the target site if necessary. Backup and use the exiting stylesheet as a starting template.
- 13) Click Accept to save stylesheet changes

### *UI Designer Configuration*

- 1) Go to Admin > General section > UI Designer.
- 2) Select Customer Assets List link to customize and configure the page layout.
- 3) Click on the main table for Customer Assets, select Attributes on the configuration panel.
- 4) Select the attributes to be displayed in the table and drag drop to the Customer Assets table.
- 5) Click Save to save the new layout. The layout changes would be deployed immediately.
- 6) Click Cancel to close the UI Designer.

### *ICS Configuration*

- 1) Go to Admin > Integration Platform section > Integration Center.
- 2) Select Integration Cloud Service.
- 3) Verify that the existing integration configuration, if any, is defined with the variable name "**ocSampleICS**".
- 4) If the existing integration has a different name, delete and recreate the integration. Only one integration to ICS is supported in CPQ.
- 5) Provide a name for the new integration and the Variable Name has to "ocSampleICS".
- 6) Provide the URL to connect to the ICS instance. For example: <https://xxxxxx-xxxxxxx.integration.us2.oraclecloud.com:443/icsapis/v1/integrations>
- 7) Provide the user credentials and Test the connection to ICS.
- 8) Select Enable Integration checkbox and click Save.

### *Refresh and Configure Integration to ICS*

- 1) Go to Admin > Commerce and Documents section > Process Definition.
- 2) In the Navigation drop-down for Oracle Quote to Order process, select Integrations and click on List button.
- 3) Select the integration link to refresh and configure the ICS Integration, for example CPQ-ICS-CreateOrder.
- 4) In Edit Integration, update the Timeout value, for example 60000 (defined in milliseconds).
- 5) In Edit Integration, verify the Services drop-down is referencing the correct ICS Integration.

Integration Name	Variable Name	Service Name
CPQ-ICS-CreateOrder	ocCpqICSCreateOrder	CommsC3_CPQCreateSalesOrder
CPQ-ICS-GetAccount	ocCPQICSGetAccount	CommsC3_CPQRetrieveAcctDetails

- 6) Click Update button to refresh and save the Integration.
- 7) Click Back button on the Integrations page, or go to Admin > Commerce and Documents section > Process Definition again.
- 8) In the Navigation drop-down for Oracle Quote to Order process, select Deployment Center and click on List button.
- 9) Select Deploy in the Event Type, and click on Add Event.

### *User Administration*

1. Go to Admin > Users section > Internal Users.
2. Click Add to add more users to the system.
3. Provide login username, password (if not defaulted), and email address for the user.
4. Select access Type either RestrictedAccess for Sales User role, or FullAccess for Admin User role.
5. Provide user first and last name.
6. Select the Groups tab and select all groups to be added to the user.
  - a) Business Administrator
  - b) Sales User
  - c) Technical Administrator
7. Click Add to add the user to the system.

## 3. Importing and Enriching Reference Data

This section describes importing reference data into your Digital BSS Reference Solution environment to enable demonstrating the Digital BSS features according to the scenarios documented in the *Digital BSS Reference Solution User Guide*.

### 3.1. Configure BRM system

- 1) Locate **aia\_custom\_services.podl** in manageable install kit (MIK) and copy it over to BRM host in a directory (say BRM\_TEST\_DIR).
- 2) Edit **aia\_custom\_services.podl** and add a new service.

```
# Storable Class /service/ethernet
#=====

STORABLE CLASS /service/ethernet {
    READ_ACCESS = "Self";
    WRITE_ACCESS = "Self";
    IS_PARTITIONED = "0";
}
```

- 3) Locate **pin\_deploy** in <PIN\_HOME>/sys/test and run below command

```
pin_deploy create <BRM_TEST_DIR>/aia_custom_services.podl
```

- 4) Locate **pin\_device\_permit\_map** in <PIN\_HOME>/sys/data/config and add /service/ethernet

```
/device          :/service/ip
                  :/service/email
                  :/service/Ethernet
```

- 5) Locate **load\_pin\_device\_permit\_map** in BRM bin folder and run  
`load_pin_device_permit_map -v -d pin_device_permit_map`
- 6) Restart **cm** and **dm\_oracle**.

### 3.2. Configure PDC system

- 1) Login to host where PDC is installed.
- 2) Ensure RRE and BRE transformation engines are running in PDC system.
- 3) Run **<PDC\_Installation\_Loc>/OracleCommunications/BIP/apps/bin/startSyncPDC** (if not running already) from PDC system. Enter key password if asked.
- 4) Locate and copy **pdcc\_metadata.xml** and **pdcc\_config.xml** from **CX Integration Pack Reference Bundle** to a directory in PDC system say **IMPORT\_DIR**
- 5) Navigate to **<PDC\_Installation\_Loc>/OracleCommunications/PDC/apps/bin**
- 6) Import metadata definitions into PDC database using command

```
ImportExportPricing -import -config < IMPORT_DIR >/pdcc_metadata.xml
```

- 7) Import setup components into PDC database using command

*ImportExportPricing -import -config < IMPORT\_DIR >/pdc\_config.xml*

### 3.3. Use Catalog Operations

You can use Catalog operations from any machine (windows or linux).

- 1) Locate **IBCMarketOffer.json** in **CX Integration Pack Reference Bundle** and copy it to a location say IMPORT\_DIR.
- 2) Locate **CommsC3\_Catalog** Integration calling url from ICS. Sample url will look like [https://ics-url-prefix/COMMSC3\\_CATALOG/v01/metadata](https://ics-url-prefix/COMMSC3_CATALOG/v01/metadata)
- 3) Use any REST client (example POSTMAN, SOAP, cURL etc.) to use **POST** operation on above endpoint suffixed with /catalog with content of **IBCMarketOffer.json** in body. Example [https://ics-url-prefix/COMMSC3\\_CATALOG/v01/metadata/catalog](https://ics-url-prefix/COMMSC3_CATALOG/v01/metadata/catalog).
- 4) It'll need Basic Authorization with ICS username and password

### 3.4. Import Reference configuration data to CPQ

Locate **CommsC3\_ConfigurationData.zip** and **CommsC3\_EthernetServicesData.zip** in Digital BSS Reference package and import the data to data tables by importing both the zips. Please follow steps mentioned in [Importing CPQ Data tables' data](#) to import data into data tables for both the archive files.

Above archive files contain data of following tables:

1. **CommsC3\_ConfigurationData.zip**
  - a. Status
  - b. OC\_ADDRESS
  - c. OC\_CONFIGURATION
  - d. Oracle\_aboPart2Model
2. **CommsC3\_EthernetServicesData.zip**
  - a. Oracle\_BomAttrDef
  - b. Oracle\_BomAttrMap
  - c. Oracle\_BomItemMap

### 3.5. Verify and Configure Data in CPQ

#### 3.2.1.Parts

- 1) Login to CPQ as admin user.
- 2) Go to Admin > Products section > Parts.
- 3) Click on Search Button for "Search for Part by Part Number". Search criteria is optional.
- 4) Verify following parts are created and synced from PDC are the same in CPQ Parts.
  - a. IBC Market Offer-Root
  - b. IBC Market Offer

- c. Instant Business Connect
- d. IBC Endpoint (BO)
- e. EBC 1GB Bandwidth
- f. EBC 2GB Bandwidth
- g. EBC 5GB Bandwidth
- h. Basic UNI Access
- i. IBC Endpoint Happy Customer Discount
- j. IBC SLA
- k. IBC SLA 10% Discount

Click and Open **Basic UNI Access** and set “**Service Instance**” to **True**.

### 3.2.2.Data Tables

- 1) Login to CPQ as admin user.
- 2) Go to Admin > Developer Tools section > Data Tables > OracleComms.

#### OC\_CONFIGURATION

Configuration label	Configuration Value	Description
OLM_URL	https://demo_url:demo_port/OrderManagement/osmweb/	URL end point of the OLM API
OLM_PATH	/CustomerHeaders/ExternalOrderKey	Mnemonic path of the BS ID in the Order
CPQ_ONCLOUD	YES	Set to YES if CPQ is on cloud otherwise NO
CPQ_DOC_ID	36244074	
CPQ_ACTION_OPEN_ID	36244076	
CPQ_PROCESS_ID	36244034	

Change OLM\_URL value to OSM url.

#### Oracle\_aboPart2Model

PartNumber	ProductLine	Segment	Model
IBC Market Offer-Root	ocMultiSiteInstantBusinessConnect	ocEthernetServices	ocInstantBusinessConnect

#### OC\_BUNDLE

productName	parent
IBC SLA	IBC Market Offer
IBC SLA 10% Discount	IBC Market Offer
Instant Business Connect	IBC Market Offer
IBC Endpoint (BO)	Instant Business Connect
EBC 1GB Bandwidth	IBC Endpoint (BO)
EBC 2GB Bandwidth	IBC Endpoint (BO)
EBC 5GB Bandwidth	IBC Endpoint (BO)
Basic UNI Access	IBC Endpoint (BO)
IBC Endpoint Happy Customer Discount	IBC Endpoint (BO)



## OC\_PART\_ATTRIBUTES

PartName	ProductSpecification
IBC SLA	CE SLA PS
IBC SLA 10% Discount	CE Discount PS
Instant Business Connect	CE Service PS
IBC Endpoint (BO)	CE Endpoint PS
EBC 1GB Bandwidth	CE CoS Bandwidth PS
EBC 2GB Bandwidth	CE CoS Bandwidth PS
EBC 5GB Bandwidth	CE CoS Bandwidth PS
Basic UNI Access	UNI Access PS
IBC Endpoint Happy Customer Discount	CE Happy Customer Discount PS

## OC\_PROD\_ATTRIBUTES

ProductName	AttributeName	DataType
IBC Endpoint (BO)	bandwidth	String
IBC Endpoint (BO)	site	String
IBC Endpoint (BO)	Line Service Account Name	String
IBC Endpoint (BO)	Line Service Account ID	String
IBC Endpoint (BO)	Line Service Account Number	String
IBC Endpoint (BO)	Line Service Address ID	String
EBC 1GB Bandwidth	bandwidth	String
EBC 2GB Bandwidth	bandwidth	String
EBC 5GB Bandwidth	bandwidth	String
Basic UNI Access	site	String
Basic UNI Access	interfaceType	String
Basic UNI Access	accessType	String

## OC\_PRICELIST

priceListName	productName	priceChargeType	currency	listPrice
Business Pricelist	IBC SLA	ONE-TIME	USD	250
Default	IBC SLA	ONE-TIME	USD	300
Business Pricelist	EBC 1GB Bandwidth	RECURRING	USD	500
Default	EBC 1GB Bandwidth	RECURRING	USD	550
Business Pricelist	EBC 2GB Bandwidth	RECURRING	USD	900
Default	EBC 2GB Bandwidth	RECURRING	USD	1000
Business Pricelist	EBC 5GB Bandwidth	RECURRING	USD	2000
Default	EBC 5GB Bandwidth	RECURRING	USD	2250
Business Pricelist	Basic UNI Access	ONE-TIME	USD	125
Default	Basic UNI Access	ONE-TIME	USD	150
Business Pricelist	Basic UNI Access	RECURRING	USD	200
Default	Basic UNI Access	RECURRING	USD	225

Addition to these columns there will be columns like rateTierId, startDate, endDate etc which will be populated with various runtime values.

## OC\_PRODUCT

productName
IBC SLA
EBC 1GB Bandwidth
EBC 2GB Bandwidth
EBC 5GB Bandwidth
Basic UNI Access

3) Go to Admin > Developer Tools section > Data Tables > BOM Tables.

## Oracle\_BomItemDef

VariableName	ItemId	Name	ItemType	PartNumber	DefaultQuantity	Optional	Sale Item	ParentVariableName	RootVariableName	ManufacturingItem
IBC Market Offer-Root	IBC Market Offer-Root	IBC Market Offer-Root	Standard Item	IBC Market Offer-Root	1	N	Y		IBC Market Offer-Root	N
IBC Market Offer	IBC Market Offer	IBC Market Offer	Standard Item	IBC Market Offer	1	N	Y	IBC Market Offer-Root	IBC Market Offer-Root	N
IBC SLA-xxxx	IBC SLA-xxxx	IBC SLA	Standard Item	IBC SLA	1	N	Y	IBC Market Offer	IBC Market Offer-Root	N
IBC SLA 10% Discount-xxxx	IBC SLA 10% Discount-xxxx	IBC SLA 10% Discount	Standard Item	IBC SLA 10% Discount	1	N	Y	IBC Market Offer	IBC Market Offer-Root	N
Instant Business Connect-xxxx	Instant Business Connect-xxxx	Instant Business Connect	Standard Item	Instant Business Connect	1	N	Y	IBC Market Offer	IBC Market Offer-Root	N
IBC Endpoint (BO) -xxxx	IBC Endpoint (BO) -xxxx	IBC Endpoint (BO)	Standard Item	IBC Endpoint (BO)	1	N	Y	Instant Business Connect-xxxx	IBC Market Offer-Root	N
EBC 1GB Bandwidth-xxxx	EBC 1GB Bandwidth-xxxx	EBC 1GB Bandwidth	Standard Item	EBC 1GB Bandwidth	1	N	Y	IBC Endpoint (BO) -xxxx	IBC Market Offer-Root	N
EBC 2GB Bandwidth-xxxx	EBC 2GB Bandwidth-xxxx	EBC 2GB Bandwidth	Standard Item	EBC 2GB Bandwidth	1	N	Y	IBC Endpoint (BO) -xxxx	IBC Market Offer-Root	N
EBC 5GB Bandwidth-xxxx	EBC 5GB Bandwidth-xxxx	EBC 5GB Bandwidth	Standard Item	EBC 5GB Bandwidth	1	N	Y	IBC Endpoint (BO) -xxxx	IBC Market Offer-Root	N
Basic UNI Access-xxxx	Basic UNI Access-xxxx	Basic UNI Access	Standard Item	Basic UNI Access	1	N	Y	IBC Endpoint (BO) -xxxx	IBC Market Offer-Root	N
IBC Endpoint Happy Customer Discount-xxxx	IBC Endpoint Happy Customer Discount-xxxx	IBC Endpoint Happy Customer Discount	Standard Item	IBC Endpoint Happy Customer Discount	1	N	Y	IBC Endpoint (BO) -xxxx	IBC Market Offer-Root	N

Here xxxx are random unique numbers generated at runtime.

## Oracle\_BomAttrDef

VariableName	Name	BomItemVarName	Data Type	RootBomItemVarName
IBCPRICELIST	Pricelist Name	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCBillingAccountID	Billing Account ID	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCOppportunityName	Opportunity Name	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCOppportunityID	Opportunity ID	IBC Market Offer-	String	IBC Market Offer-

		Root		Root
IBCCustomerAccountID	Customer Account ID	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCCustomerAccountNumber	Customer Account Number	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCCustomerAccountName	Customer Account Name	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCSERVICEAccountID	Service Account ID	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCSERVICEAccountNumber	Service Account Number	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCSERVICEAccountName	Service Account Name	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCBillingAccountName	Billing Account Name	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCBillingAccountNumber	Billing Account Number	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCBillingProfileID	Billing Profile ID	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCBillingProfileName	Billing Profile Name	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCSERVICEAddressID	Service Address ID	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCCustomerFirstName	Customer First Name	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCCustomerLastName	Customer Last Name	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCCustomerCompanyName	Company Name	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCCustomerAddress	Customer Address	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCCustomerCity	Customer City	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCCustomerState	Customer State	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCFullServiceAccountList	Full Service Account List	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCCustomerCountry	Customer Country	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCCustomerZip	Customer Zip	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCAccountType	Account Type	IBC Market Offer-Root	String	IBC Market Offer-Root
IBCCustomerEmail	Customer Email	IBC Market Offer-Root	String	IBC Market Offer-Root
IBC Endpoint (BO)-Line Service Account Name-xxxx	Line Service Account Name	IBC Endpoint (BO)-xxxx	String	IBC Market Offer-Root
IBC Endpoint (BO)-Line Service Account ID-xxxx	Line Service Account ID	IBC Endpoint (BO)-xxxx	String	IBC Market Offer-Root
IBC Endpoint (BO)-Line Service Account Number-xxxx	Line Service Account Number	IBC Endpoint (BO)-xxxx	String	IBC Market Offer-Root
IBC Endpoint (BO)-Line Service Address ID-xxxx	Line Service Address ID	IBC Endpoint (BO)-xxxx	String	IBC Market Offer-Root
IBC Endpoint (BO)-site-xxxx	site	IBC Endpoint (BO)-xxxx	String	IBC Market Offer-Root
IBC Endpoint (BO)-bandwidth-xxxx	bandwidth	IBC Endpoint (BO)-xxxx	String	IBC Market Offer-Root
Basic UNI Access-site-xxxx	site	Basic UNI Access-xxxx	String	IBC Market Offer-Root
Basic UNI Access-interfaceType-xxxx	interfaceType	Basic UNI Access-xxxx	String	IBC Market Offer-Root
Basic UNI Access-accessType-xxxx	accessType	Basic UNI Access-xxxx	String	IBC Market Offer-Root
EBC 1GB Bandwidth-bandwidth-xxxx	bandwidth	EBC 1GB Bandwidth-xxxx	String	IBC Market Offer-Root
EBC 2GB Bandwidth-bandwidth-xxxx	bandwidth	EBC 2GB Bandwidth-xxxx	String	IBC Market Offer-Root
EBC 5GB Bandwidth-	bandwidth	EBC 5GB	String	IBC Market Offer-

bandwidth-xxxx		Bandwidth-xxxx		Root
----------------	--	----------------	--	------

Addition to these column there will be columns like EffectiveDate, ExtendedAttribute etc.

xxxx are random unique number generated at run time.

Make ExtendedAttribute as true for following

- IBC Endpoint (BO)
  - site
  - bandwidth
- Basic UNI Access
  - site
  - interfaceType
  - accessType
- EBC xx Bandwidth
  - bandwidth

For more information about ExtendedAttribute refer to **Oracle Communications Digital BSS Reference Solution Implementation Guide**

### Oracle\_BomItemMap

VariableName	BomItemVarName	ConfigAttrVarName	ConfigAttrValue	ParentBomMapVarName
IBC Market Offer-Root	IBC Market Offer-Root	ocProductModel	IBC	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOMMappingRule
IBC Market Offer	IBC Market Offer	ocProductModel	IBC	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOMMappingRule
IBC SLA	IBC SLA	ocProductModel	IBC	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOMMappingRule
IBC SLA 10% Discount	IBC SLA 10% Discount	ocSLADiscount	TRUE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOMMappingRule
Instant Business Connect	Instant Business Connect	ocProductModel	IBC	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOMMappingRule
IBC Endpoint (BO)	IBC Endpoint (BO)	ocInternalEndpoint	EP	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOMMappingRule
EBC 1GB Bandwidth	EBC 1GB Bandwidth	ocBandwidth	1 Gbps	
EBC 2GB Bandwidth	EBC 2GB Bandwidth	ocBandwidth	2 Gbps	
EBC 5GB Bandwidth	EBC 5GB Bandwidth	ocBandwidth	5 Gbps	
Basic UNI Access	Basic UNI Access	ocSites	*	
IBC Endpoint Happy Customer Discount	IBC Endpoint Happy Customer Discount	ocSites	*	

Change **BomItemVarName** column value for following rows by referring to **OracleBomItemDef** table's **variableName** column for the same items:

- IBC SLA
- IBC SLA 10% Discount
- Instant Business Connect
- IBC Endpoint (BO)
- EBC 1GB Bandwidth
- EBC 2GB Bandwidth
- EBC 5GB Bandwidth
- Basic UNI Access
- IBC Endpoint Happy Customer Discount

### Oracle\_BomAttrMap

VariableName	TargetVariableName	BomItemMapVarName	ConfigAttrVarName	Target Type	Source Type	RootBomMapVarName
IBCBillingAccountID	IBCBillingAccountID	IBC Market Offer-Root	ocBillingAccountID	BOM_AT TRIBUTE	CONFIG_ATTRIBUTUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOMMappingRule
IBCOportunityName	IBCOportunityName	IBC Market Offer-Root	ocOpportunityName	BOM_AT TRIBUTE	CONFIG_ATTRIBUTUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOMMappingRule
IBCOportunityID	IBCOportunityID	IBC Market Offer-Root	ocOpportunityID	BOM_AT TRIBUTE	CONFIG_ATTRIBUTUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOMMappingRule
IBCCustomerAccountID	IBCCustomerAccountID	IBC Market Offer-Root	ocCustomerAccountID	BOM_AT TRIBUTE	CONFIG_ATTRIBUTUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOMMappingRule
IBCCustomerAccountNumber	IBCCustomerAccountNumber	IBC Market Offer-Root	ocCustomerAccountNumber	BOM_AT TRIBUTE	CONFIG_ATTRIBUTUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOMMappingRule
IBCCustomerAccountName	IBCCustomerAccountName	IBC Market Offer-Root	ocCustomerAccountName	BOM_AT TRIBUTE	CONFIG_ATTRIBUTUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOMMappingRule
IBCSERVICEAccountID	IBCSERVICEAccountID	IBC Market Offer-Root	ocSERVICEAccountID	BOM_AT TRIBUTE	CONFIG_ATTRIBUTUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOMMappingRule
IBCSERVICEAccountNumber	IBCSERVICEAccountNumber	IBC Market Offer-Root	ocSERVICEAccountNumber	BOM_AT TRIBUTE	CONFIG_ATTRIBUTUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOMMappingRule
IBCSERVICEAccountName	IBCSERVICEAccountName	IBC Market Offer-Root	ocSERVICEAccountName	BOM_AT TRIBUTE	CONFIG_ATTRIBUTUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOMMappingRule
IBCBillingAccountName	IBCBillingAccountName	IBC Market Offer-Root	ocBillingAccountName	BOM_AT TRIBUTE	CONFIG_ATTRIBUTUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOMMappingRule
IBCBillingAc	IBCBilling	IBC	ocBilling	BOM_AT	CONFIG	ocEthernetServices:ocMultiSiteI

countNumber	gAccountNumber	Market Offer-Root	gAccount Number	TRIBUTE	_ATTRIBUTE	nstantBusinessConnect:ocInstantBusinessConnect:ocIBCBO Mapping Rule
IBCBillingProfileID	IBCBillingProfileID	IBC Market Offer-Root	ocBillingProfileID	BOM_AT TRIBUTE	CONFIG _ATTRIBUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBO Mapping Rule
IBCBillingProfileName	IBCBillingProfileName	IBC Market Offer-Root	ocBillingProfileName	BOM_AT TRIBUTE	CONFIG _ATTRIBUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBO Mapping Rule
IBCSERVICEADDRESSID	IBCSERVICEADDRESSID	IBC Market Offer-Root	ocSERVICEADDRESSID	BOM_AT TRIBUTE	CONFIG _ATTRIBUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBO Mapping Rule
IBCCustomerFirstName	IBCCustomerFirstName	IBC Market Offer-Root	ocCustomerFirstName	BOM_AT TRIBUTE	CONFIG _ATTRIBUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBO Mapping Rule
IBCCustomerLastName	IBCCustomerLastName	IBC Market Offer-Root	ocCustomerLastName	BOM_AT TRIBUTE	CONFIG _ATTRIBUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBO Mapping Rule
IBCCustomerCompanyName	IBCCustomerCompanyName	IBC Market Offer-Root	ocCustomerCompanyName	BOM_AT TRIBUTE	CONFIG _ATTRIBUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBO Mapping Rule
IBCCustomerAddress	IBCCustomerAddress	IBC Market Offer-Root	ocCustomerAddresses	BOM_AT TRIBUTE	CONFIG _ATTRIBUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBO Mapping Rule
IBCCustomerCity	IBCCustomerCity	IBC Market Offer-Root	ocCustomerCity	BOM_AT TRIBUTE	CONFIG _ATTRIBUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBO Mapping Rule
IBCCustomerState	IBCCustomerState	IBC Market Offer-Root	ocCustomerState	BOM_AT TRIBUTE	CONFIG _ATTRIBUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBO Mapping Rule
IBCFullServiceAccountList	IBCFullServiceAccountList	IBC Market Offer-Root	ocFullServiceAccountList	BOM_AT TRIBUTE	CONFIG _ATTRIBUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBO Mapping Rule
IBCCustomerCountry	IBCCustomerCountry	IBC Market Offer-Root	ocCustomerCountry	BOM_AT TRIBUTE	CONFIG _ATTRIBUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBO Mapping Rule
IBCCustomerZip	IBCCustomerZip	IBC Market Offer-Root	ocCustomerZip	BOM_AT TRIBUTE	CONFIG _ATTRIBUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBO Mapping Rule
IBCAccountType	IBCAccountType	IBC Market Offer-Root	ocAccountType	BOM_AT TRIBUTE	CONFIG _ATTRIBUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBO Mapping Rule
IBCCustomerEmail	IBCCustomerEmail	IBC Market Offer-Root	ocCustomerEmail	BOM_AT TRIBUTE	CONFIG _ATTRIBUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBO Mapping Rule
IBCPRICELIST	IBCPRICELIST	IBC Market Offer-Root	ocPriceList	BOM_AT TRIBUTE	CONFIG _ATTRIBUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBO Mapping Rule
Basic UNI Access-accessType	Basic UNI Access-accessType	Basic UNI Access	ocAccessType	BOM_AT TRIBUTE	CONFIG _ATTRIBUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBO Mapping Rule
Basic UNI Access-site	Basic UNI Access-site	Basic UNI Access	ocSites	BOM_AT TRIBUTE	CONFIG _ATTRIBUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBO Mapping Rule

						Rule
Basic UNI Access-interfaceType	Basic UNI Access-interfaceType	Basic UNI Access	ocInterfaceType	BOM_ATRIBUTE	CONFIG_ATTRIBUTUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOEMappingRule
IBC Endpoint (BO)-site	IBC Endpoint (BO)-site	IBC Endpoint (BO)	ocSites	BOM_ATRIBUTE	CONFIG_ATTRIBUTUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOEMappingRule
IBCLineServiceAccountName	IBCLineServiceAccountName	IBC Endpoint (BO)	ocLineServiceAccountName	BOM_ATRIBUTE	CONFIG_ATTRIBUTUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOEMappingRule
IBCLineServiceAccountID	IBCLineServiceAccountID	IBC Endpoint (BO)	ocLineServiceAccountID	BOM_ATRIBUTE	CONFIG_ATTRIBUTUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOEMappingRule
IBCLineServiceAccountNumber	IBCLineServiceAccountNumber	IBC Endpoint (BO)	ocLineServiceAccountNumber	BOM_ATRIBUTE	CONFIG_ATTRIBUTUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOEMappingRule
IBCLineServiceAddressID	IBCLineServiceAddressID	IBC Endpoint (BO)	ocLineServiceAddressID	BOM_ATRIBUTE	CONFIG_ATTRIBUTUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOEMappingRule
IBC Endpoint (BO)-bandwidth	IBC Endpoint (BO)-bandwidth	IBC Endpoint (BO)	ocBandwidth	BOM_ATRIBUTE	CONFIG_ATTRIBUTUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOEMappingRule
EBC 1GB Bandwidth	EBC 1GB Bandwidth	EBC 1GB Bandwidth	ocBandwidth	BOM_ATRIBUTE	CONFIG_ATTRIBUTUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOEMappingRule
EBC 2GB Bandwidth	EBC 2GB Bandwidth	EBC 2GB Bandwidth	ocBandwidth	BOM_ATRIBUTE	CONFIG_ATTRIBUTUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOEMappingRule
EBC 5GB Bandwidth	EBC 5GB Bandwidth	EBC 5GB Bandwidth	ocBandwidth	BOM_ATRIBUTE	CONFIG_ATTRIBUTUTE	ocEthernetServices:ocMultiSiteInstantBusinessConnect:ocInstantBusinessConnect:ocIBCBOEMappingRule

Change **TargetVariableName** column values of following rows by referring to **VariableName** column of the **Oracle\_BomAttrDef** table

- Basic UNI Access-accessType
- Basic UNI Access-site
- Basic UNI Access-interfaceType
- IBC Endpoint (BO)-site
- IBCLineServiceAccountName
- IBCLineServiceAccountID
- IBCLineServiceAccountNumber
- IBCLineServiceAddressID
- IBC Endpoint (BO)-bandwidth
- EBC 1GB Bandwidth
- EBC 2GB Bandwidth
- EBC 5GB Bandwidth

### 3.3. Importing CPQ Data tables' data

Repeat following steps for importing data tables data: (must be done only after **CommsC3\_DataTables** is imported)

- 1) Login to CPQ as admin user.
- 2) Go to Admin → Data Tables
- 3) Go to File → Import.
- 4) Select the zip file (leave other values empty) and click on import.
- 5) Check which data tables has been impacted (their name turns red).

Right click on each of the impacted data tables and click deploy.



# Appendix A: Installing RODOD Applications Using an Oracle Pre-Installed Database

If you do not want to install a new Database for every RODOD application, and instead want to point all the RODOD applications to an existing pre-installed Oracle repository database, the following configuration changes will have to be done:

1. The default knobs configuration file has to be modified in the **global\_knobs** file using your choice of text editor.

```
vi /private/downloads/aiacom_manageable_install/common/global_knobs
```

2. Update the deployment configuration parameter in **global\_knobs** file to *rodod\_apps\_share\_existing\_db*.

```
DEPLOY_CONFIGURATION_FILE=rodod_apps_share_existing_db
```

3. Review the **rodod\_apps\_share\_existing\_db** using your choice of text editor.

```
vi /private/downloads/aiacom_manageable_install/common/rodod_apps_share_existing_db
```

4. By default RODOD\_DATABASE\_INSTALL property is 0 in rodod\_apps\_share\_existing\_db. This ensures that an existing DB on the given DB host is used. If it is set to 1, a new DB will be installed.

5. Edit the **rodod\_apps\_share\_existing\_db** file by changing the pre-existing Database entries:

**Please make sure that the pre-existing Database Port is listening on port 1521.**

**Other database ports are not supported as of now.**

Configuration Parameters	Details
RODOD_BRM_DATABASE_HOST	Pre-existing BRM Database FQDN hostname
RODOD_BRM_DATABASE_HOST_NAME	Pre-existing BRM Database simple hostname, with the target host for BRM without the domain name
RODOD_OSM_DATABASE_HOST	Pre-existing OSM Database FQDN hostname
RODOD_OSM_DATABASE_HOST_NAME	Pre-existing OSM Database simple hostname, with the target host for BRM without the domain name

RODOD_AIA_DATABASE_HOST	Pre-existing AIA Database FQDN hostname
RODOD_AIA_DATABASE_HOST_NAME	Pre-existing AIA Database simple hostname, with the target host for BRM without the domain name
RODOD_DATABASE_SID	Pre-existing Database SID
RODOD_DATABASE_SID_UPPERCASE	Pre-existing Database SID in Uppercase
RODOD_DATABASE_SYS_USER_NAME	“sys”
RODOD_DATABASE_SYS_USER_PASSWORD	Password for “sys” user
RODOD_DATABASE_SYSTEM_USER_NAME	“system”
RODOD_DATABASE_SYSTEM_USER_PASSWORD	Password for “system” user
RODOD_DATABASE_GLOBAL_NAME	Full Name (including the domain) of Pre-existing Database

Save and Close the file.

If the preexisting DB is on the same host where the edge application is installed, these values can be left blank.

6. Review the Database pre-requisite list for each of the RODOD applications to ensure all expected Database patches are applied to the Database

# Appendix B: Apply New Patches

## Apply SOA Patch Set

1. Download the new AIA SOA patch set installer related files on the Media Server.
2. On the Installer Workstation, review the default installation configuration for AIA Middleware using your choice of text editor. It should match the host where the AIA Middleware is installed.

```
vi /private/downloads/aiacom_manageable_install/common/rodod_poc
```

### Verify

```
RODOD_AIA_HOST=<AIA_HOST>
RODOD_AIA_HOST_NAME=<AIA_HOST simple name>
```

Refer to [Installing FMW for AIA Integration Packs](#) section for the sample host names to be provided.

3. In case, if the previous patches needs to be rolled back before applying the latest patch, follow the below steps.(The patches which are applied through MIK previously can only be rolled back through this scripts, as MIK expects all the patches installer related media in a certain directory to roll back)

Update the <MIK\_HOME>/common/media\_pack\_config.properties with the patches that needs to be rolled back.

```
vi /private/downloads/aiacom_manageable_install/common/
media_pack_config.properties
```

### Example:

```
MEDIA_DIRECTORY_ROLLBACK_SOA_PATCHSET="20163149|22524811"
```

Rollback the patches listed in media\_pack\_config.properties :

```
/private/downloads/aiacom_manageable_install/aia_middleware_scripts/aiafp/go_aia_soa_patchrollback.sh
```

4. On the Installer Workstation, review the <MIK\_HOME>/common/media\_pack\_config.properties file:

```
vi /private/downloads/aiacom_manageable_install/common/
media_pack_config.properties
```

Review the file.

Save and Close the file.

5. Configure OS user access and generate media variables in media\_map for AIA SOA patches by executing the config\_access.sh file for AIA Middleware:

```
/private/downloads/aiacom_manageable_install/aia_middleware_scripts/common/config_access.sh
```

**Every time any configuration file is edited for AIA, you must rerun config\_access.sh file.**

6. Apply the AIA SOA patch and redirect the output to a log file:

```
/private/downloads/aiacom_manageable_install/aia_middleware_scripts/aiafp/go_apply_soa_patches.sh 2>&1 | tee /private/aia_soa_patch_install.log
```

## Appendix C: Install OSM and O2A only

This section provides information on installing OSM, its database, corresponding Design Studio and O2A cartridges. The following instructions are useful when up taking a new version of OSM that do not require changes to the rest of the applications in the Reference solution:

1. Uninstall the OSM and its database by executing the **ungo.sh** scripts in the following sequence:

```
/private/downloads/aiacom_manageable_install/osm_scripts/osm/ungo.sh  
  
/private/downloads/aiacom_manageable_install/osm_scripts/database/ungo.sh
```

2. Manually check if any process running from /private
3. Ensure following entry does not exist in /etc/oratab:

```
orcl:/private/aiacom_test_install/oracledb/product/12.1.0/dbhome_1:N
```

4. Remove all directories under /private/downloads/\* except for **aiacom\_manageable\_install**
5. Remove all directories under Application Home - /private/aiacom\_test\_install/\*
6. On the Installer Workstation where the unattended install scripts are extracted, review the <MIK\_HOME>/common/media\_pack\_config.properties file and make the appropriate edits.
7. Configure OS user access (including remote access depending on the topology) and generate media variables in media\_map for OSM installer by executing the **config\_access.sh** file for OSM:

```
/private/downloads/aiacom_manageable_install/osm_scripts/common/config_access.s  
h
```

8. Execute the OSM installer and redirect the output to a log file:

```
/private/downloads/aiacom_manageable_install/osm_scripts/osm/go.sh 2>&1 | tee  
/private/osm_install.log
```

9. Execute the O2C AIA PIP installer and redirect the output to a log file:

```
/private/downloads/aiacom_manageable_install/aiapip_o2c/aiapip_o2c/go_prepare_osm.s  
h.sh 2>&1 | tee /private/go_prepare_osm.log
```

## Appendix D: Enabling Demo scenarios

### TSQ Simulation

This is optional step. In order to enable TSQ simulation, a file named **verifyTSQ.xml** need to be available in **\$DOMAINHOME\TSQ** directory of OSM domain.

Following is the sample content of verifyTSQ.xml to fail TSQ for Site1 with 1 Gbps bandwidth and Site2 with 50 Mbps. Content of xml should be changed accordingly for TSQ failure for desired site and bandwidth.

```
<TSQ>
  <row>
    <SiteBandwidth>Site1:1 Gbps</SiteBandwidth>
  </row>
  <row>
    <SiteBandwidth>Site2:50 Mbps</SiteBandwidth>
  </row>
</TSQ>
```

For example

```
<TSQ>
  <row>
    <SiteBandwidth>Redwood Shores:1 Gbps</SiteBandwidth>
  </row>
  <row>
    <SiteBandwidth>San Jose:50 Mbps</SiteBandwidth>
  </row>
</TSQ>
```

### Revision

During demos, OSM processes orders very fast, which makes it tough to demo “Revision”.

User can introduce manual pause in the work flow by following simple steps mentioned below:

#### Introduce a manual task

- Create a new rule:
  - Navigate to **COM\_SalesOrderFulfillment** Order under **OracleComms\_OSM\_O2A\_COM\_Base** Project.
  - Add a Rule in the Rules tab with below condition:

```
/ControlData/OrderItem/BaseLineItemData/ItemReference/SpecificationGroup/Specification/Value = Charleston
```

- Create a Manual task:

- Navigate to **OracleComms\_OSM\_O2A\_COM\_Provisioning** project and create a manual task (say ProvisioningManualTask) by extending **ProvisionOrderBaseTask**.
  - Assign Permissions to the manual task.
- Change the Process:
  - Navigate to Process named **ProvisionOrderSubProcess** and change the process flow as below:

Start → Rule (assign check\_site condition to the rule)

- true → ProvisioningManualTask → Next → ProvisionOrderSIEntryPointTask
- false → ProvisionOrderSIEntryPointTask