FCUBS Process Flow Deployment
Oracle FLEXCUBE Universal Banking
Release 14.4.0.2.0
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ORACLE
FINANCIAL SERVICES

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1. Introduction

1.1 Background

This document provides detailed description on deploying FCUBS BPEL process flows onto a weblogic server configured with soa suite components .This document will cover different approaches for deploying a process.The audience for this document will be the deployment teams of FCUBS BPEL process flows

1.2 Organization of the Document

The first chapter of this document gives an introduction with brief background and organization of the document. Subsequent chapters of this document will give the details of the various deployment options.

1.3 Acronyms and Abbreviations

Acronyms	**Description**
BPEL	BPEL Process Flow
BAM	Business Activity Monitoring
SOA Application	With Fusion middleware 12c BPEL process flows becomes part of a SOA Composite application.

2. Oracle JDeveloper IDE

2.1 Introduction

Oracle JDeveloper is the IDE used for BPEL process design and development. It's recommended that the version of JDeveloper used should be in sync with the Oracle SOA suite that is used for BPEL runtime. E.g. (Oracle SOA suite – 12.2.1+ Oracle JDeveloper 12.2.1). Though different versions of Oracle SOA suite and JDeveloper might be compatible it is recommended to go through the releases notes and documentation prior to their usage.

2.2 Obtaining JDeveloper IDE

Oracle JDeveloper IDE can be downloaded from oracle website, the hyperlink provided might have been updated. Please check appropriate location prior to download and refer installation and release notes documentation of Oracle JDeveloper for Installation instructions.

http://www.oracle.com/technetwork/middleware/bpm/downloads/index.html

https://edelivery.oracle.com/osdc/faces/SearchSoftware

Run fmw_12.2.1.2.0_bpm_quickstart.jar to install jdeveloper with bpm enabled.

3. Creating Application server connection

3.1 Introduction

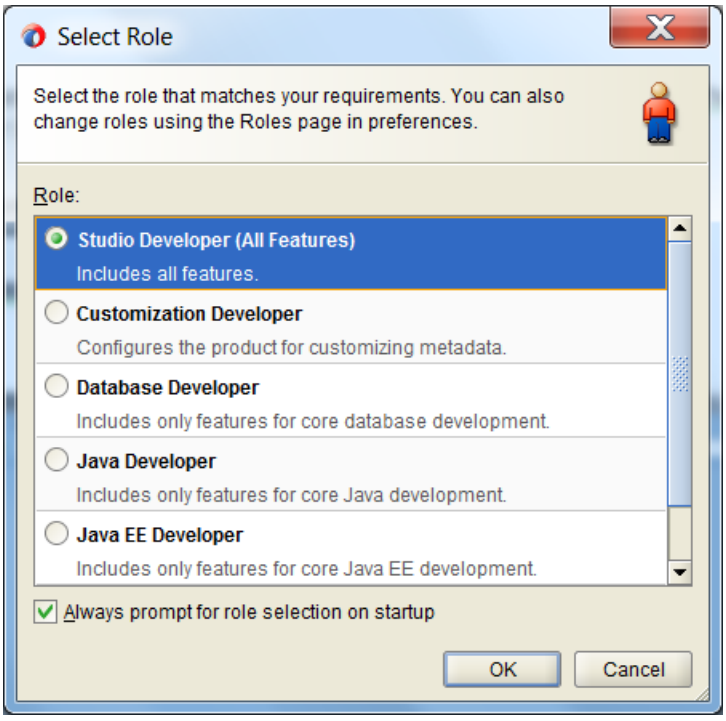
Oracle JDeveloper supports deployment of BPEL process flows to WebLogic application servers via JDeveloper application server connection.

3.2 Application Sever Connection

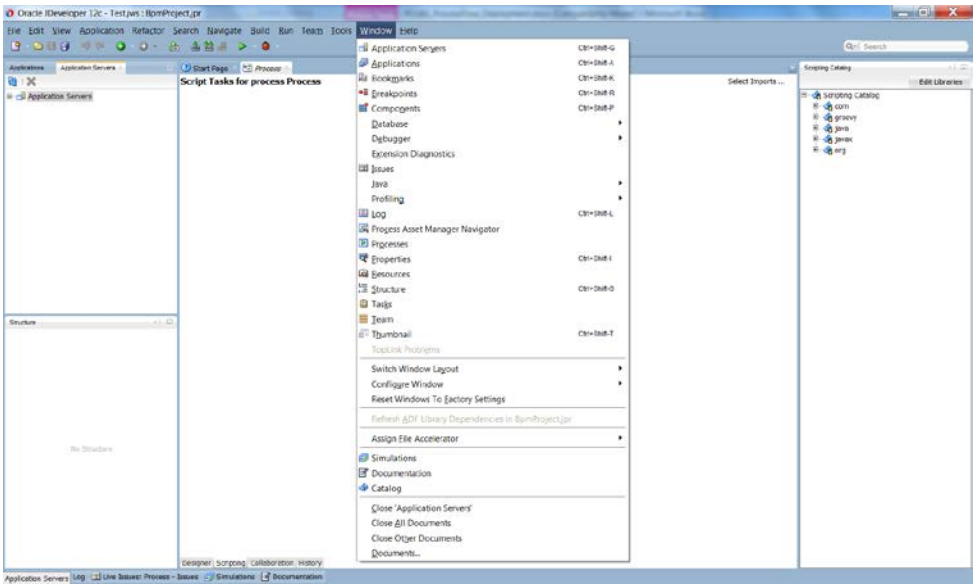
After JDeveloper has been updated with SOA extension, The IDE can be launched from 'Programs' menu or installation location.

Search 'Oracle JDeveloper Studio' in All Programs to launch JDeveloper

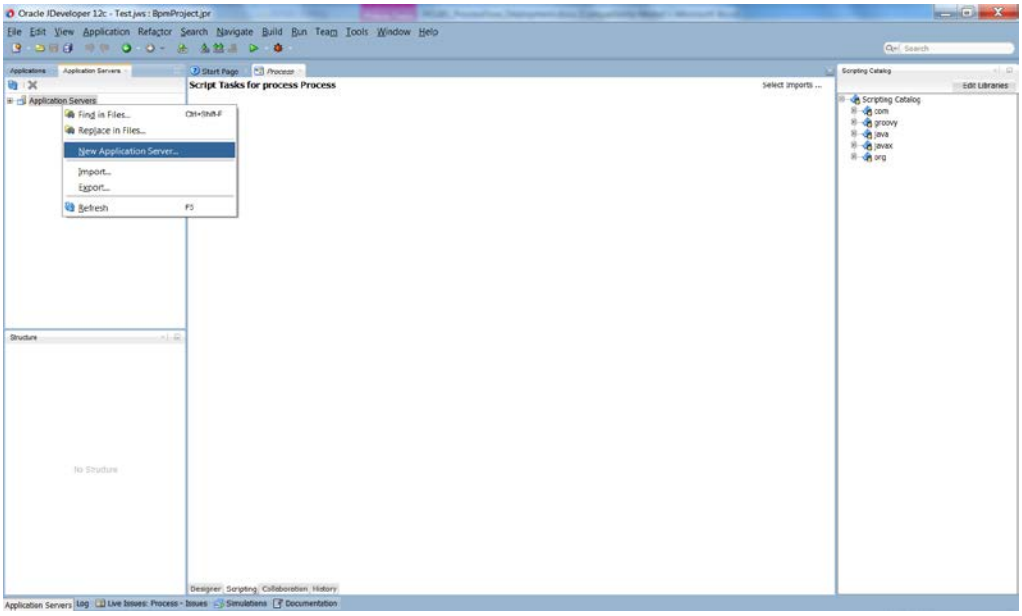
Select the role as Studio Developer



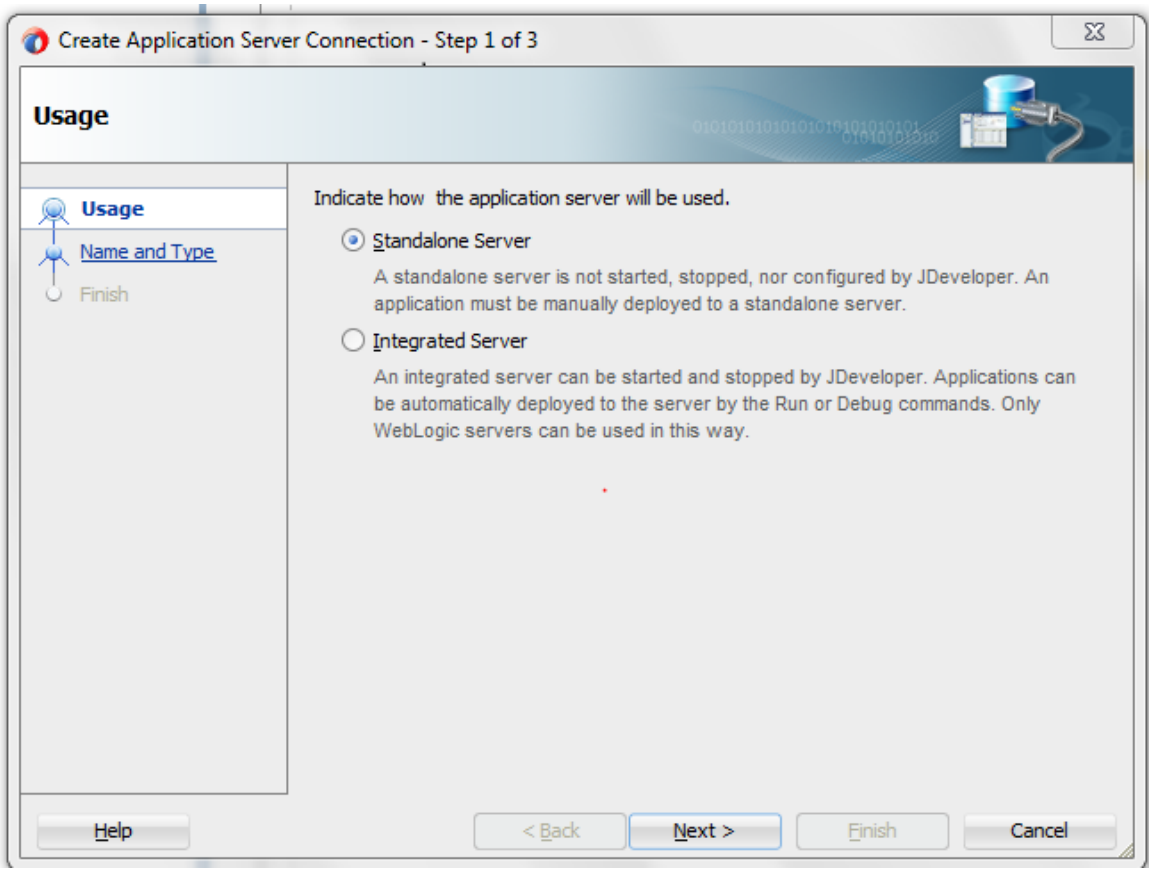
- After JDeveloper is launched
- Click on → windows → Application Servers Navigator



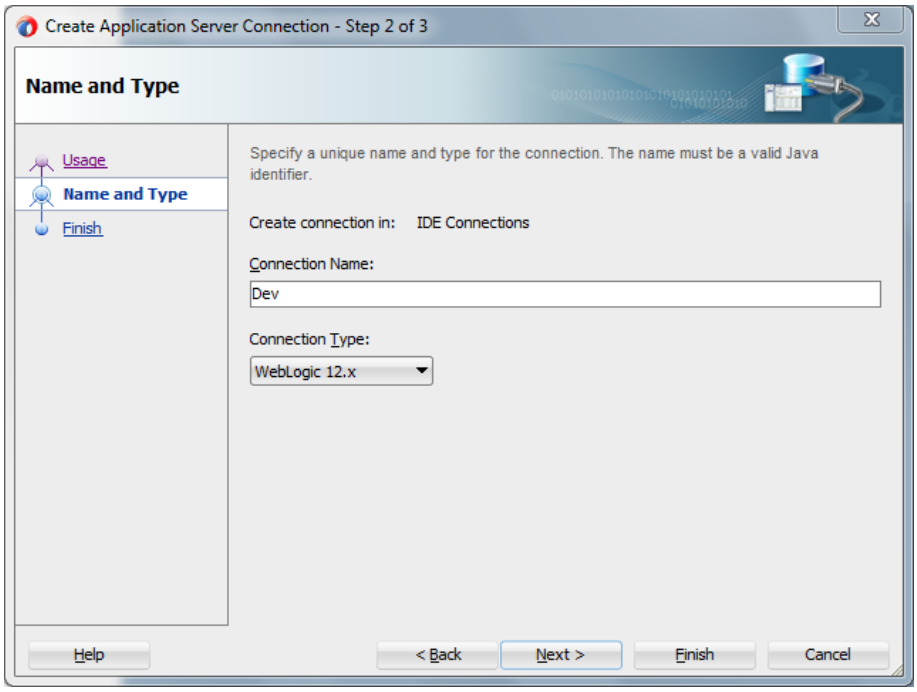
- To create a new WebLogic server connection
- Right click 'Application Servers'
- Click on → New Application Server



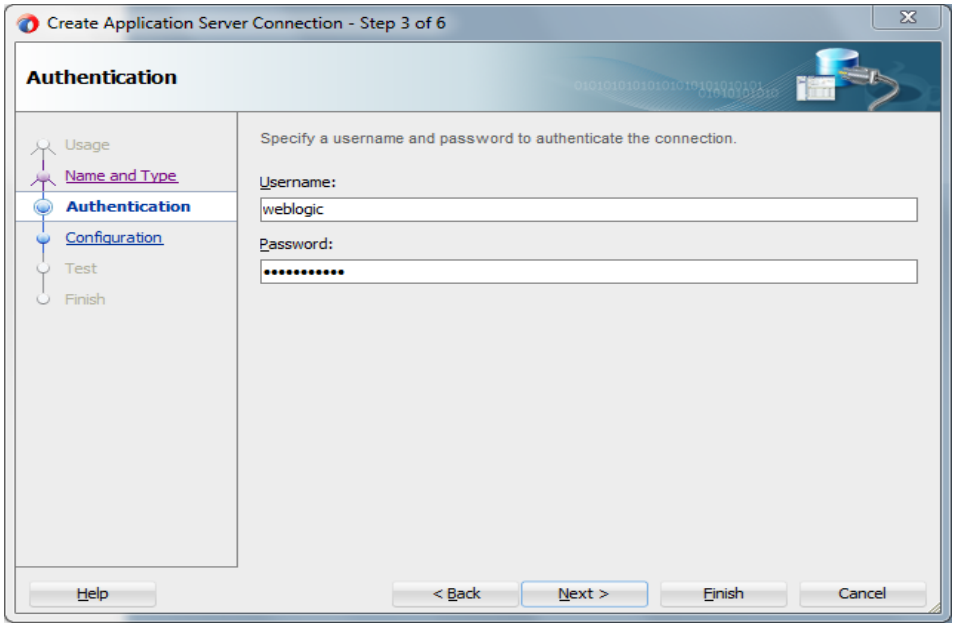
- The "Create Application Server Connection" wizard is launched as shown below.
- Select the Radio button "Standalone Server"
- Click "Next" to proceed with the configuration



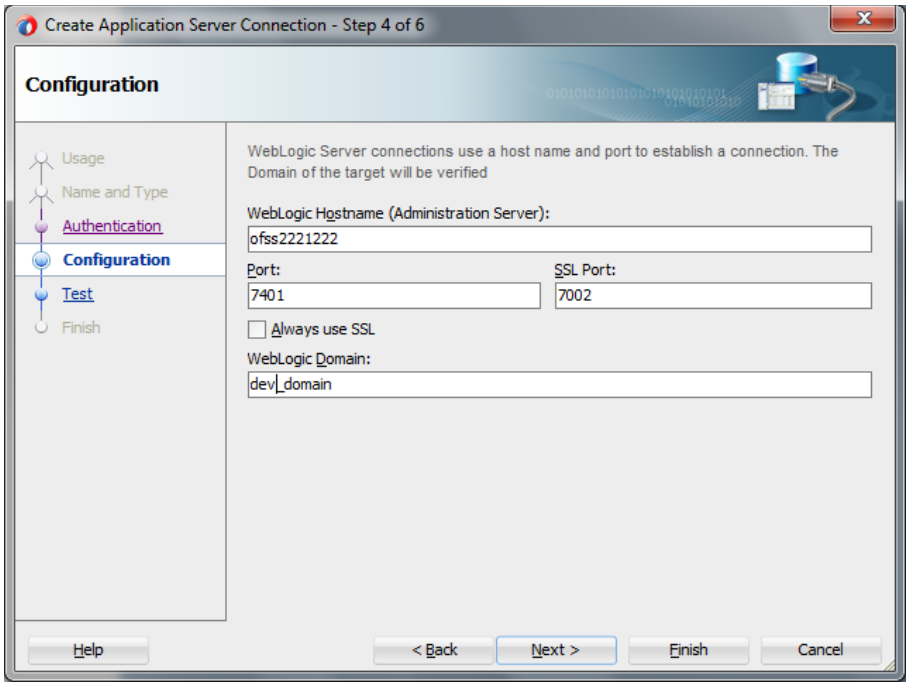
- Provide a ”Connection Name” to identify the server connection.
- Provide the ”Connection Type ” to identify the server type.
- Select “WebLogic server <version>”
- Click “Next” to proceed with the configuration



- Provide username / password to connect to the server
- The same username / password that was used while configuring the server is used.
- Click “Next” to proceed with the configuration



- Provide the WebLogic server hostname and the port number of the Admin server.
- Provide the domain name under which the server has been configured.
- Click “Next” to proceed with the configuration



- Click on the ‘Test Connection’ to ensure the configuration is done correctly.
- All the tests should go thru and indicate “success” as shown below that will indicate a correct configuration
- Click “Finish” to proceed and complete the configuration

4. Loading FCUBS Process flows in Oracle JDeveloper

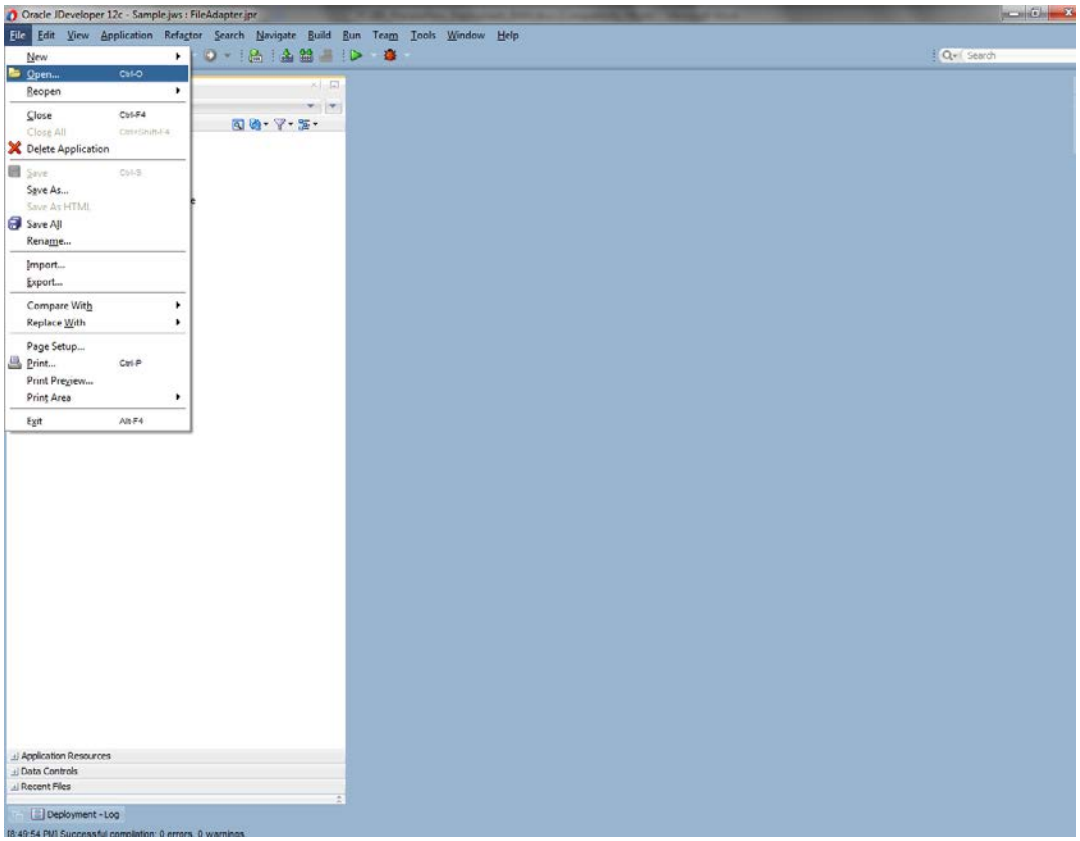
4.1 Introduction

The FCUBS BPEL process flows that are to be deployed needs to be obtained from the release area and unzipped into a folder location.

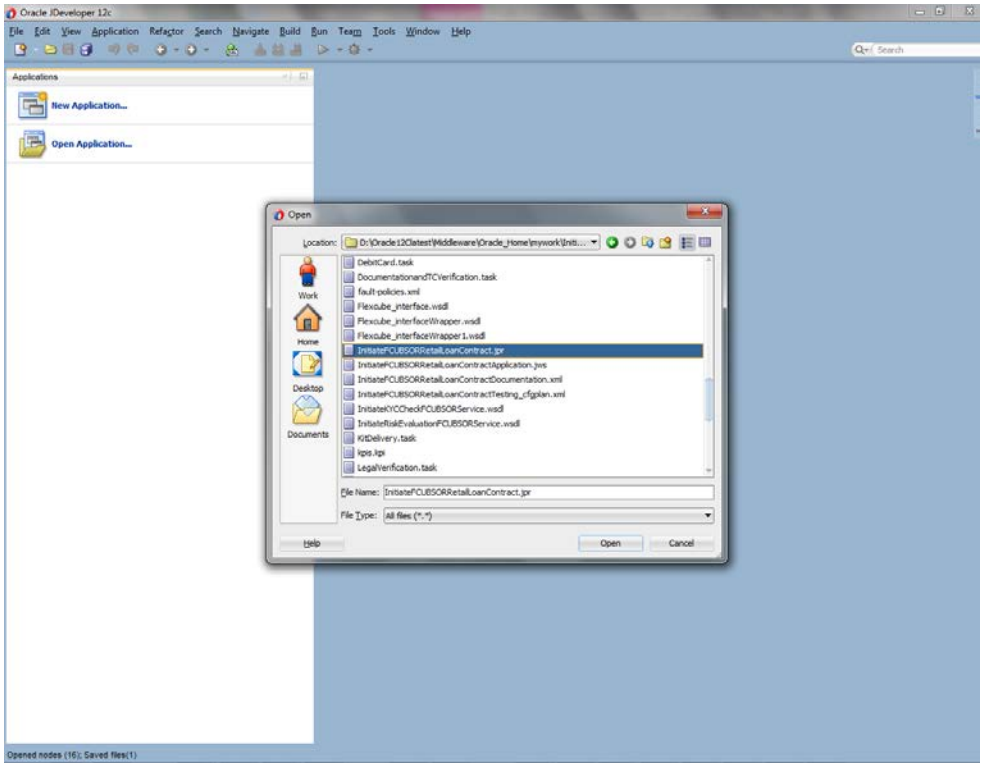
4.2 Loading the Process

After JDeveloper IDE is launched from 'Programs' menu or installation location.

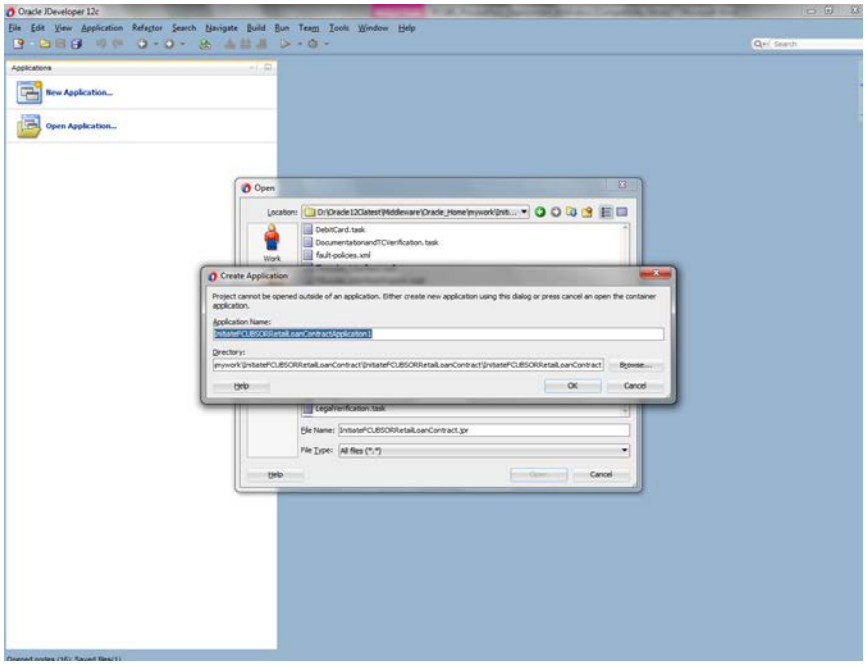
- Click on → File → Open



- Navigate to the folder where process flow is deployed
- Locate and select the ".jpr" file under the folder <process_name>
- Click 'Open' to load the process flow in JDeveloper

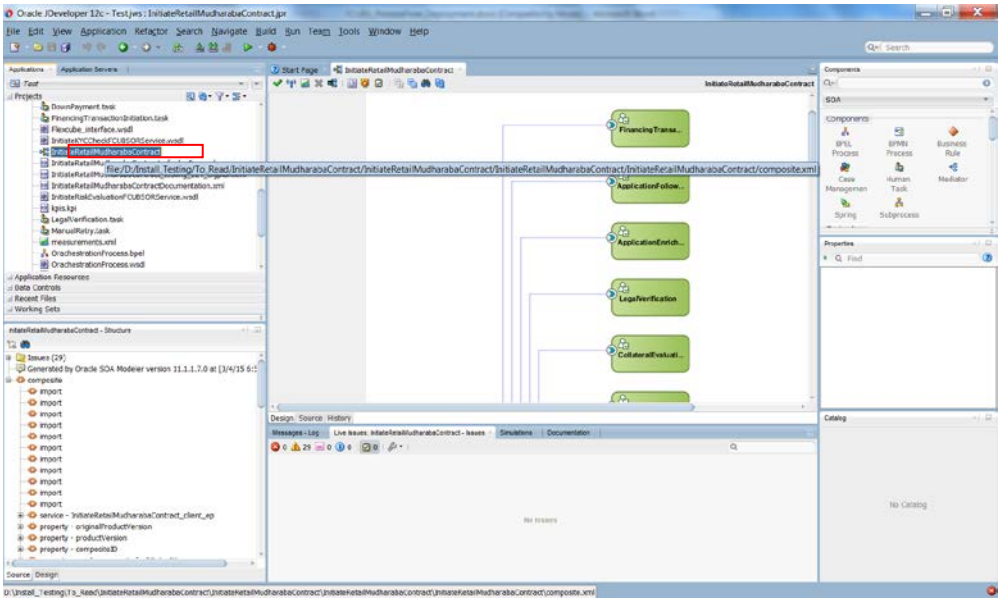


- If this is the first Process flow that is being loaded JDeveloper will prompt for an Application Name and Location where the application file will be stored
- Provide an application name and folder path for the same.
- Click in “Ok” to proceed with loading of the process flow.

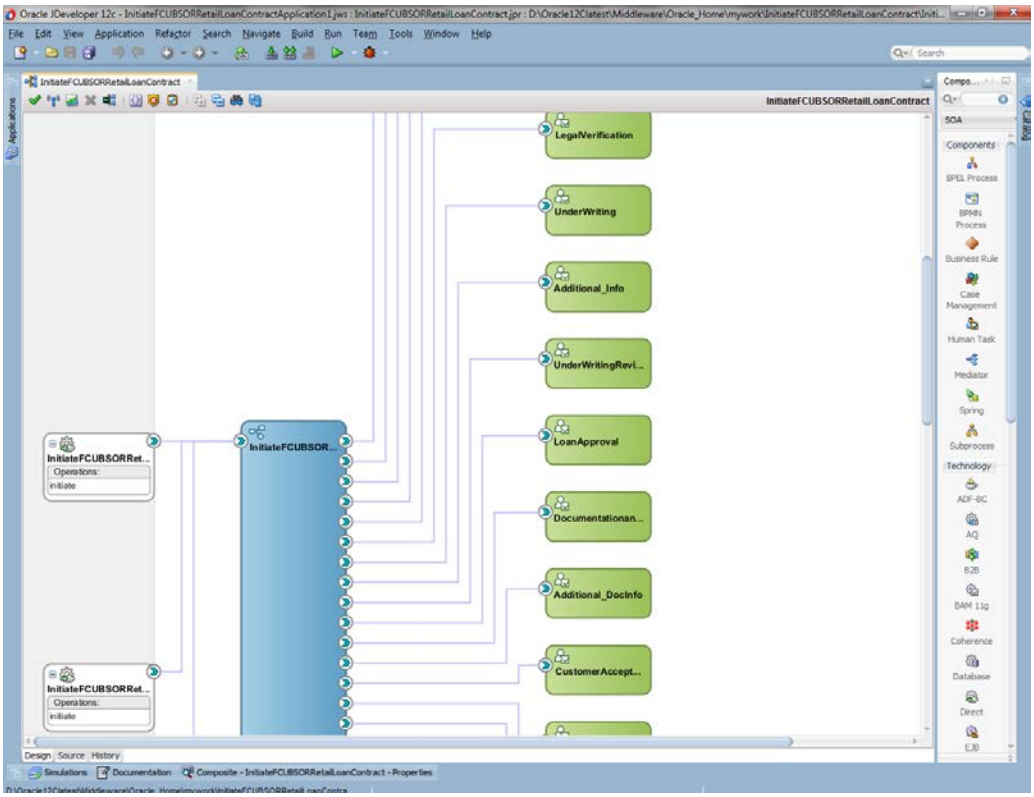


- The process flow is loaded into JDeveloper and is displayed as given below

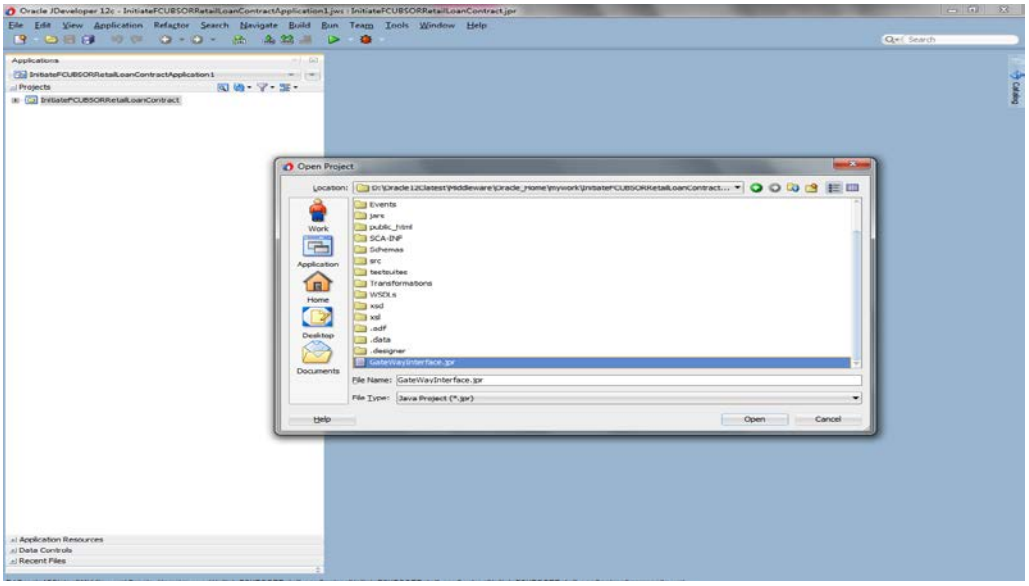
- Expand the project loaded and click on the composite.xml



- Clicking on the “composite.xml” under “SOA” in Design mode will display the process flow as illustrated in the screen shot.



- All the required process flow can be loaded in the similar fashion from File Menu into the same application.



- After all the necessary process flows are loaded, all process flows will be displayed in the "Application Navigator" menu as illustrated in the screen shot.

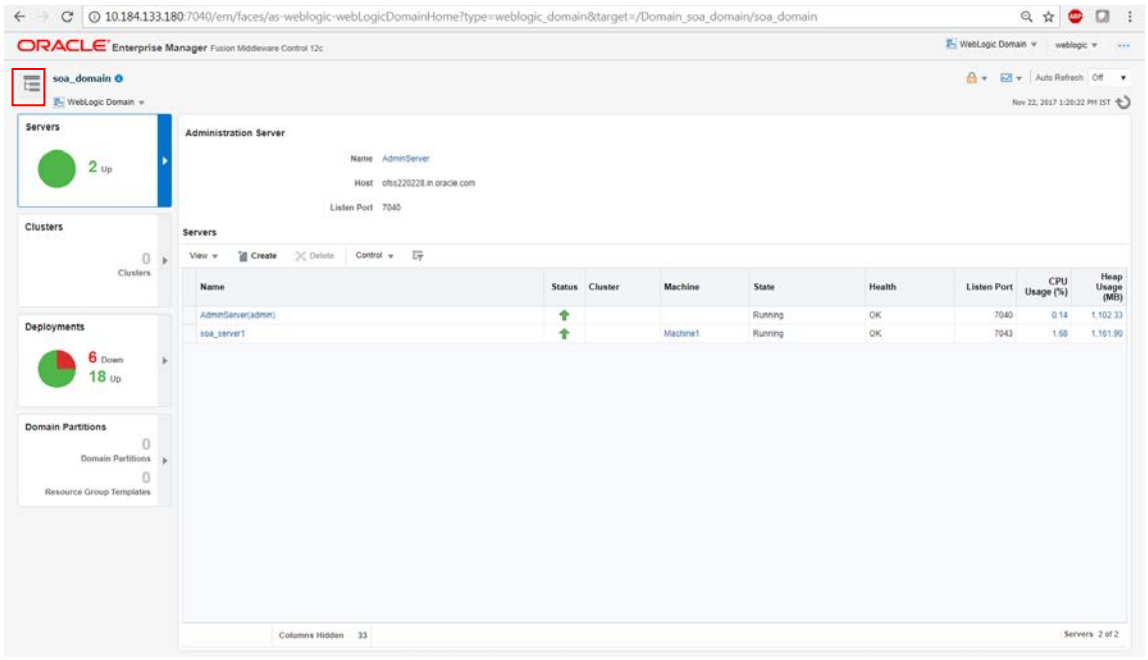
In case of Dependent Process Flows like InitiateFCUBSORRetailLoanContract, having other Process Flows as services and subprocesses the composite.xml file has to be modified with the runtime wsdl location of the subprocess (like BIPUtility).

To obtain the runtime wsdl, em console has to be launched and input the user name and password for the SOA Domain.

The deployed process can be verified by checking if the process is showing up in the SOA Suite enterprise manager console.

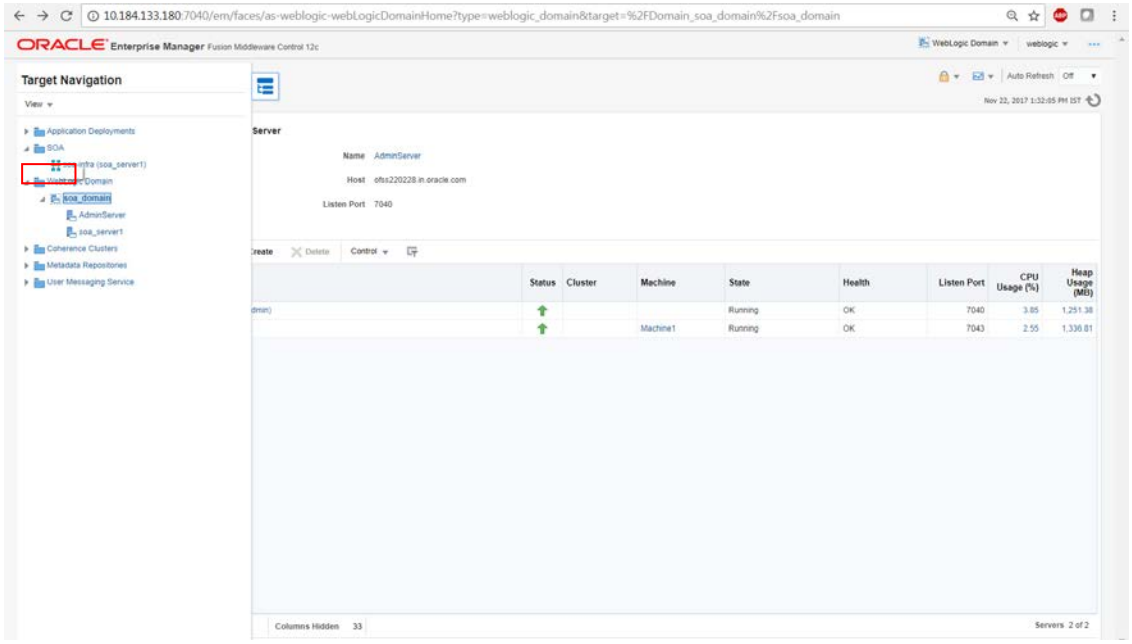
Login to http://<hostname>:<port>/em

This opens the application as in the below screenshot. Now, click on Target Navigation (highlighted in the below screenshot)

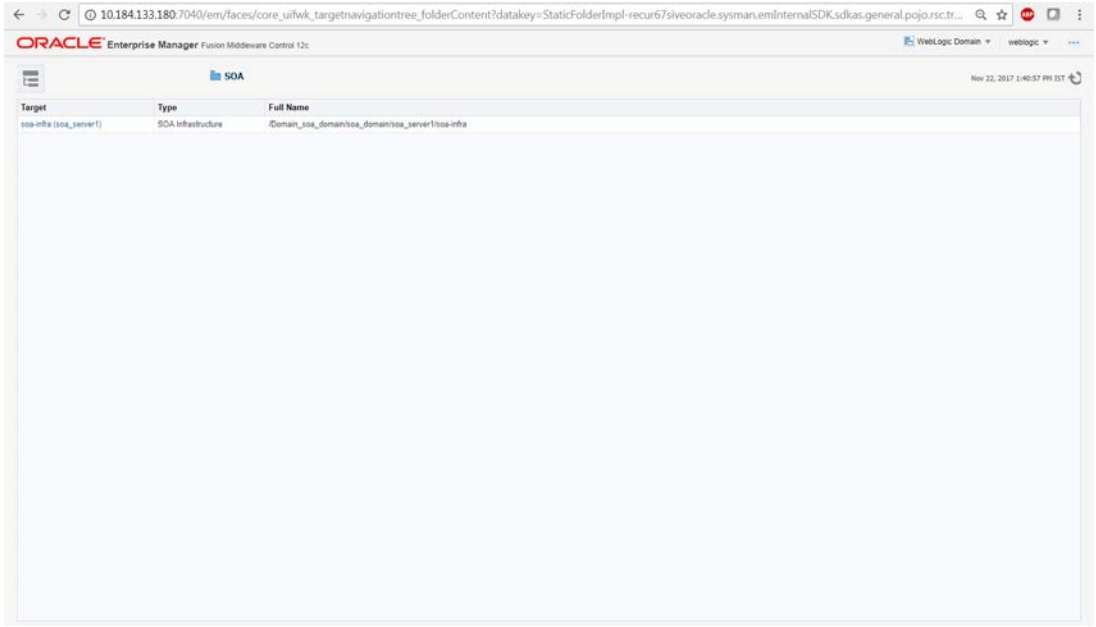


Upon opening the Target Navigation, user is presented with the below set of screens in sequence before getting the WSDL

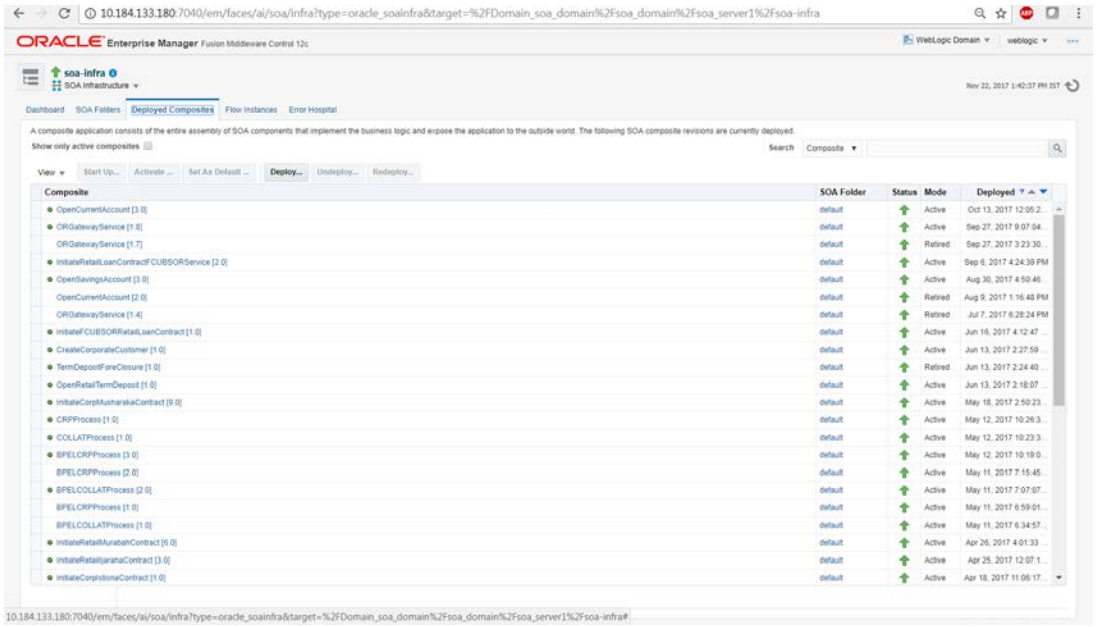
Click on SOA



Click on the Target SOA server

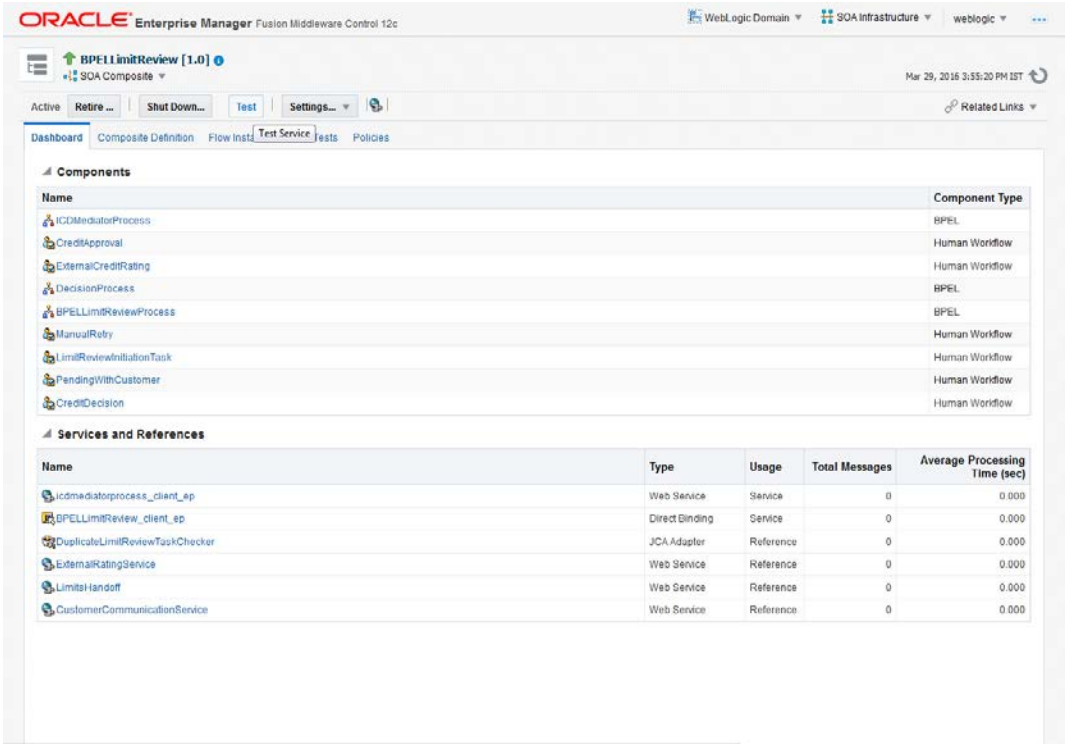


Move to deployed composites, click on the corresponding utility/ sub process

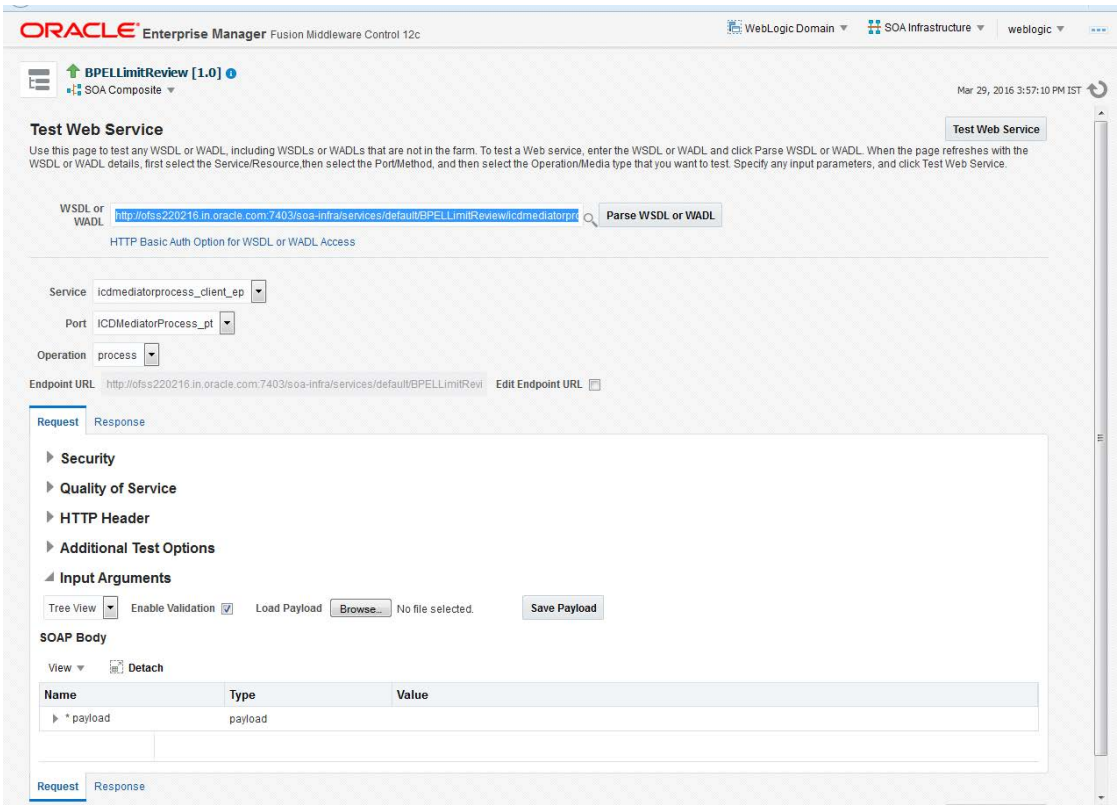


The Runtime wsdl is obtained from the em console as shown in the screen shot.

- In the em console, click the process for which runtime wsdl is required and click on Test.



- We can obtain the runtime wsdl for the process as shown below in the screen shot.



- Now we replace this runtime wsdl in the composite.xml of the process as shown in the screen shot for that particular subprocess. Click on the source tab(highlighted in the screenshot) to view the xml code of the process

5. Deployment Profile and Configuration Plan

5.1 Introduction

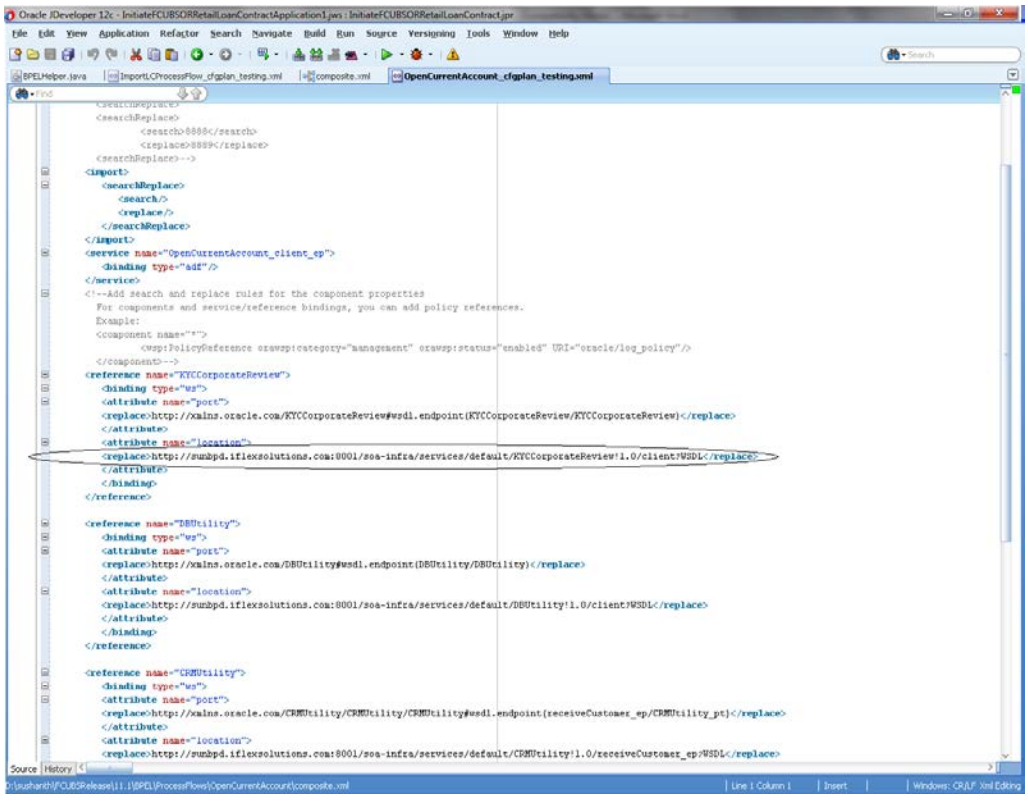
A deployment profile is automatically created for all FCUBS Process flows. The application profile includes the JAR files of SOA projects.

The configuration plan enables us to define the URL and property values to use in different environments. During process deployment, the configuration plan is used to search the SOA project for values that must be replaced to adapt the project to the target environment.

5.2 Updating the configuration plan

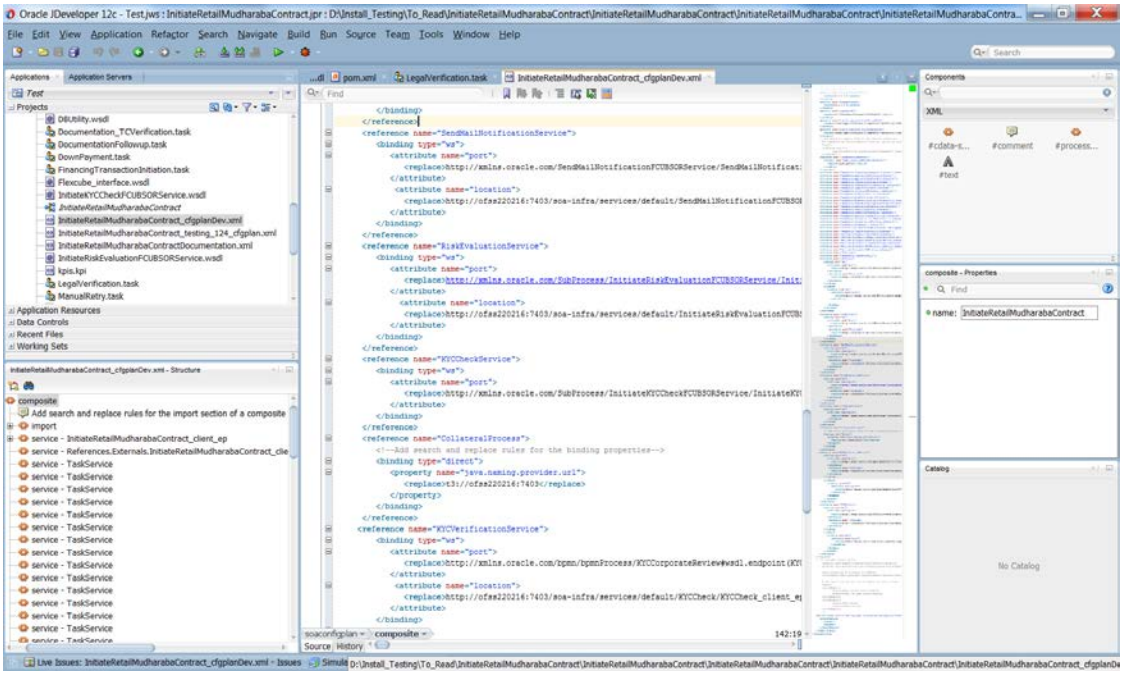
All the FCUBS process flows has been developed with three configuration plans with the following naming convention for development, testing & production environments. If there are no configuration plans in any process flow, it simply means that there are no replacement values that needs to be replaced in the project and that project can be deployed without any config plans.

Expand the Application -> SOA -> <processflow_name>_cfgplan_dev.xml



In the configuration plan we need to give the latest runtime wsdl location of the subprocesses if present. The runtime wsdl location is obtained as mentioned earlier from the em console.

	**The soaconfigplan.xml, if present in the project also have to be updated with the runtime wsdl location of the subprocesses since this will be referred by the process in runtime.**



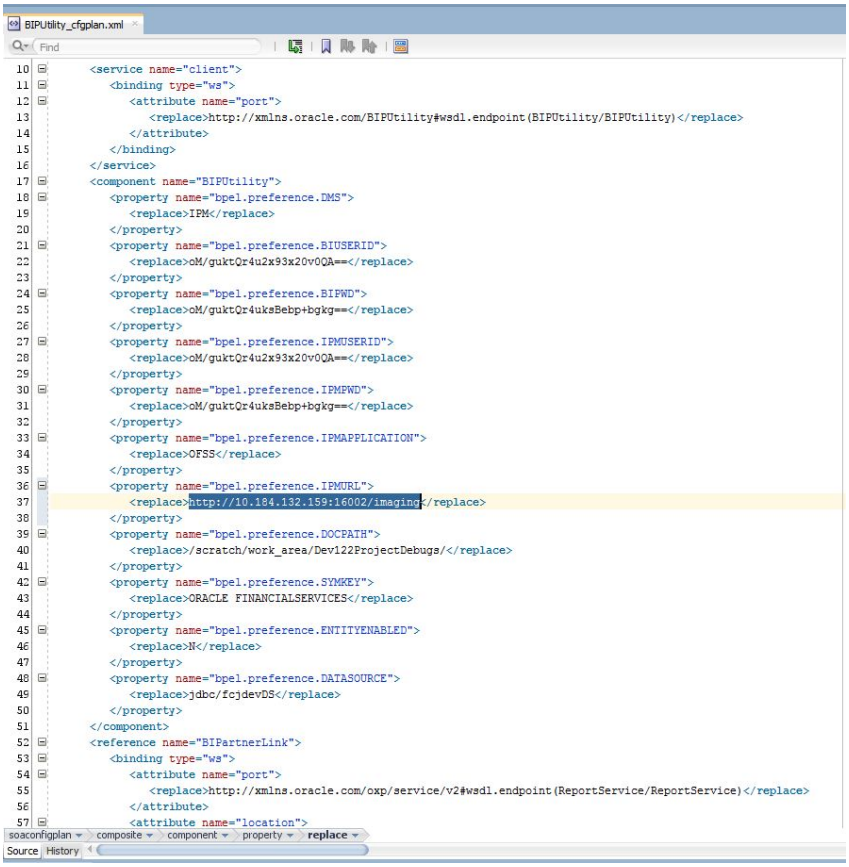
5.3 Config plan changes for BIPUtility process.

Open the BIPUtility_cfgplan.xml and copy corresponding values for the below mentioned properties from fcubs.property file.

Config_plan property	fcubs.properties
bpel.preference.BIUSERID	BI_USER
bpel.preference.BIPWD	BI_PASSWORD
bpel.preference.DOCPATH	BPEL_DOC_PATH
bpel.preference.SYMKEY	SYMMETRIC_KEY
bpel.preference.ENTITYENABLED	'Y' to enable entity OR 'N' to disable entity

bpel.preference.DATASOURCE	Map the Datasource JNDI name which is mapped for entity in the property file.
bpel.preference.IPMUSERID	Enter IPM Login Username
bpel.preference.IPMPWD	Enter IPM Login Password
bpel.preference.IPMAPPLICATION	Please provide IPM application (Which will be created after login to IPM application). Eg: OFSS or FLEXCUBE
bpel.preference.IPMURL	IPM Url upto 'imaging. Eg: http://10.184.132.159:16002/imaging

Refer sample screen shot.

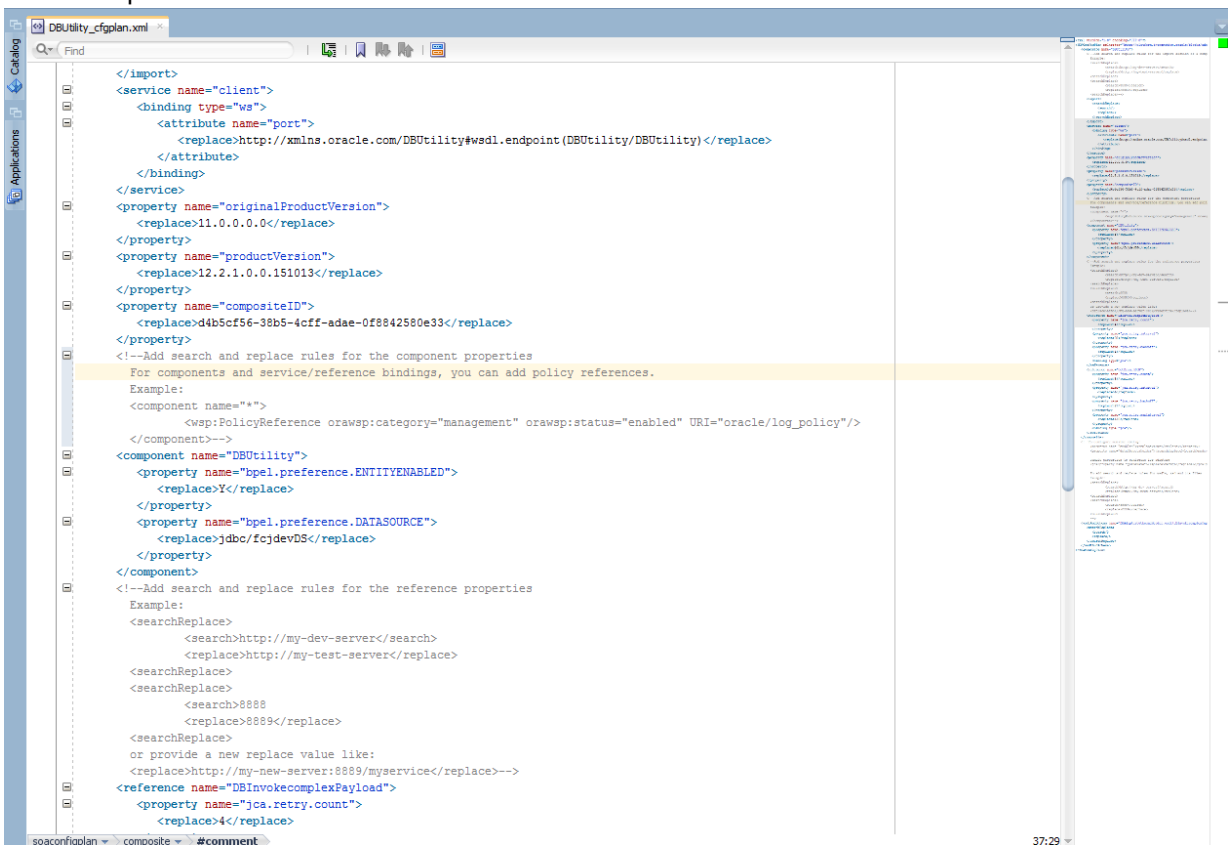


5.4 Config plan changes for DBUtility process.

Open the DBUtility _cfgplan.xml and copy corresponding values for the below mentioned properties.

Config_plan property	Property Values
bpel.preference.ENTITYENABLED	'Y' to enable entity OR 'N' to disable entity
bpel.preference.DATASOURCE	Map the Datasource JNDI name which is mapped for entity in the property file.

Refer sample screen shot.

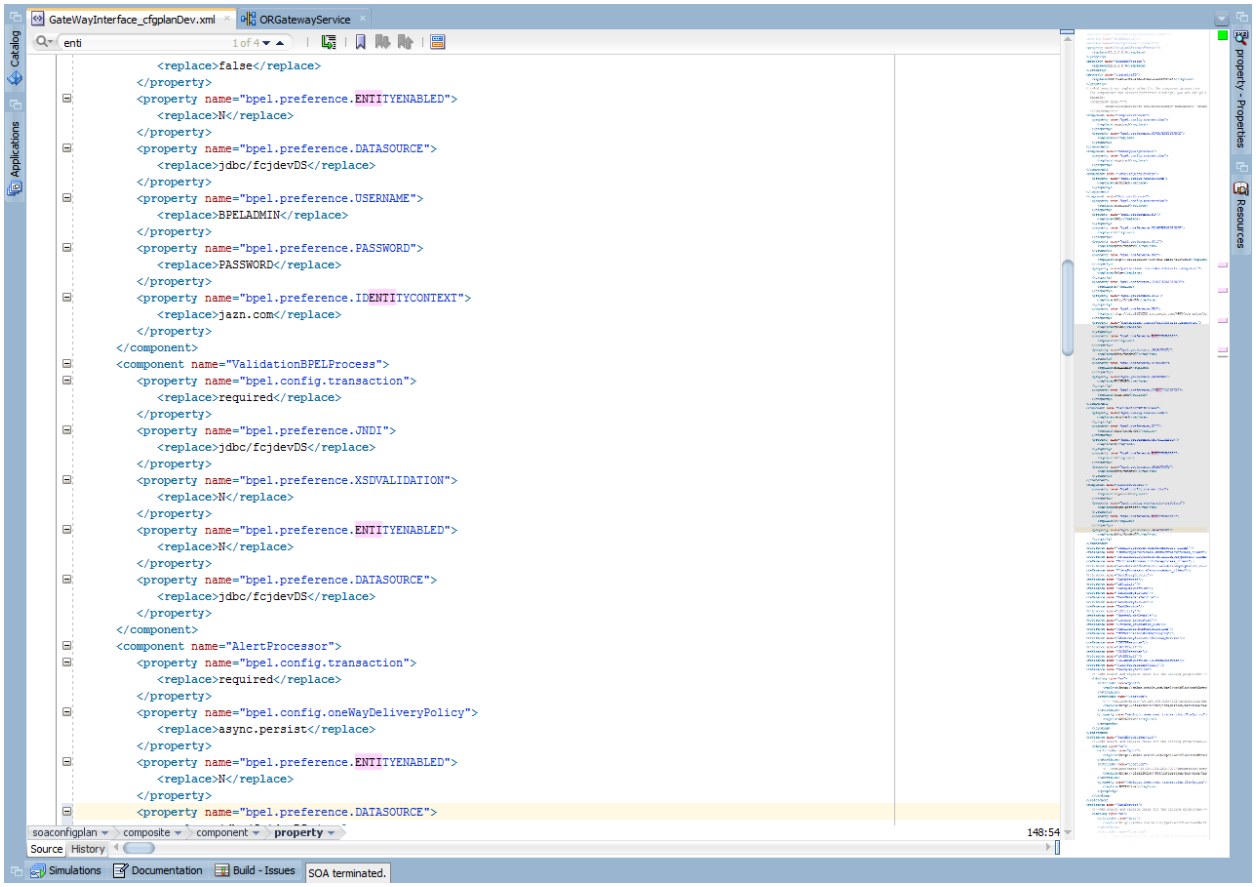


5.5 Config plan changes for Gateway process.

Open the GateWayInterface_cfgplanDev.xml and copy corresponding values for the below mentioned properties.

Config_plan property	Property Values
bpel.preference.ENTITYENABLED	'Y' to enable entity OR 'N' to disable entity
bpel.preference.DATASOURCE	Map the Datasource JNDI Name which is mapped for entity in the property file.

Refer sample screen shot.

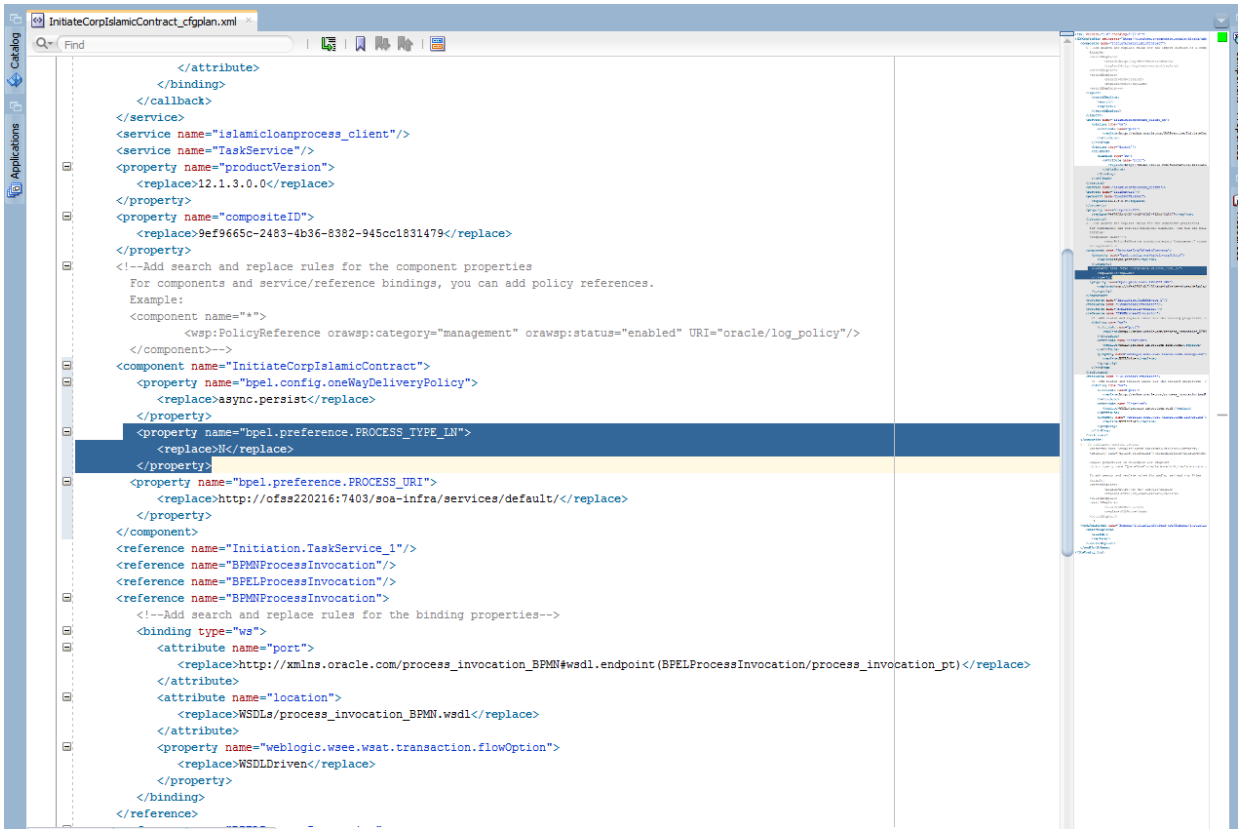


5.6 Config plan changes for InitiateCorpIslamicContract process

Open the InitiateCorpIslamicContract_cfgplan.xml and copy corresponding values for the below mentioned properties to initiate BPEL or BPMN process from Common process.

Config_plan property	Property Values
bpel.preference.PROCESS_TYPE_LN	Set value as ‘ L’ to initiate BPEL Process from Common Process
bpel.preference.PROCESS_TYPE_LN	Set value as ‘ N’ to initiate BPMN Process from Common Process

Refer sample screen shot.



5.7 Updating the Datasource name

The config.properties file, if present in the project of any of the sub processes, has the encrypted datasource name. This should be same as the one given in the fcubs.properties file while building the EAR .

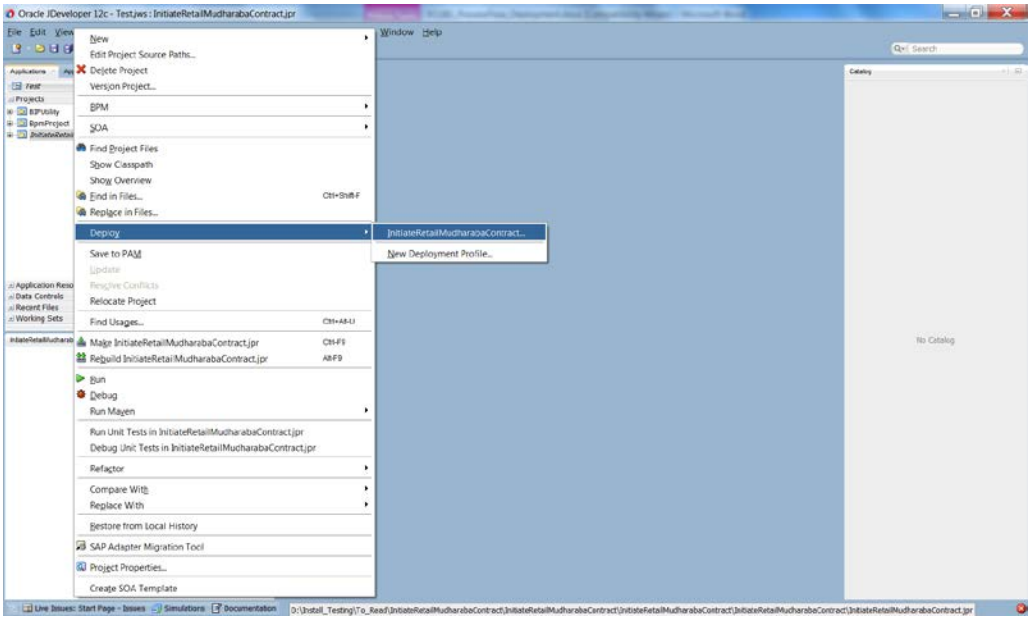
6. Deploying a Single Composite application using JDeveloper

6.1 Introduction

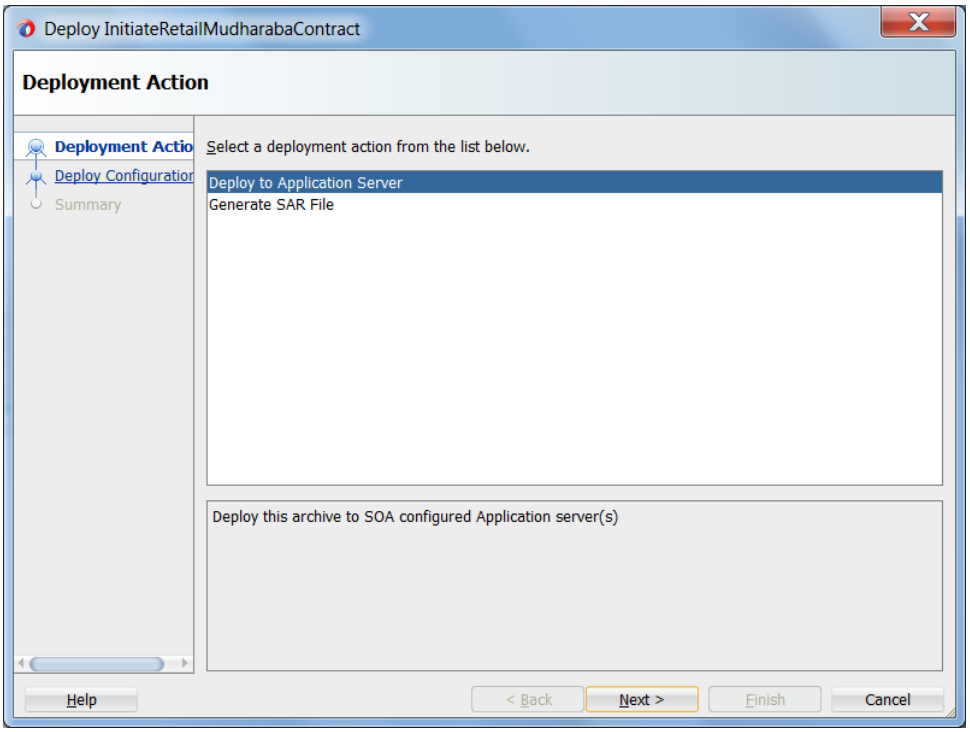
This section describes how to deploy a single SOA composite application with Oracle JDeveloper after completing updating of config plans with respective target environment replacement values.

6.2 Deploying the Application

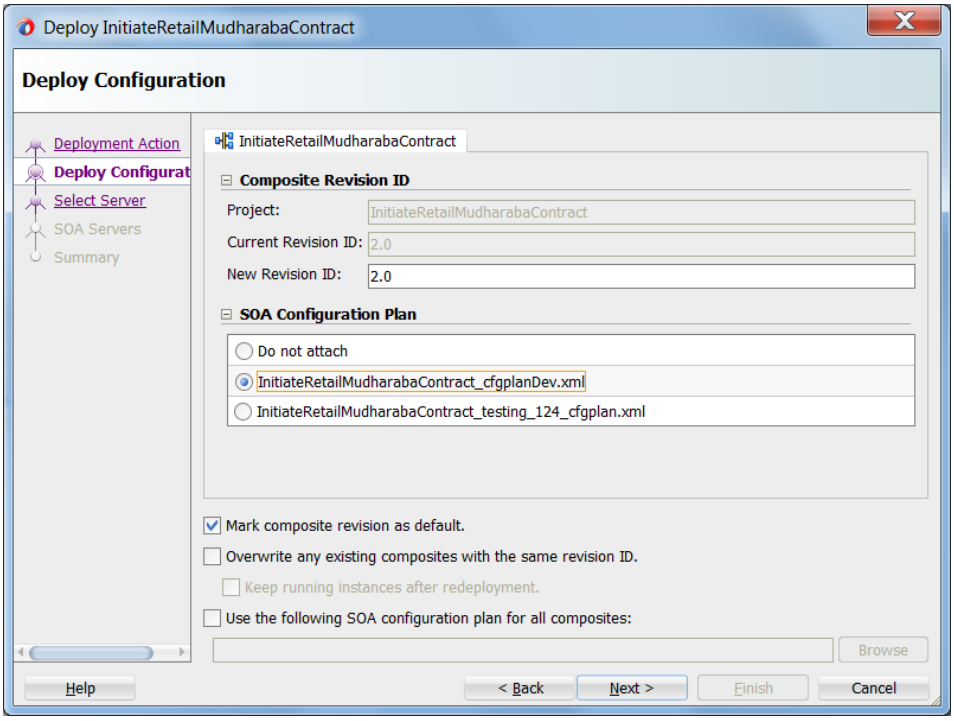
- Right click on the Application that needs to be deployed.
- Select 'Deploy' and then click on the default deployment profile which is the same as the application name.
- This will result in the deployment wizard screen being launched.



- The wizard shows the "Deployment Action" screen .Select 'Deploy to Application server' and click 'Next'



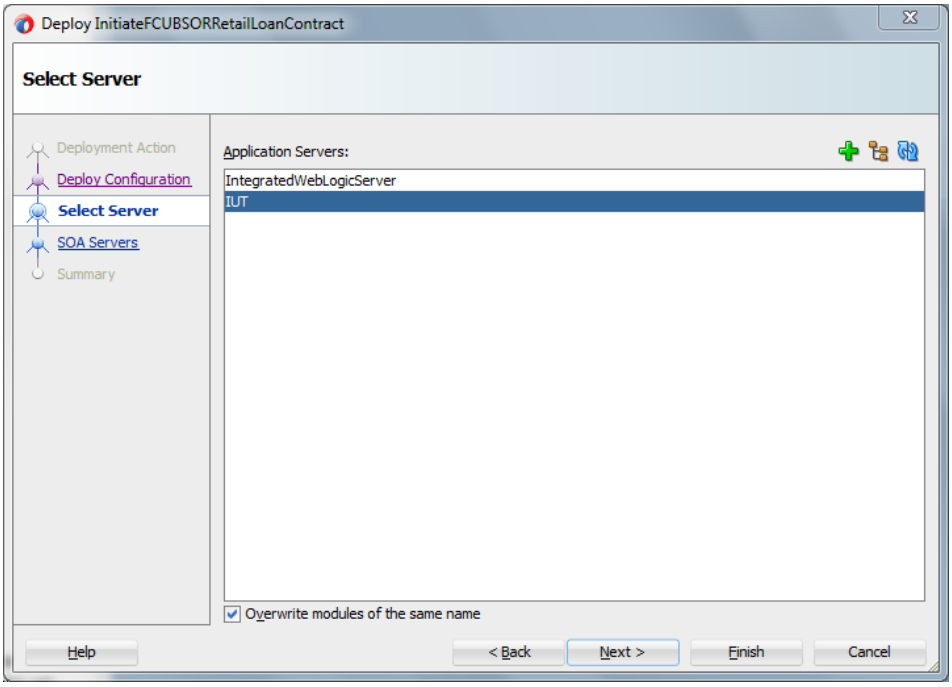
- Deployment configuration is done as illustrated in the below screen shot
- Select a Revision with which the deployment should happen
- Select a ” Configuration Plan” that was updated as given in Section 5
- Provide a new revision ID. It should be always higher than the earlier revision of the process flow like 1.0, 2.0,3.0 etc
- Check the checkbox “Mark composite revision as “default”
- Uncheck the checkbox “Overwrite any existing composites with the same revision ID”
- Click “Next” to proceed with the deployment.



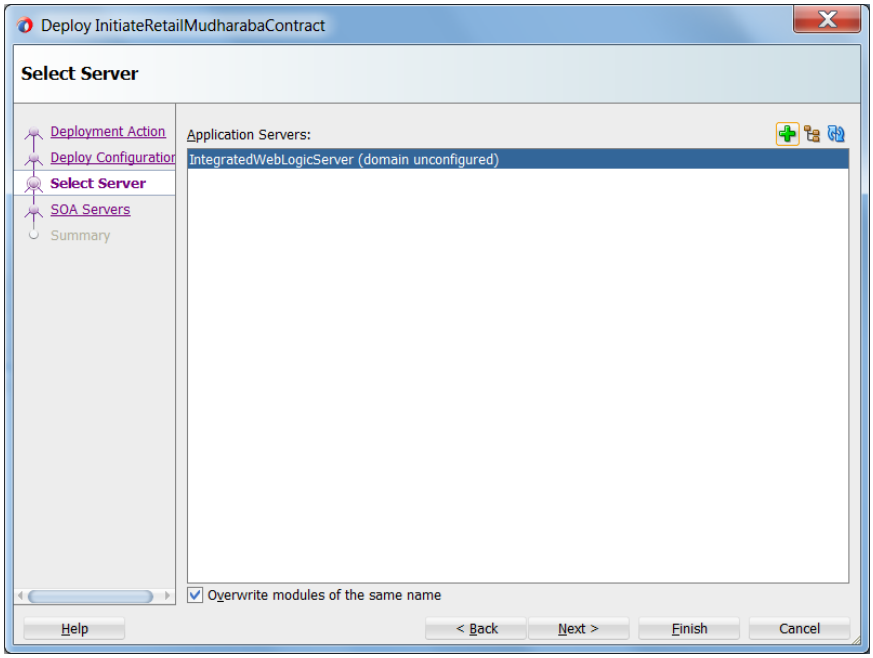
- Select the Application server ‘Server Connection’ configured that was done in Section 3 to which the deployment needs to be done
- Click ‘Next’ to proceed with the deployment.

Note :

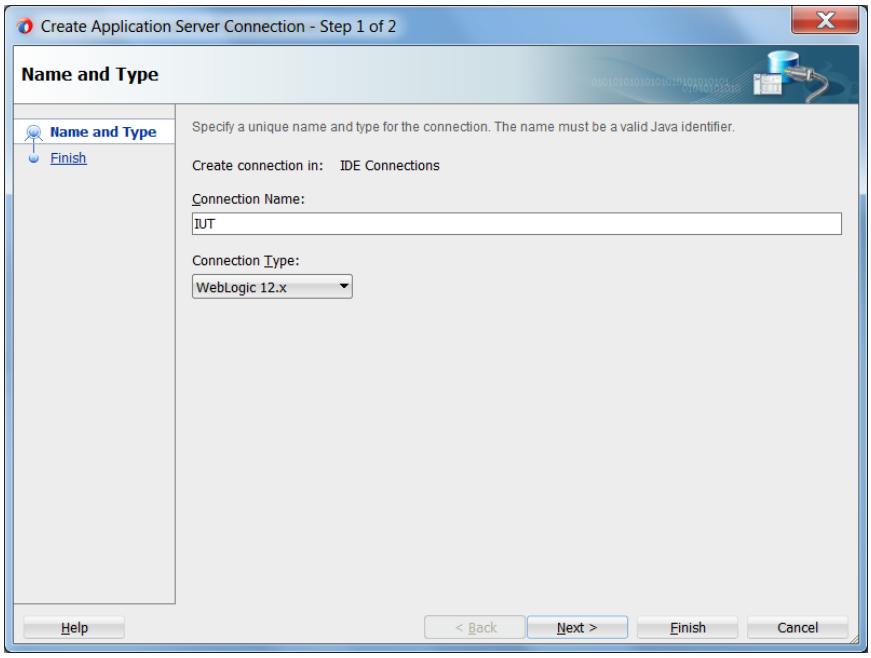
In case “Overwrite any existing composites with the same revision ID” checkbox is checked during the deployment, the active tasks which are currently running on the current revision of the process flow will be moved to “Stale” task status. The tasks which are in “Stale” status will not be displayed in the FLEXCUBE Application (under Task tab). Make sure that, before deploying the process, the “Overwrite any existing composites with the same revision ID” checkbox should be unchecked.



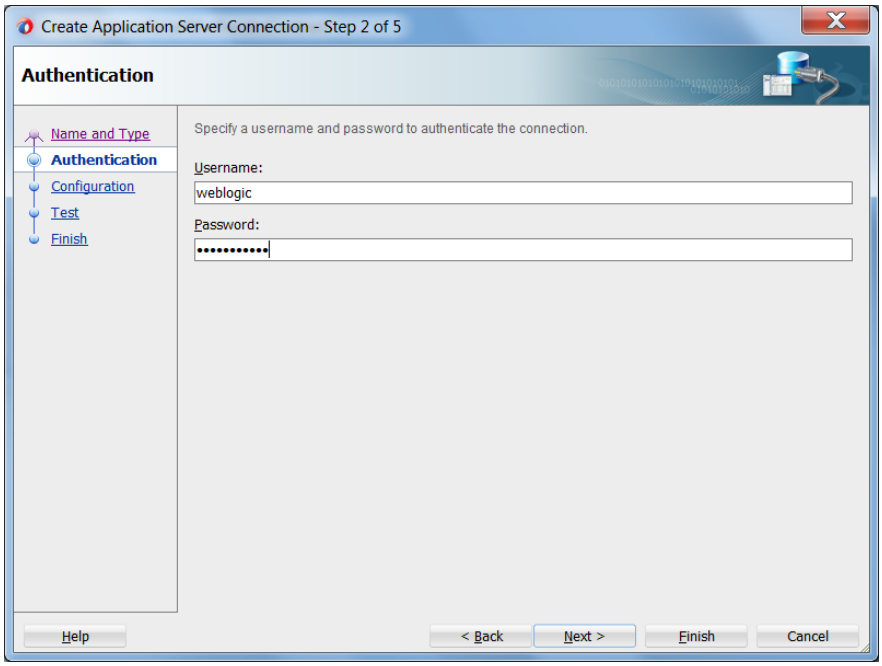
- Select the Application ‘server’ to which the deployment needs to be done.
- If the application server is not configured, it needs to be added by clicking on the ‘+’ button on the right top corner



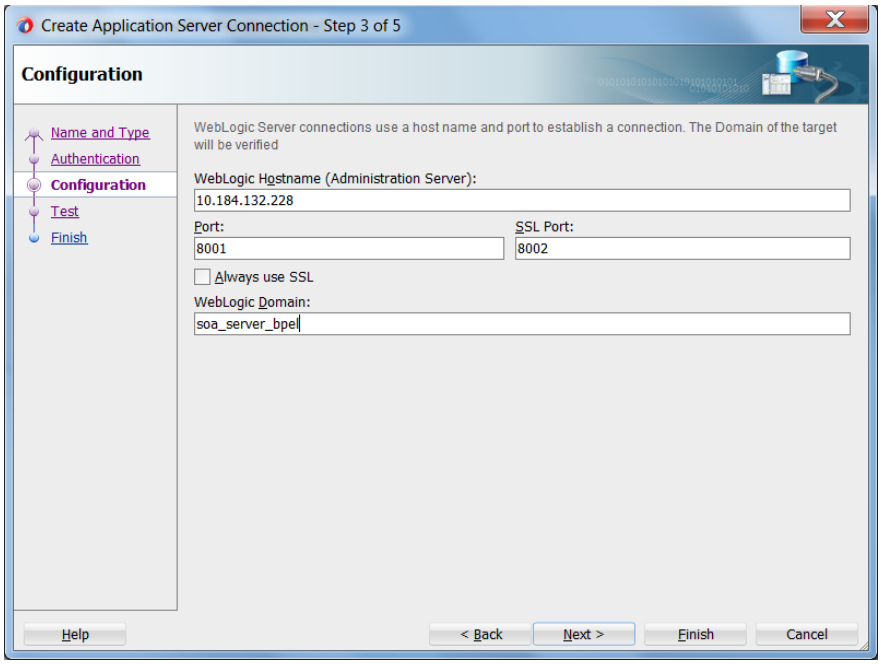
- Input the connection name and the connection type based on the weblogic console configured before and click next



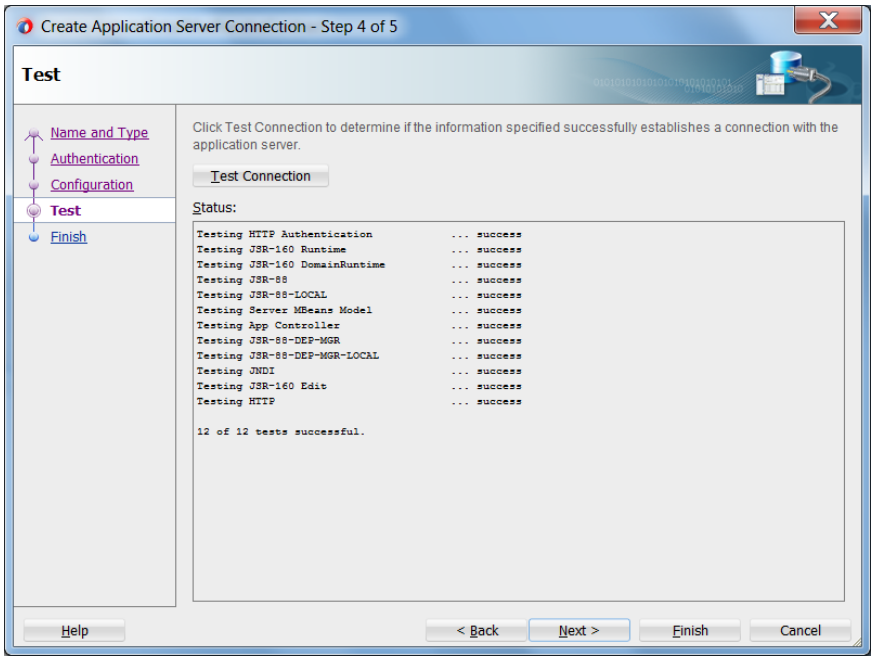
- System prompts for the weblogic password, proceed with next after inputting



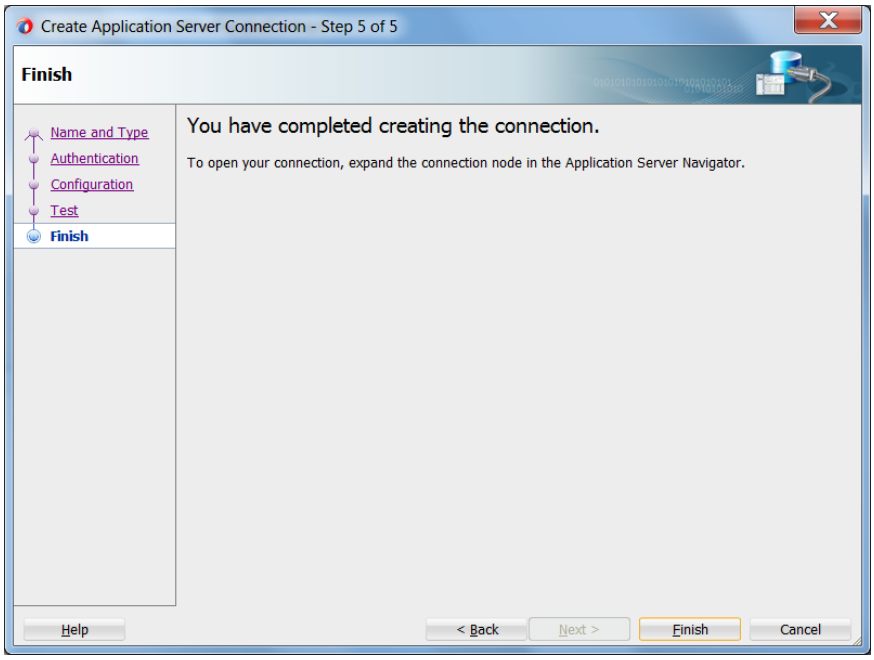
- Enter the Weblogic Hostname of the adminserver, port and domain details and click on next



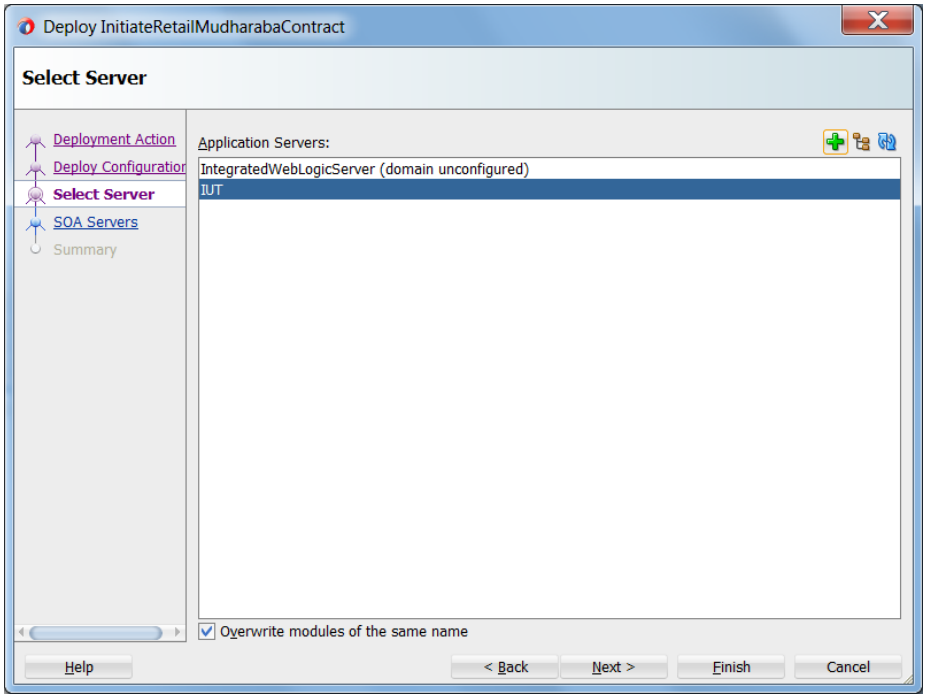
- Click on the Test Connection button to verify whether the details inputted are
- validated for the deployment of process



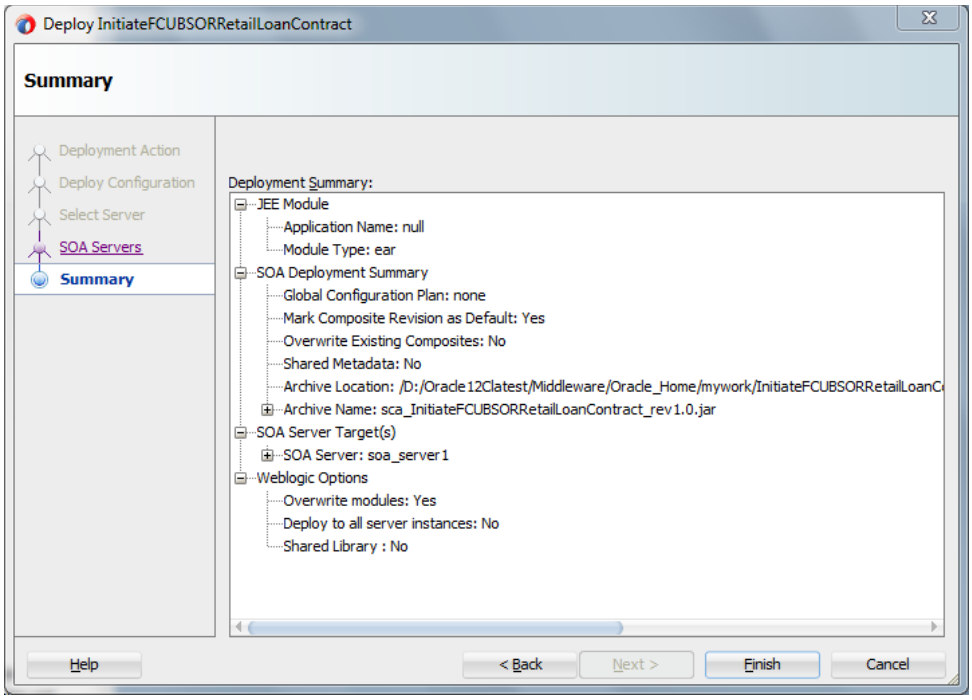
- And Once the connection is created, click on Finish



- Now the step returns to SOA servers so that the newly configured details
- can be added and deployment can be proceeded further



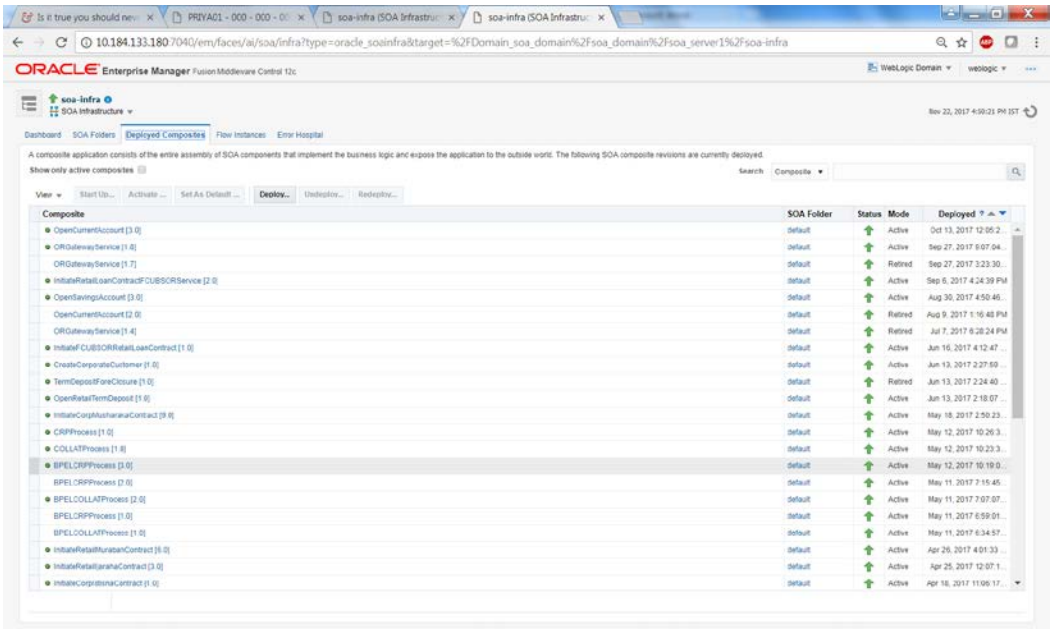
- Click Next after this
- View the summary of the deployment details and click ‘Finish’ to complete the deployment.



- The deployment status can be verified in the deployment status Log window.



- The deployed process can be verified by checking if the process is showing up in the SOA Suite enterprise manager console.
- Login to http://<hostname>:<port>/em
- Expand SOA - >soa-infra and view all deployed applications



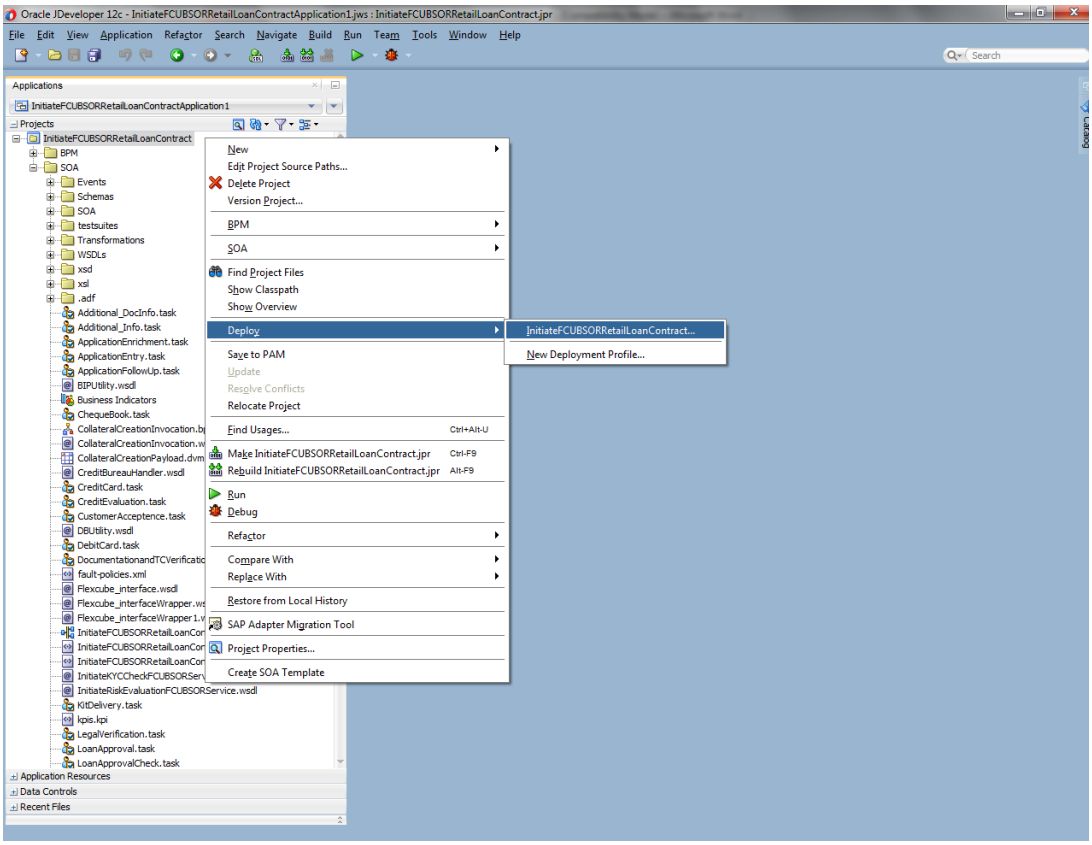
Deploying a Single Composite application via Enterprise manager console.

6.3 Introduction

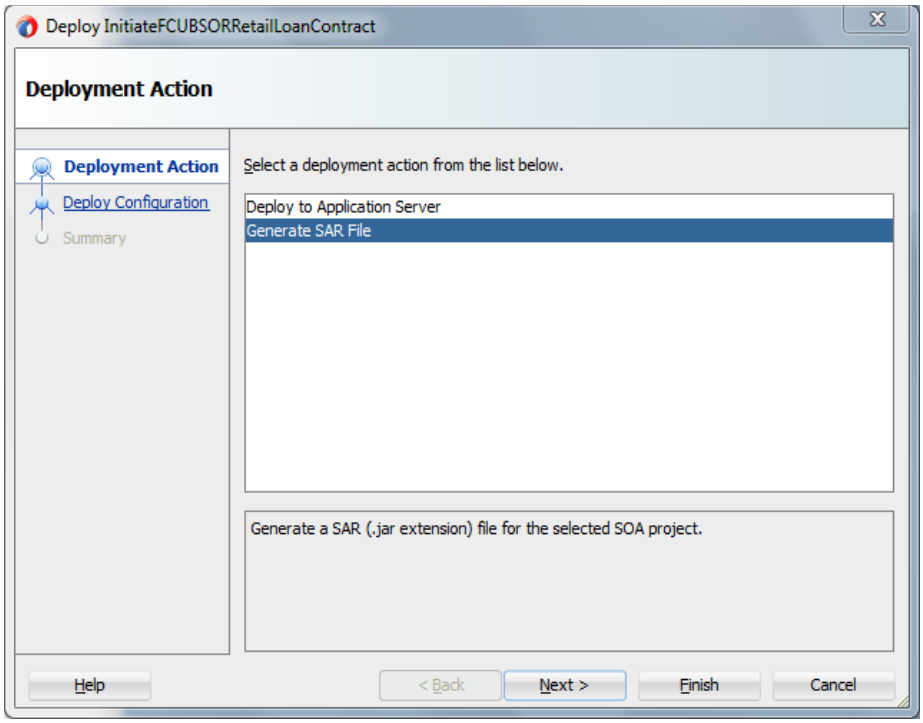
This section describes how to build a SAR file for a single SOA composite application with Oracle JDeveloper and deploy the same via enterprise manager console.

6.4 Deploying the Application

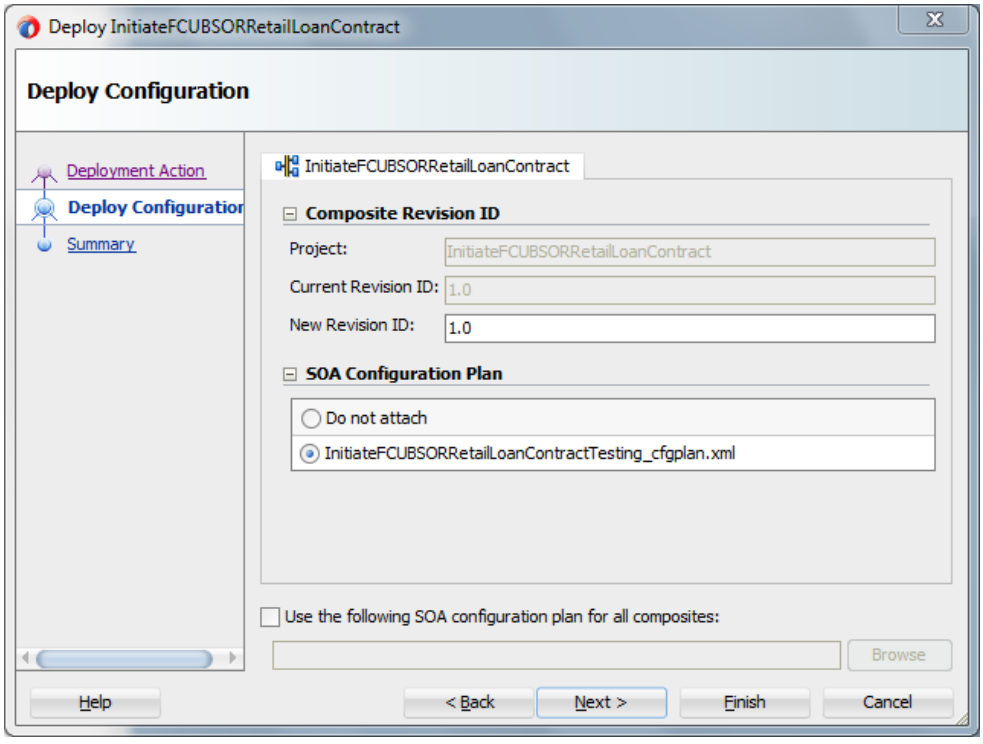
- Right click on the Application that needs to be deployed.
- Select ‘Deploy’ and then click on the default deployment profile which is the same as the application name.
- This will result in the deployment wizard screen being launched.



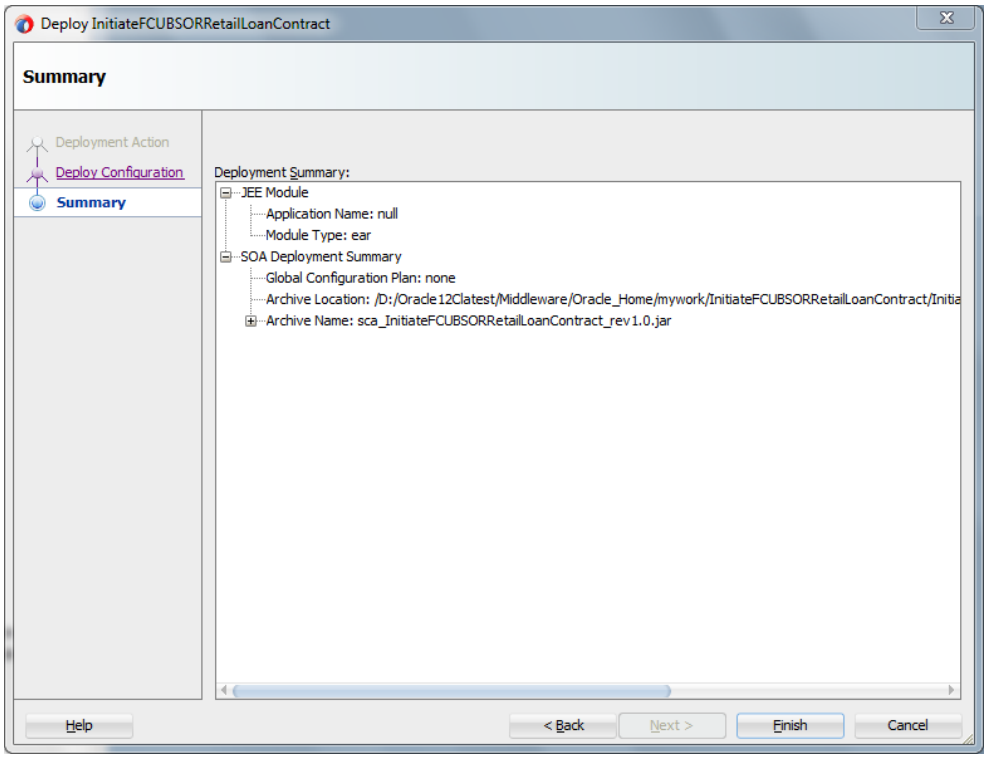
- In deployment action screen choose ‘Deploy to SAR’
- Click ‘Next’ to proceed with the deployment.



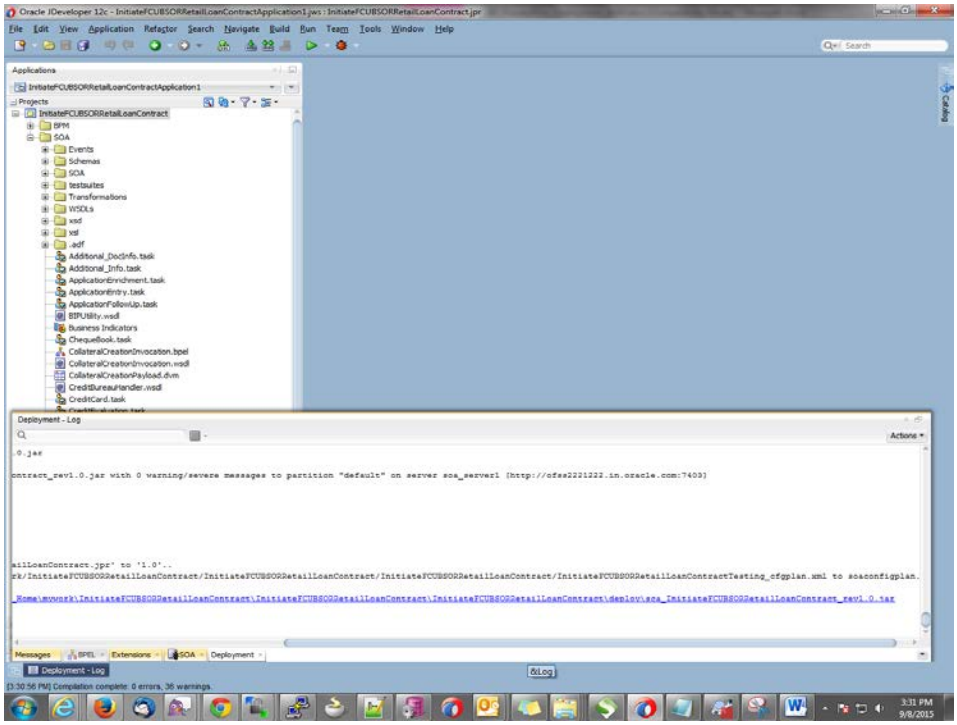
- In deployment configuration screen enter the revision
- Select the configuration plan.
- Click “Next” to proceed with the deployment.



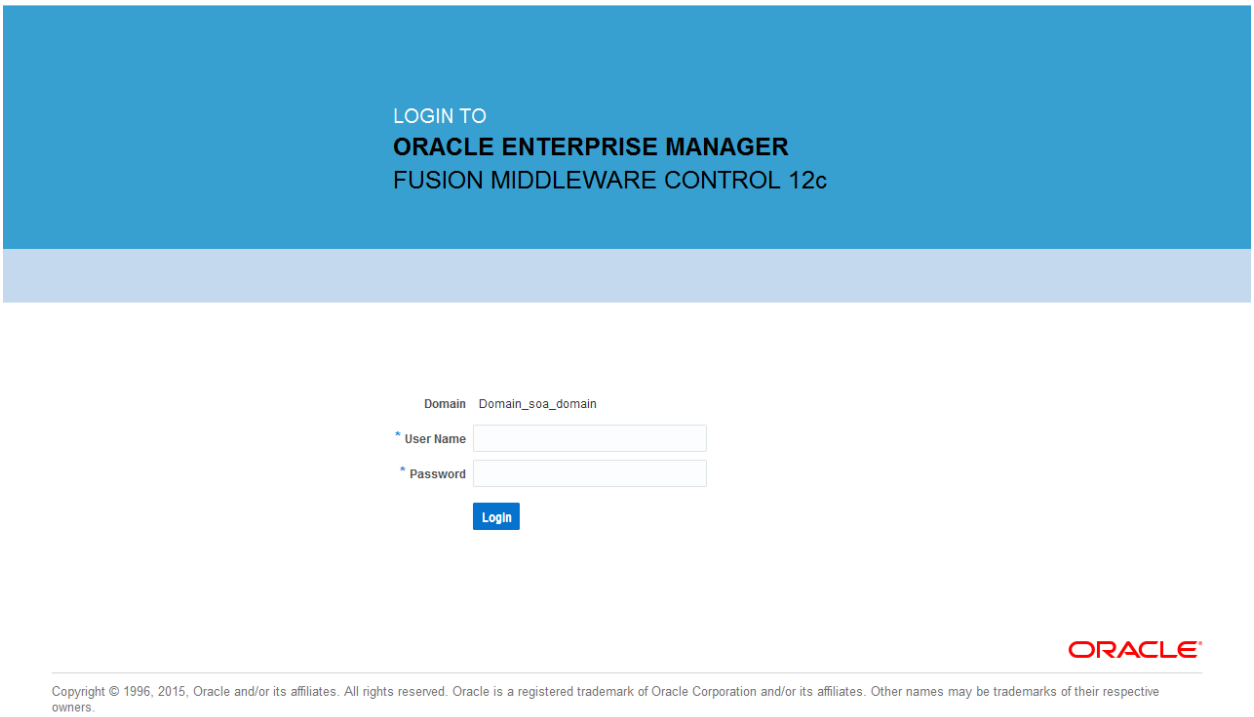
- Review the deployment summary screen
- Click “Finish” to proceed with the deployment.



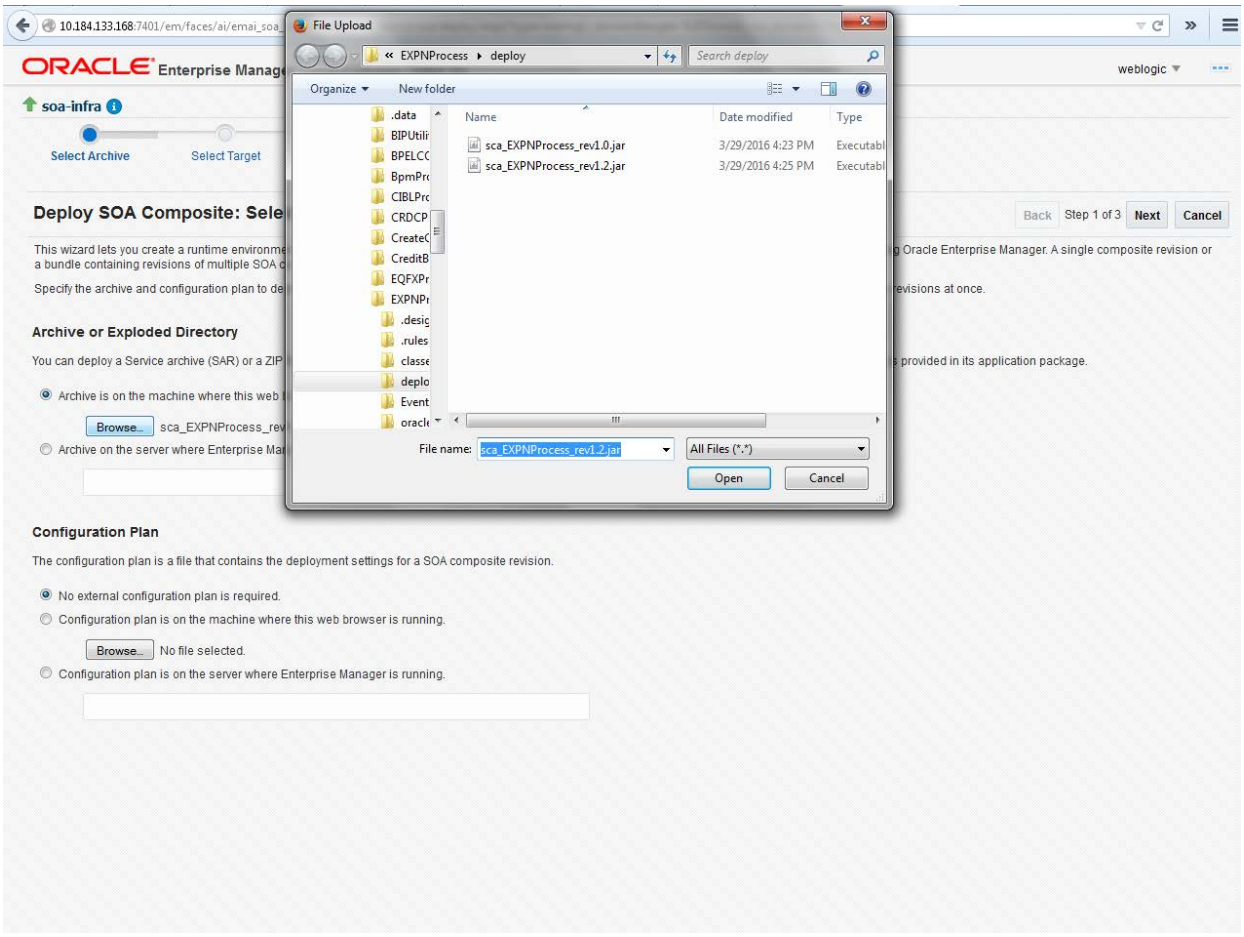
- Review the deployment log
- It shows the folder onto which the SAR file is written.



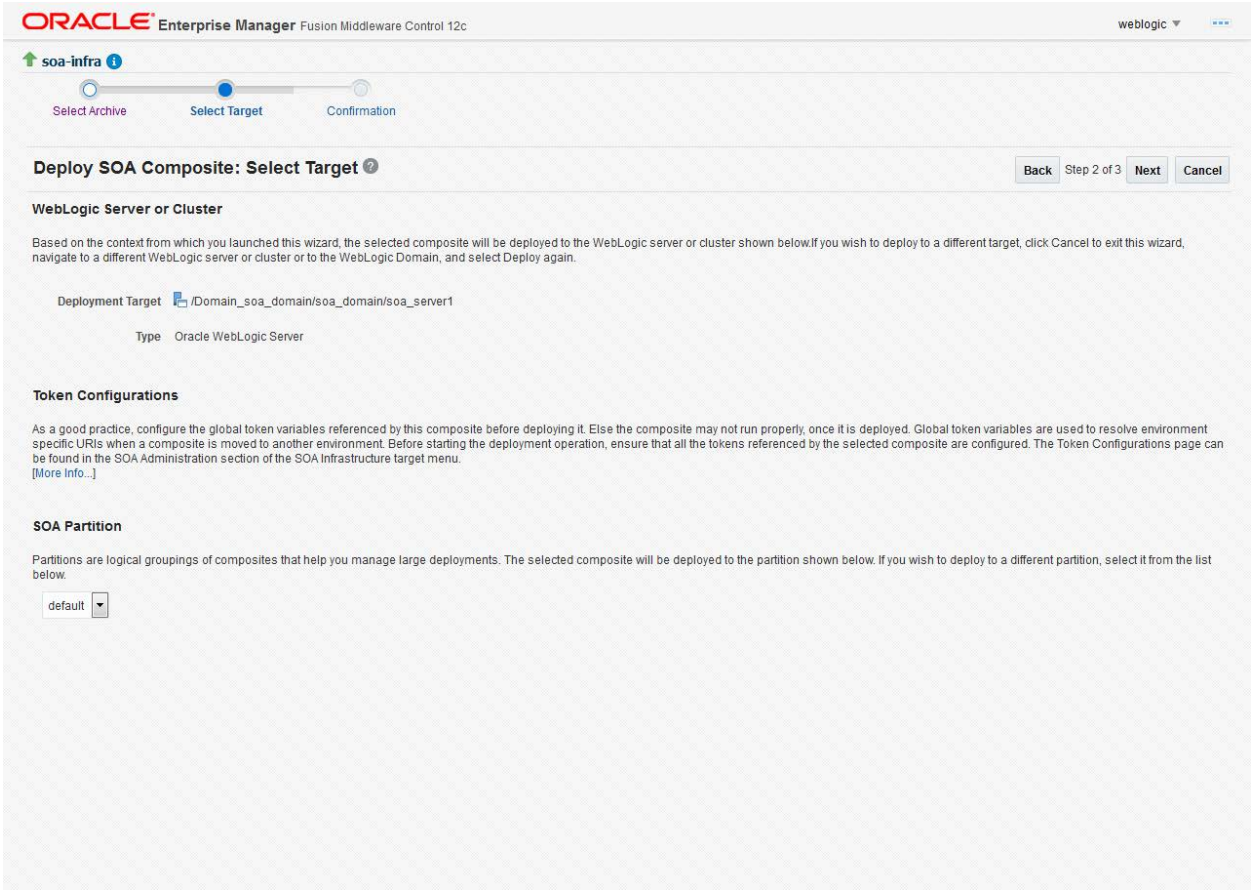
- Login to the enterprise manager console.
- Login to http://<hostname>:<port>/em



- After logging in from the left pane - Expand ‘SOA’
- Right click on soa-infra
- Choose SOA Deployment -> and click “Deploy” option.
- Select the ‘SAR’ archive
- Select the deployment plan with which the application needs to be deployed as illustrated in the screen shot.

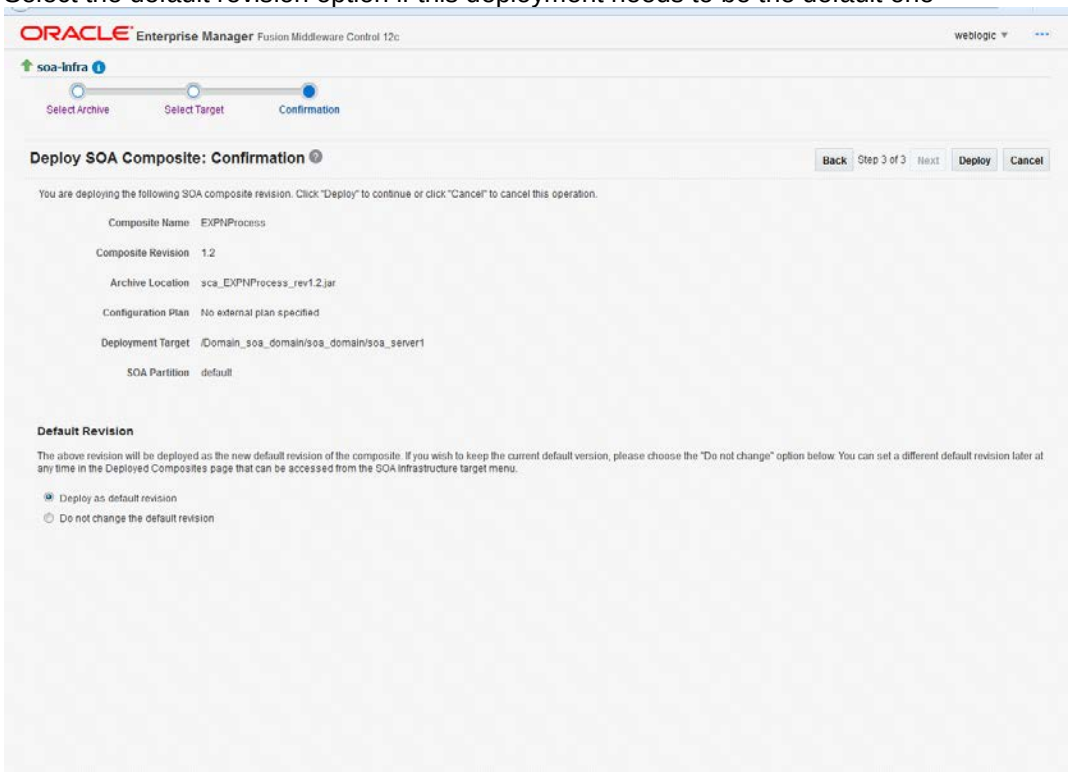


- Click on ‘Next’ to proceed with the deployment.

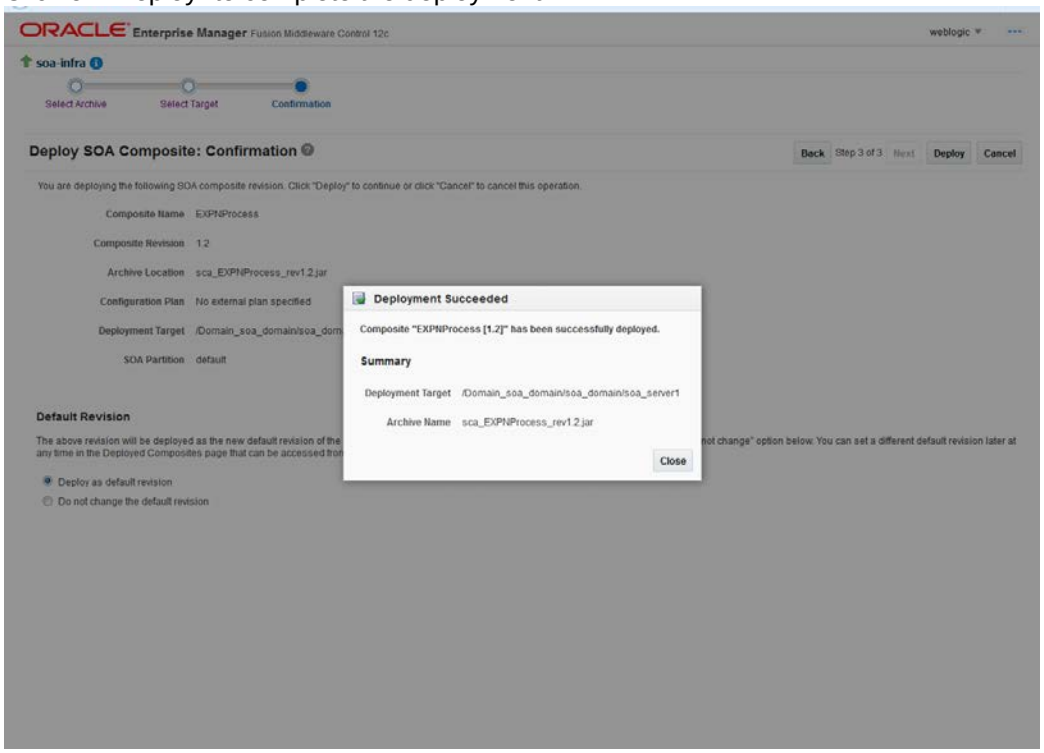


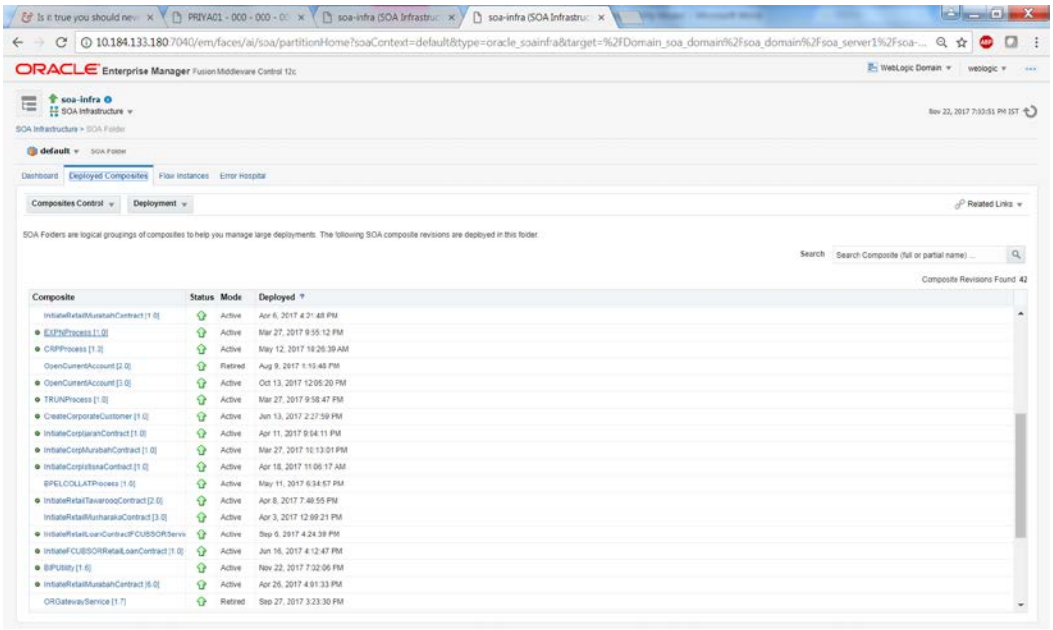
- Select default partition.

- Select the default revision option if this deployment needs to be the default one



- Click on “Deploy” to complete the deployment.





- Check the deployed process from the enterprise manager console.

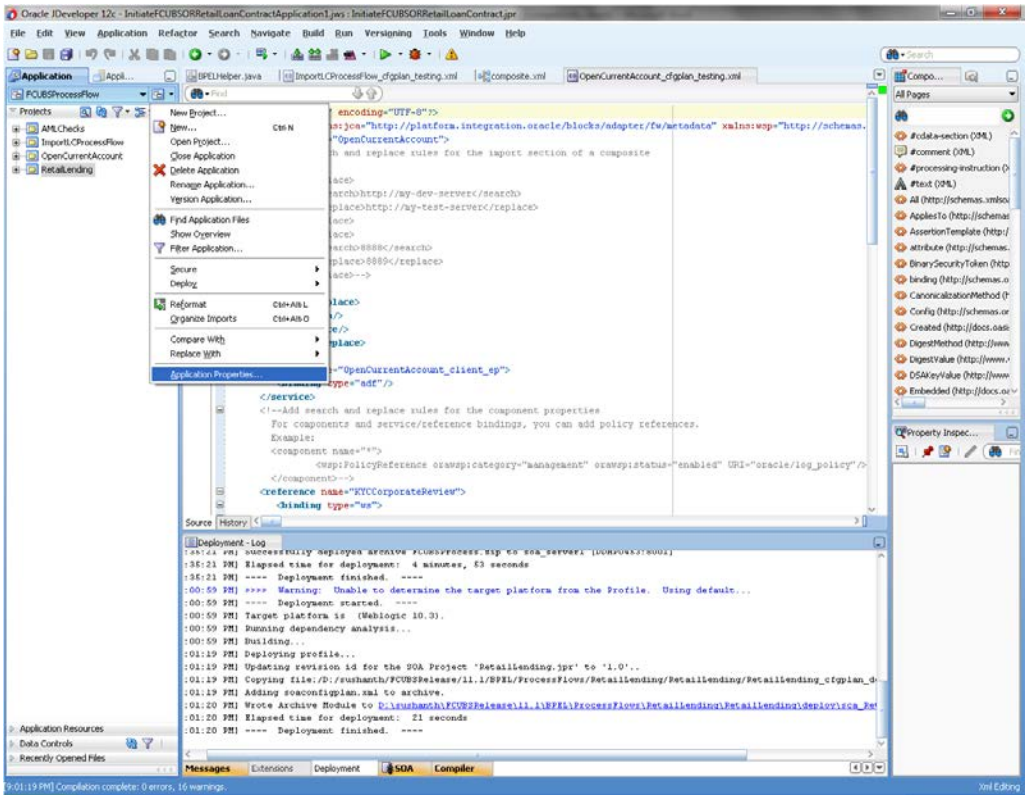
7. Deploying Multiple Composite application using JDeveloper

7.1 Introduction

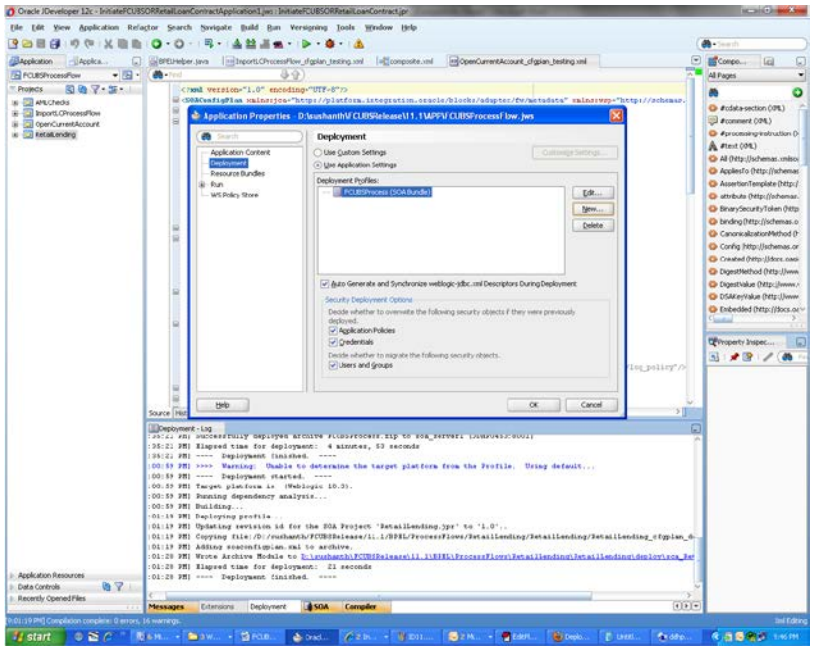
This section describes how to deploy a multiple SOA composite application with Oracle JDeveloper after completing updating of config plans with respective target environment replacement values.

7.2 Creating the Deployment Profile

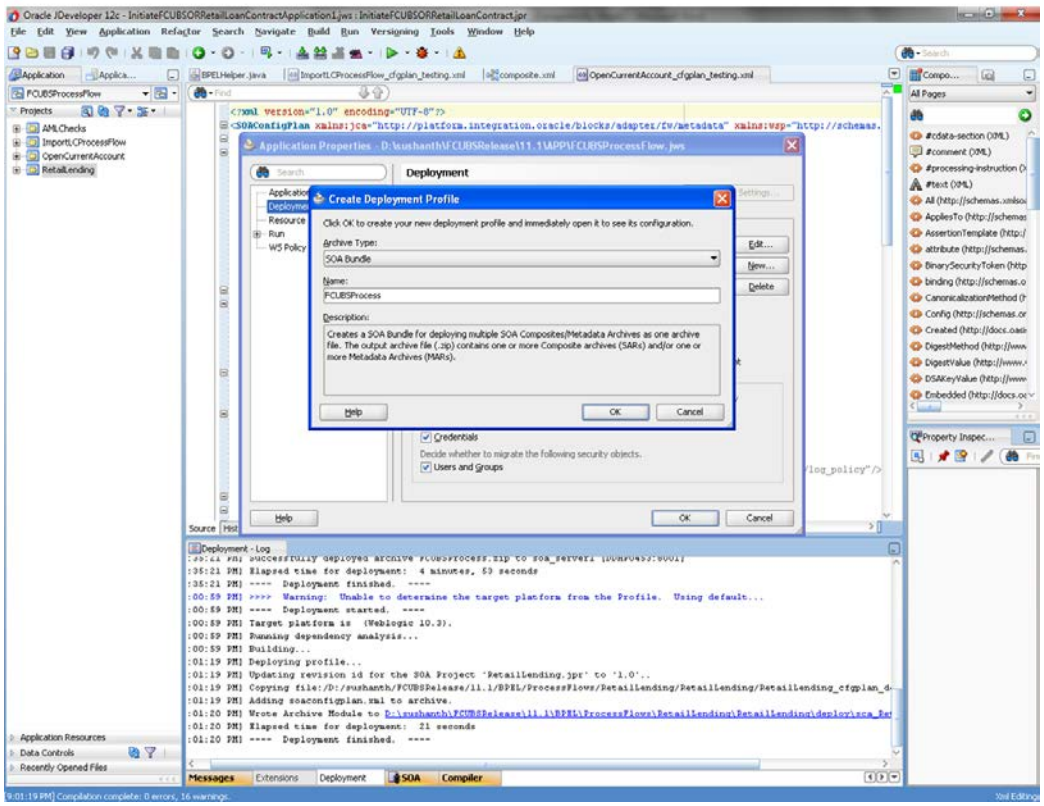
- From the application menu select 'Application Properties' as illustrated in the screen shot.



- In the Application Properties dialog, click Deployment.
- Click New.

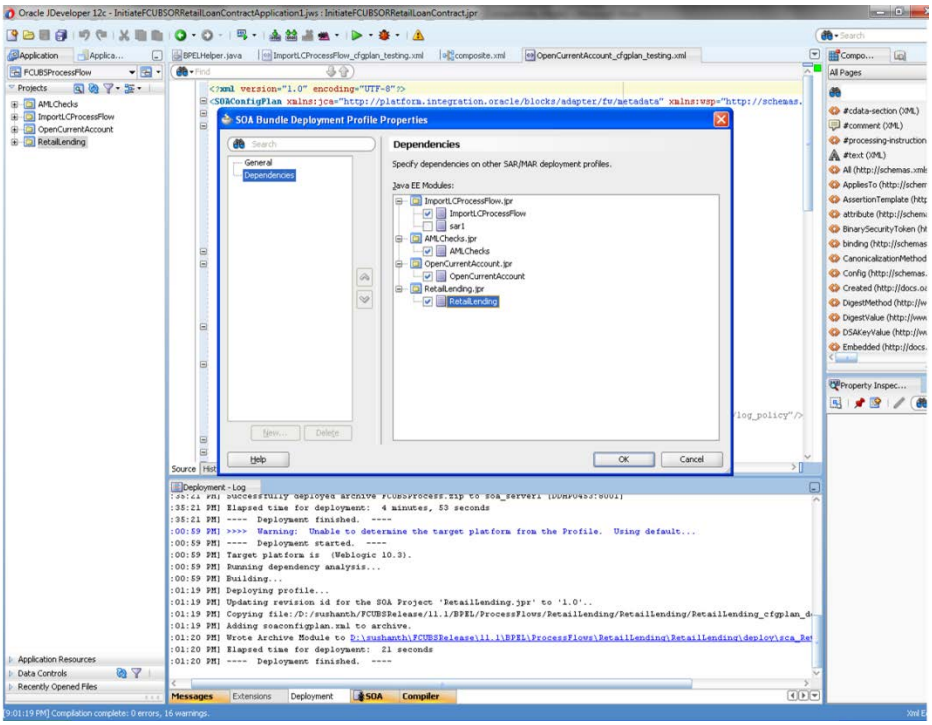


- The Create Deployment Profile dialog appears.
- In the Archive Type list, select SOA Bundle.
- In the Name field, enter a name and click ‘OK’.

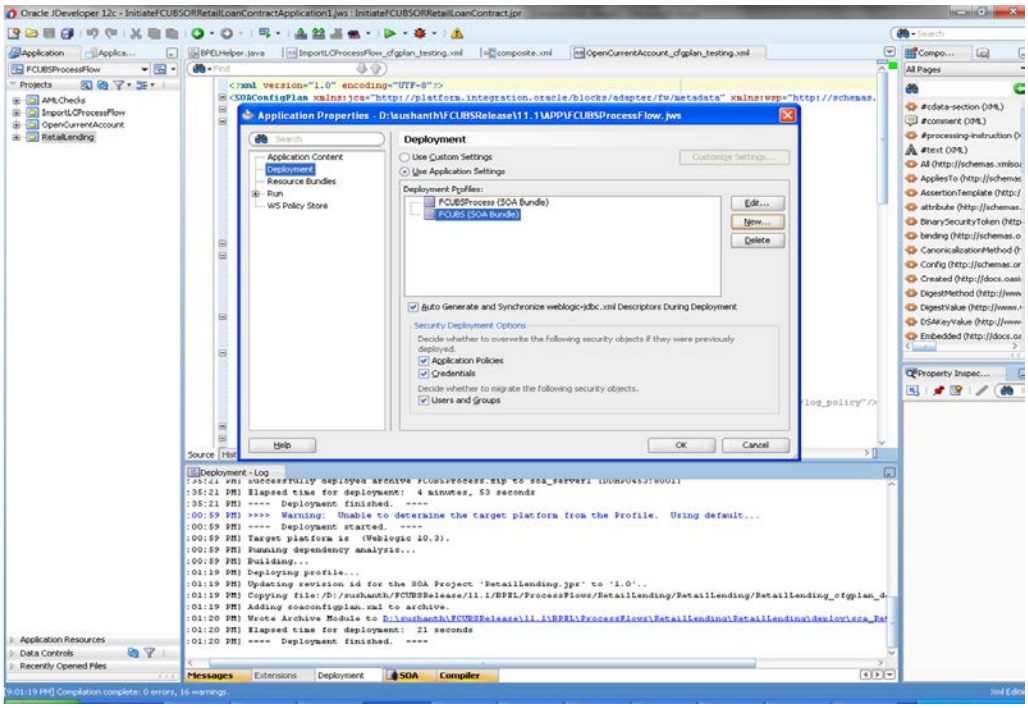


- In the navigator on the left, select the Dependencies node.
- Select the SARs you want to include in this bundle, as illustrated in the screen shot

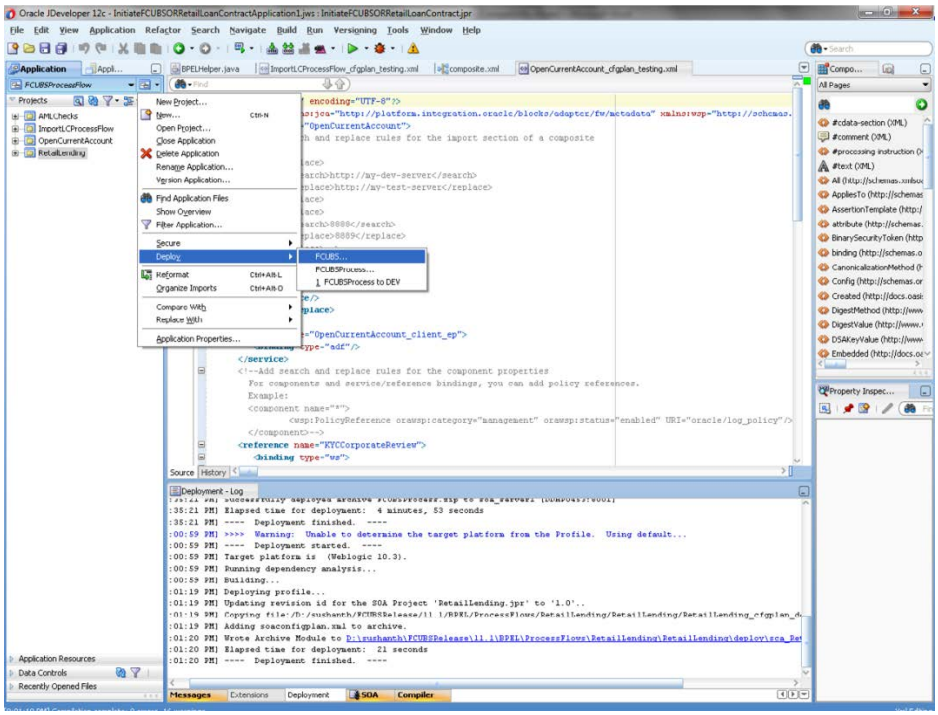
- Click OK.



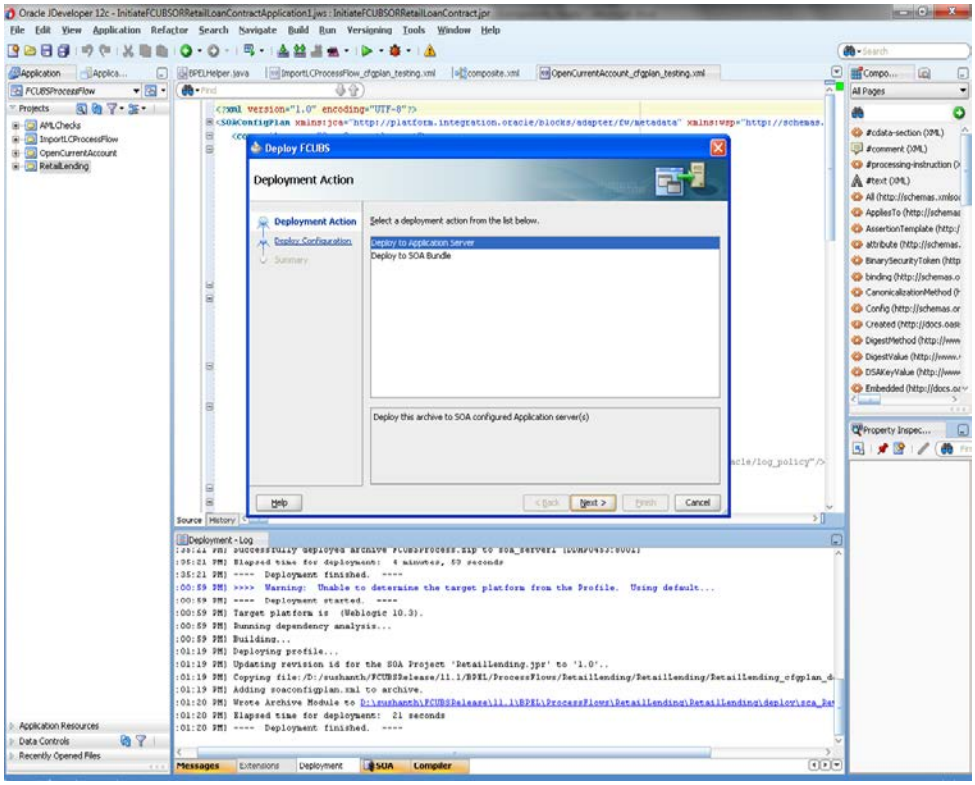
- Click OK to close the Application Properties dialog.



- Select the Application menu again, then select Deploy > SOA_bundle_name

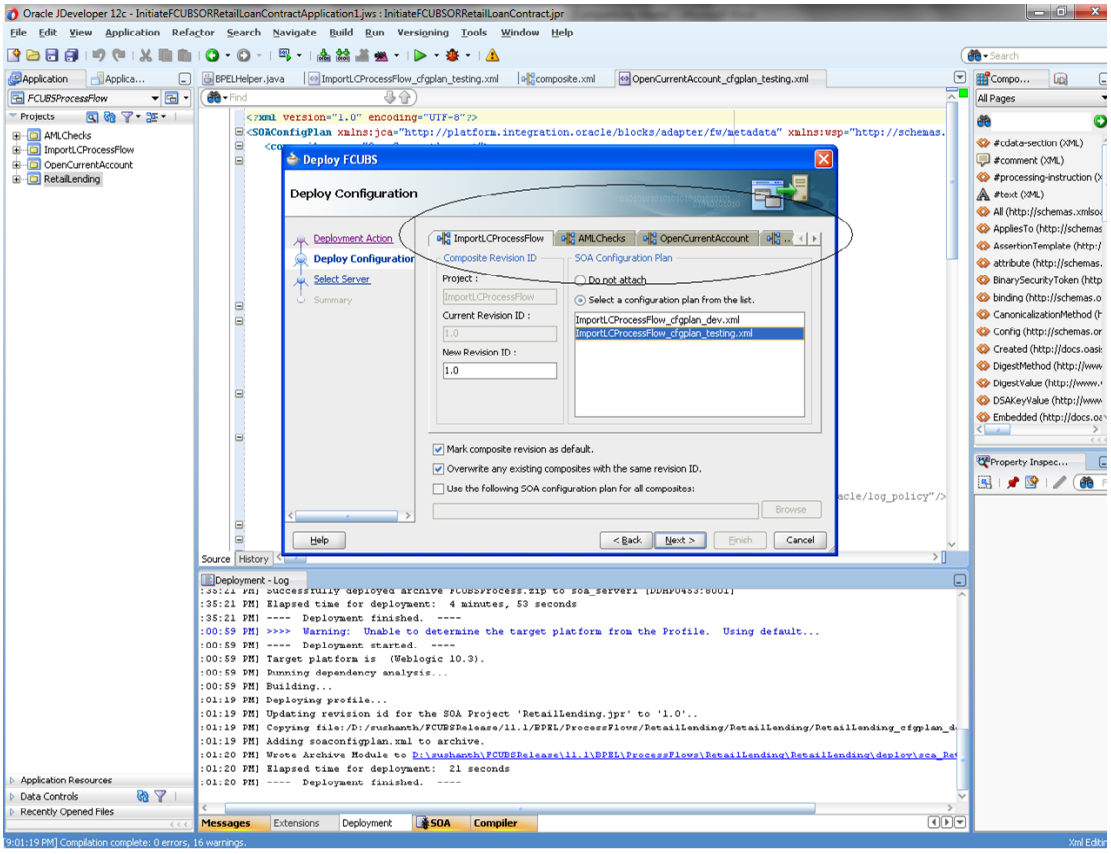


- Deployment screen is launched , Select ‘Deploy to Application Server’

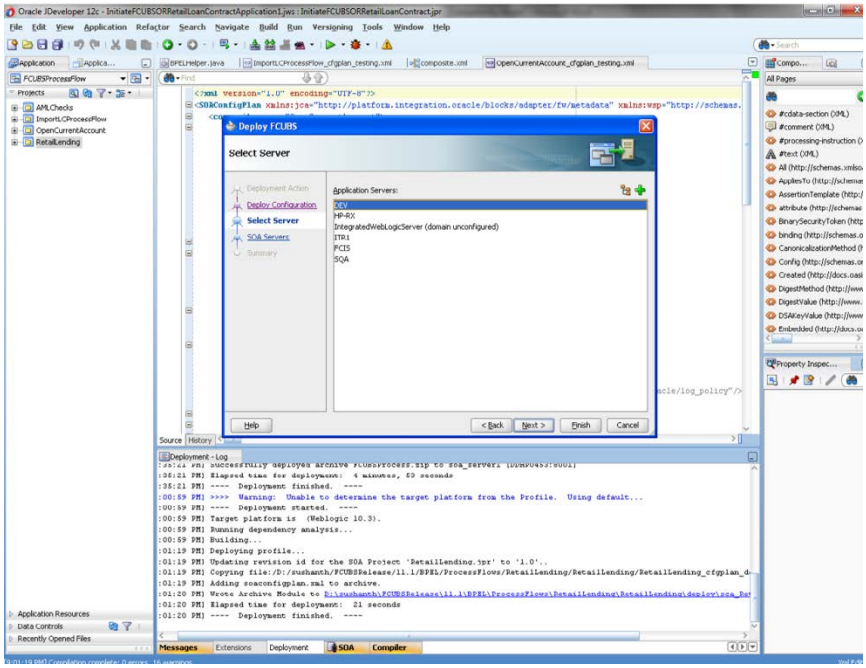


- Deployment configuration is done as illustrated in the below screen shot for each application which is displayed in the tab, application navigation can be done using the pointer provided at the end of the tab.
- Select a Revision with which the deployment should happen

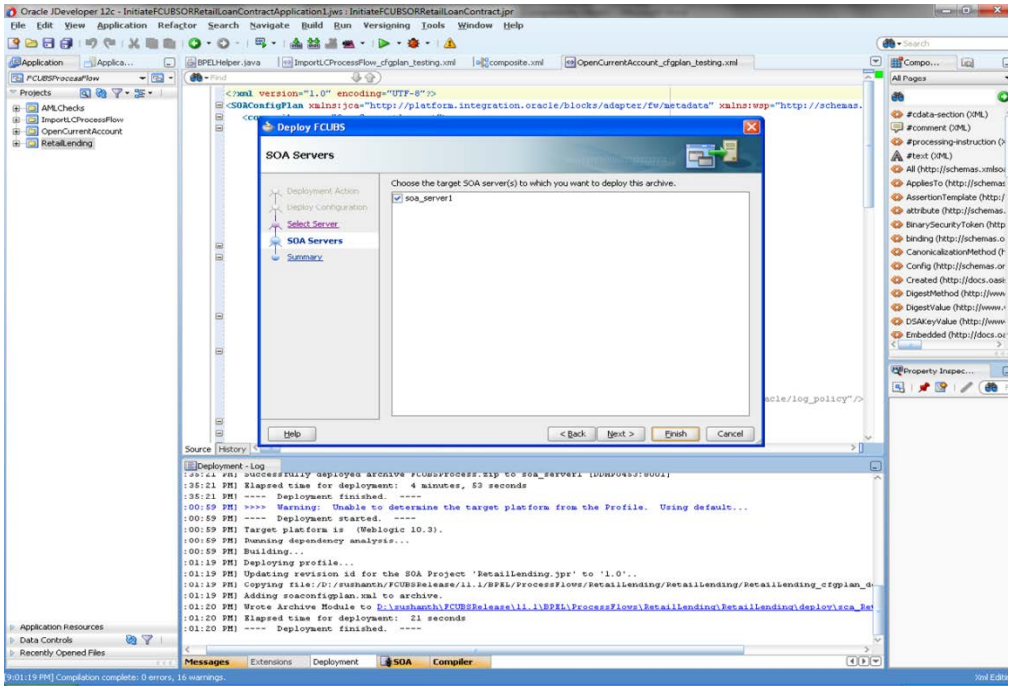
- Select a ” Configuration Plan” that was updated as given in Section 5
- Remember to check both the checkboxes
- “Mark composite revision as ‘default”
- “Overwrite any existing composites with the same revision ID”
- After all the applications are configured Click “Next” to proceed with the deployment.



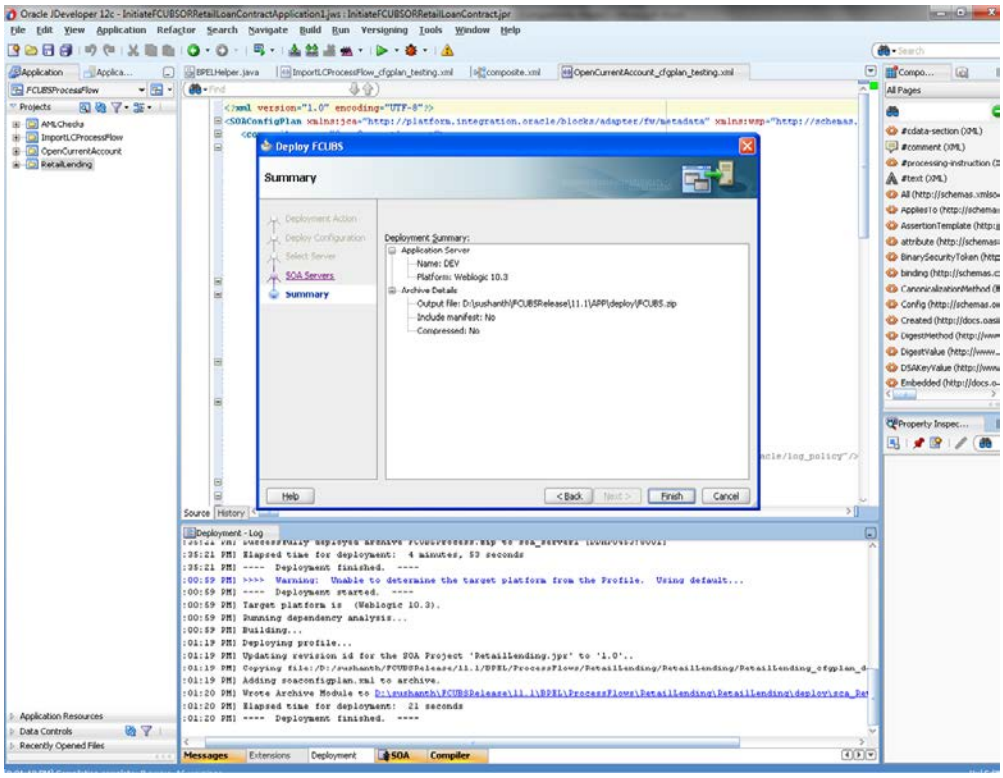
- Select the Application server ‘Server Connection’ configured that was done in Section 3 to which the deployment needs to be done
- Click ‘Next’ to proceed with the deployment.



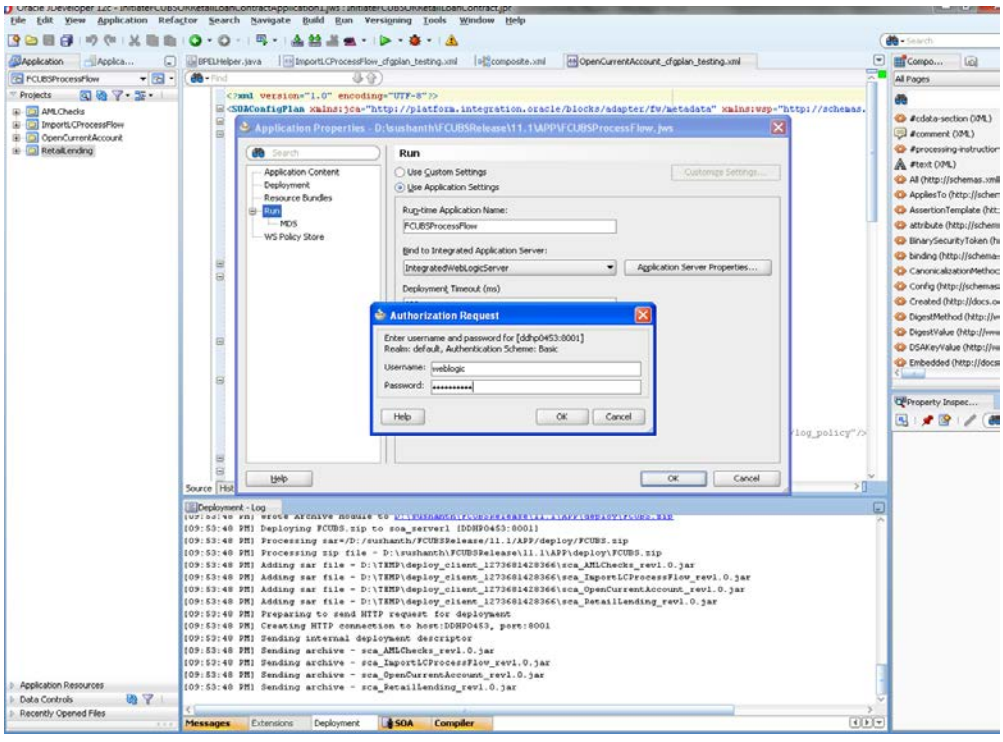
- Select the Application ‘server’ to which the deployment needs to be done.



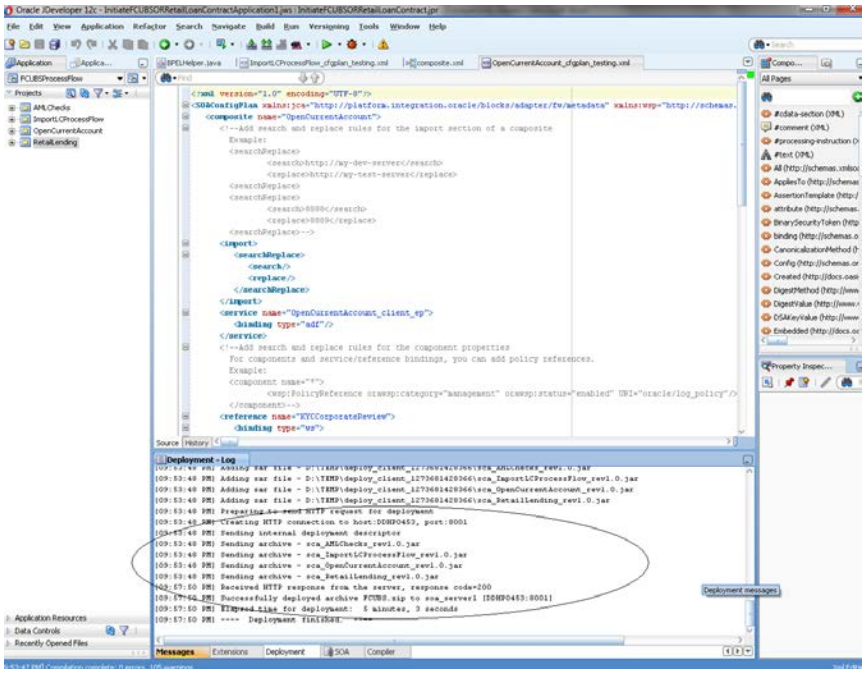
- View the summary of the deployment details and click ‘Finish’ to complete the deployment.



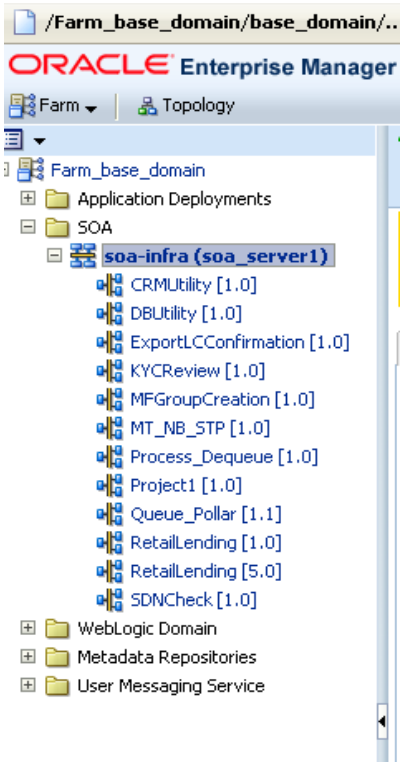
- If the server prompts for username / password provide the credentials for the server.



- The deployment status can be verified in the deployment status Log window.



- The deployed process can be verified by checking if the process is showing up in the SOA Suite enterprise manager console.
- Login to http://<hostname>:<port>/em
- Expand SOA - >soa-infra and view all deployed applications


/Farm_base_domain/base_domain/..
ORACLE Enterprise Manager
Farm
Topology
Farm_base_domain
Application Deployments
SOA
soa-infra (soa_server1)
CRMUtility [1.0]
DBUtility [1.0]
ExportLCConfirmation [1.0]
KYCReview [1.0]
MFGroupCreation [1.0]
MT_NB_STP [1.0]
Process_Dequeue [1.0]
Project1 [1.0]
Queue_Pollar [1.1]
RetailLending [1.0]
RetailLending [5.0]
SDNCheck [1.0]
WebLogic Domain
Metadata Repositories
User Messaging Service

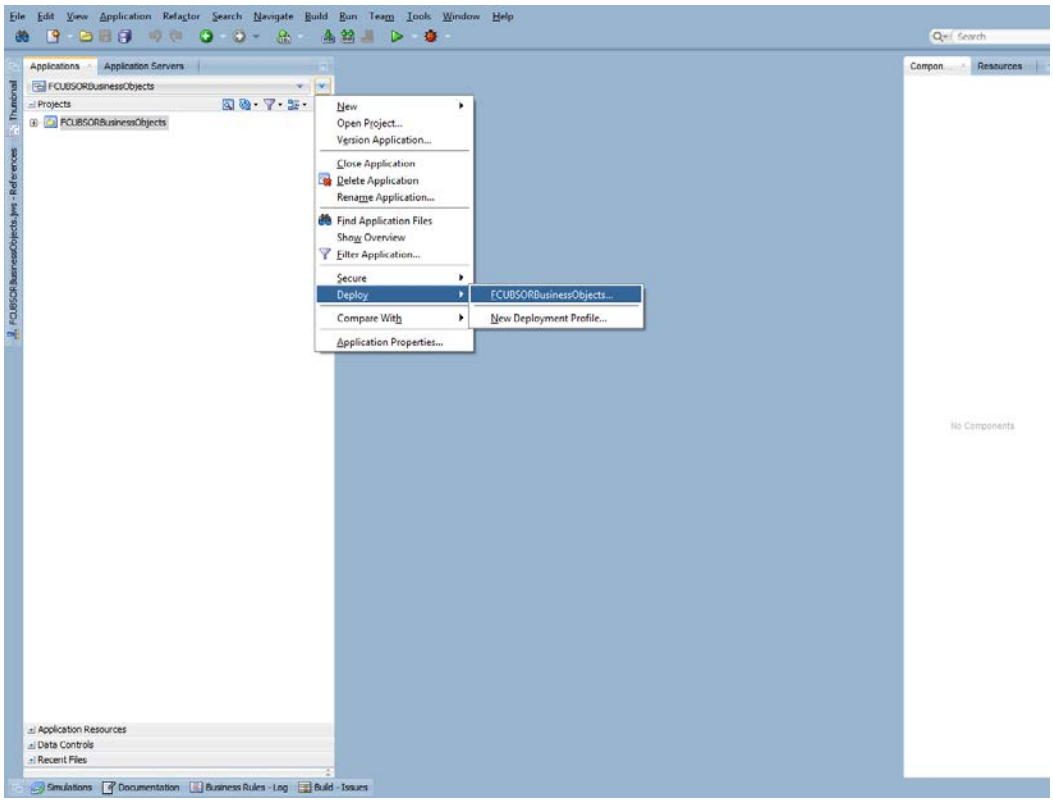
8. Deploying MDS application using JDeveloper

8.1 Introduction

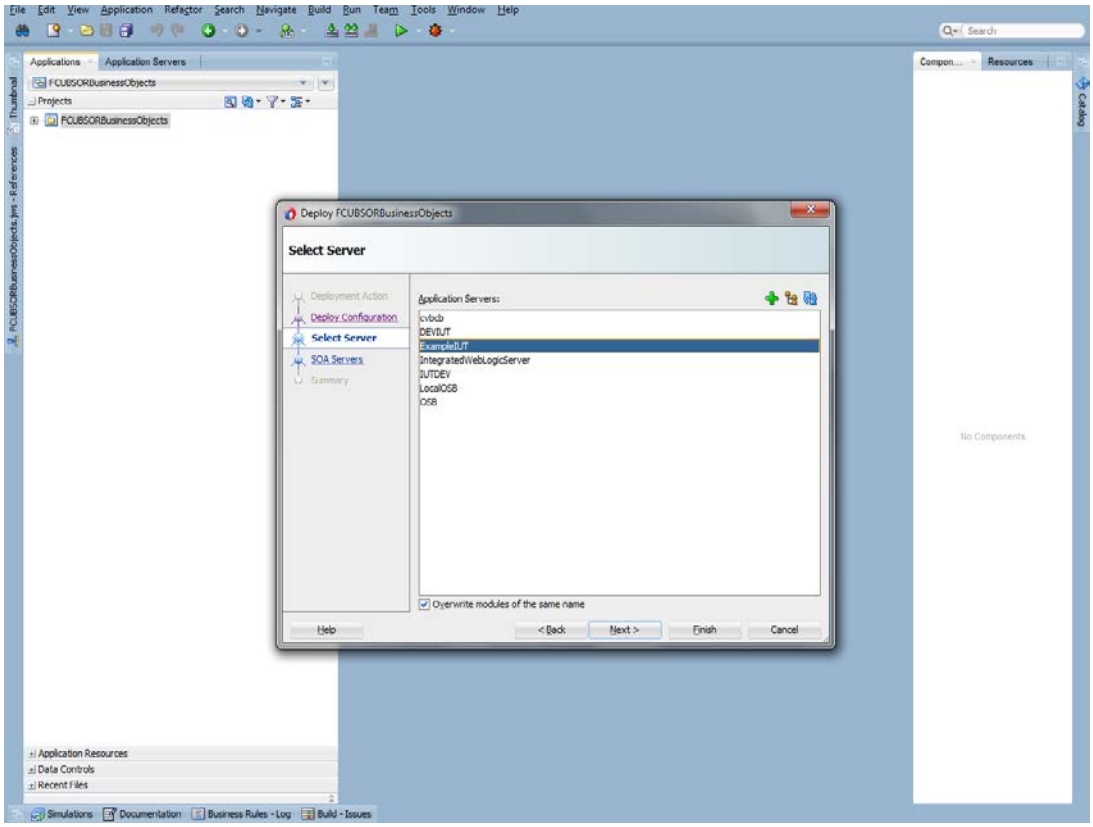
This section describes how to deploy a MDS application with Oracle JDeveloper with respective target environment.

8.2 Deploying the Application

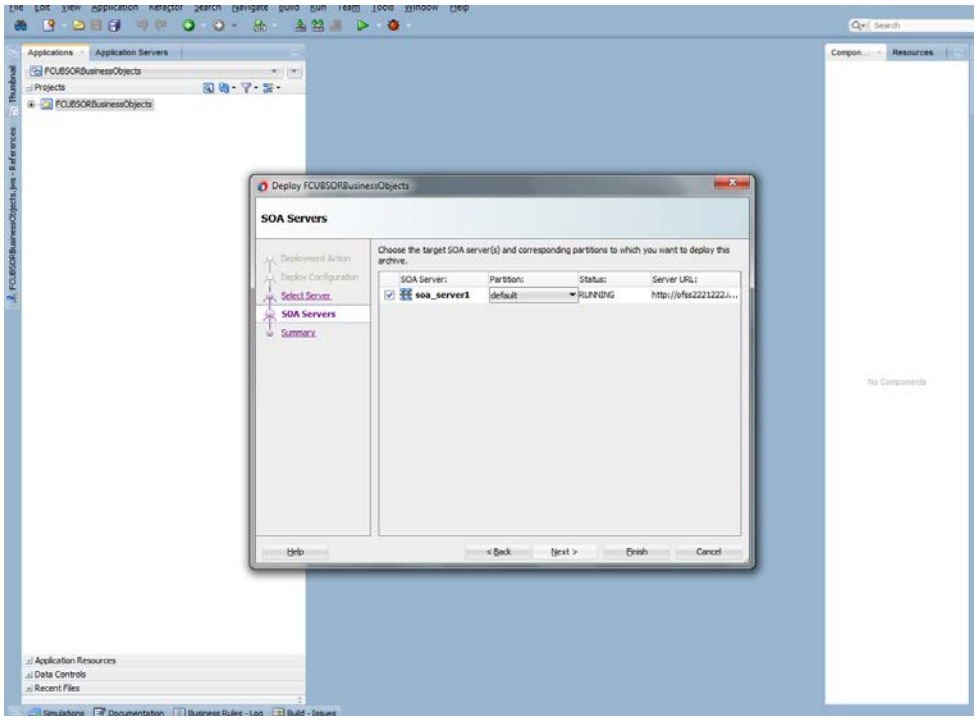
- Load the MDS Application(FCUBSORBusinessObjects,FCUBSORServiceObjects) in Jdeveloper
- Right click on the “Application” tab in the Jdeveloper
- Select ‘Deploy’ and then click on the default deployment profile which is the same as the application name.
- This will result in the deployment wizard screen being launched.

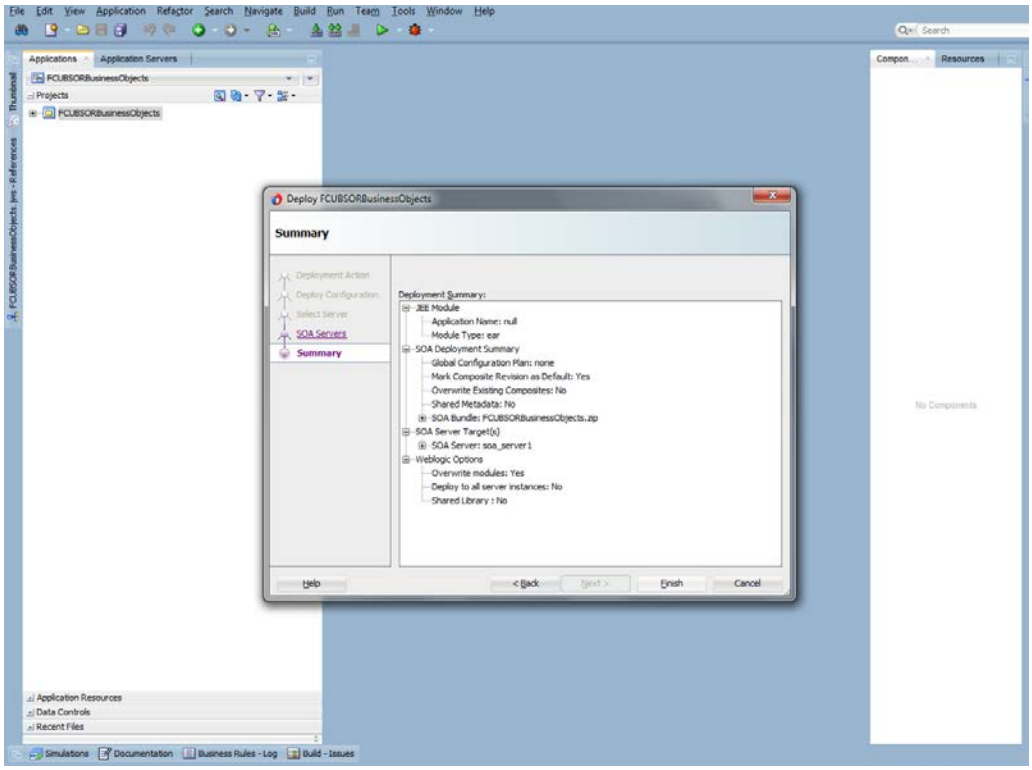


- In deployment action screen choose Deploy to Application Server.
- Click Next→Next to proceed with deployment.
- Select the Application Server to which the MDS Application Needs to Deploy.



- Click Next and Finish buttons on the deployment wizard after selecting application server.

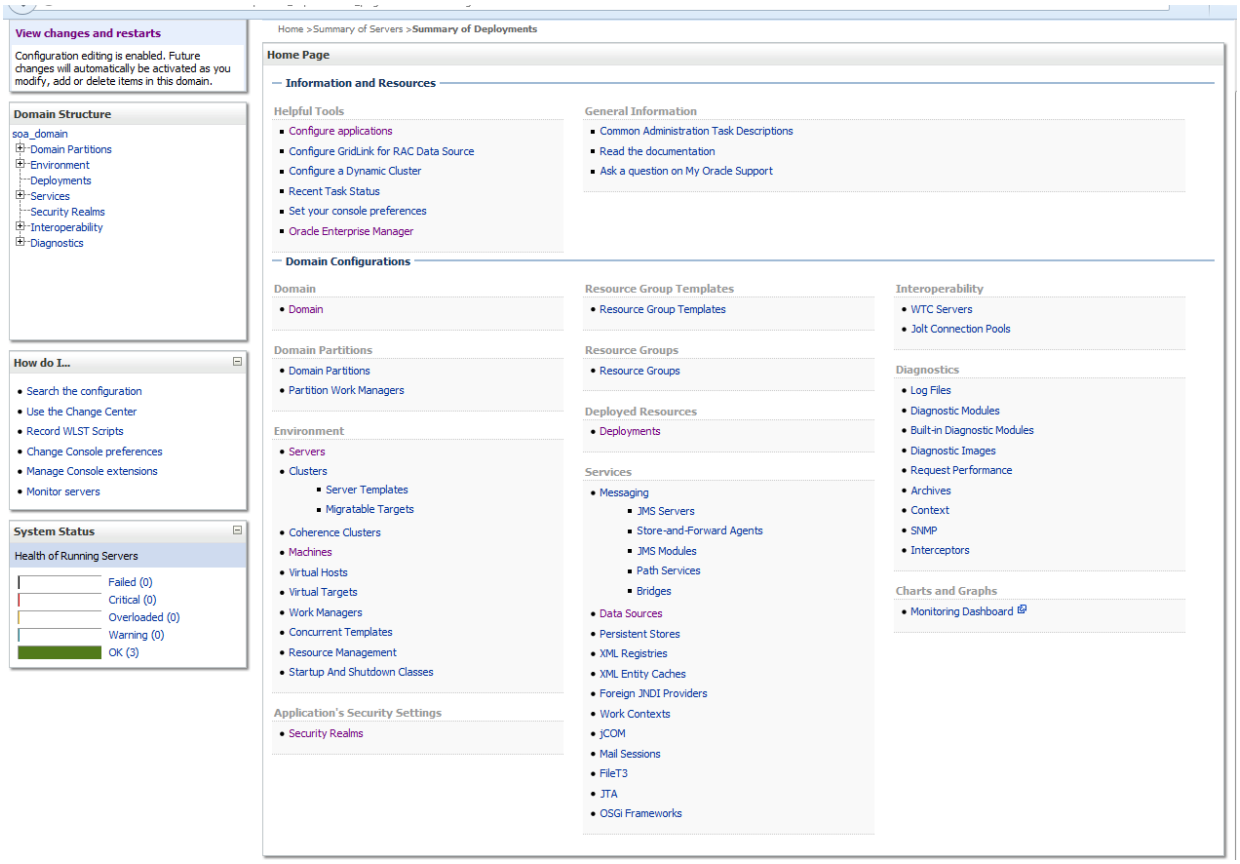




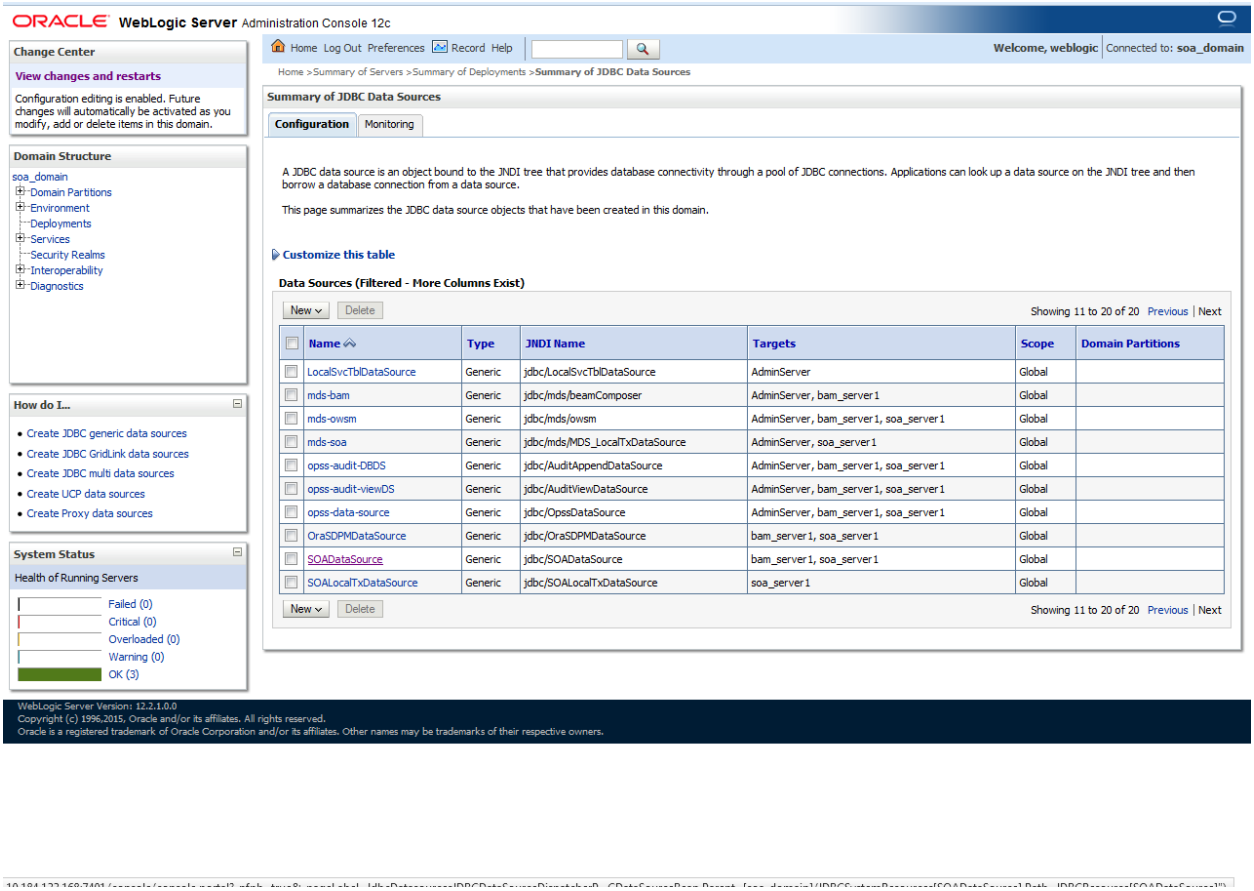
- Review the deployment log to see successfully deployed message as below

9. Deployment and configuration of Oracle BAM Reports

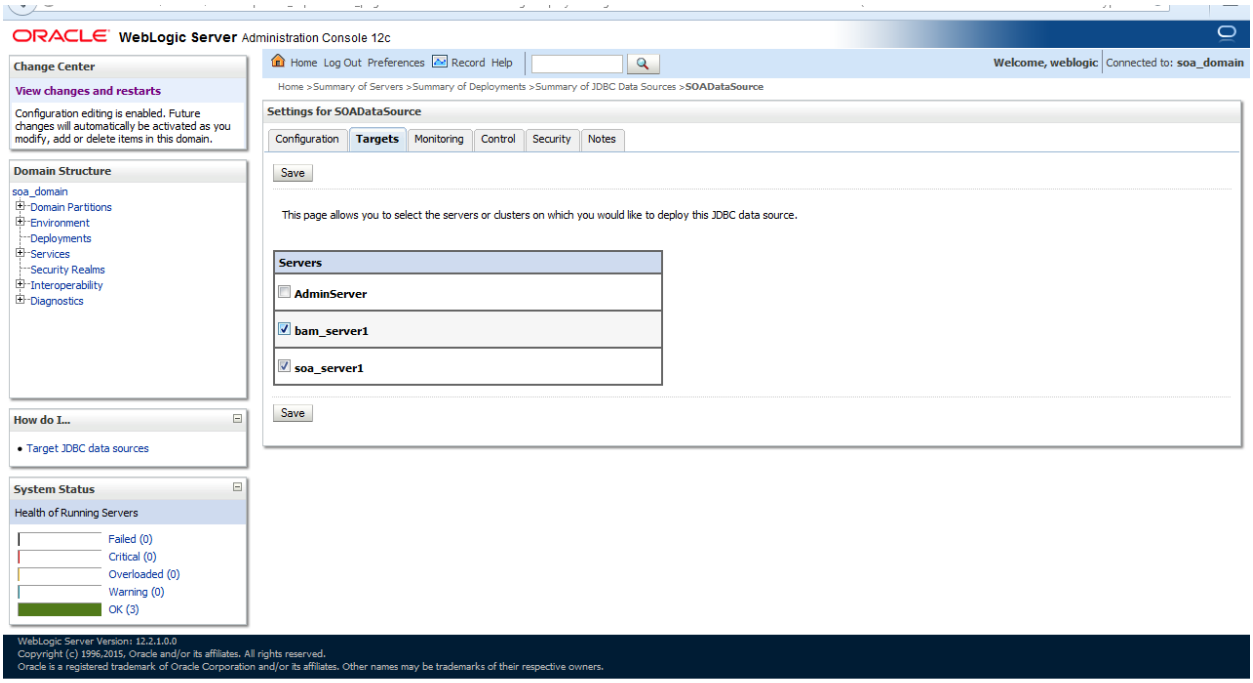
1) Login to console http://hostname:port/console
2) Click on Data sources.



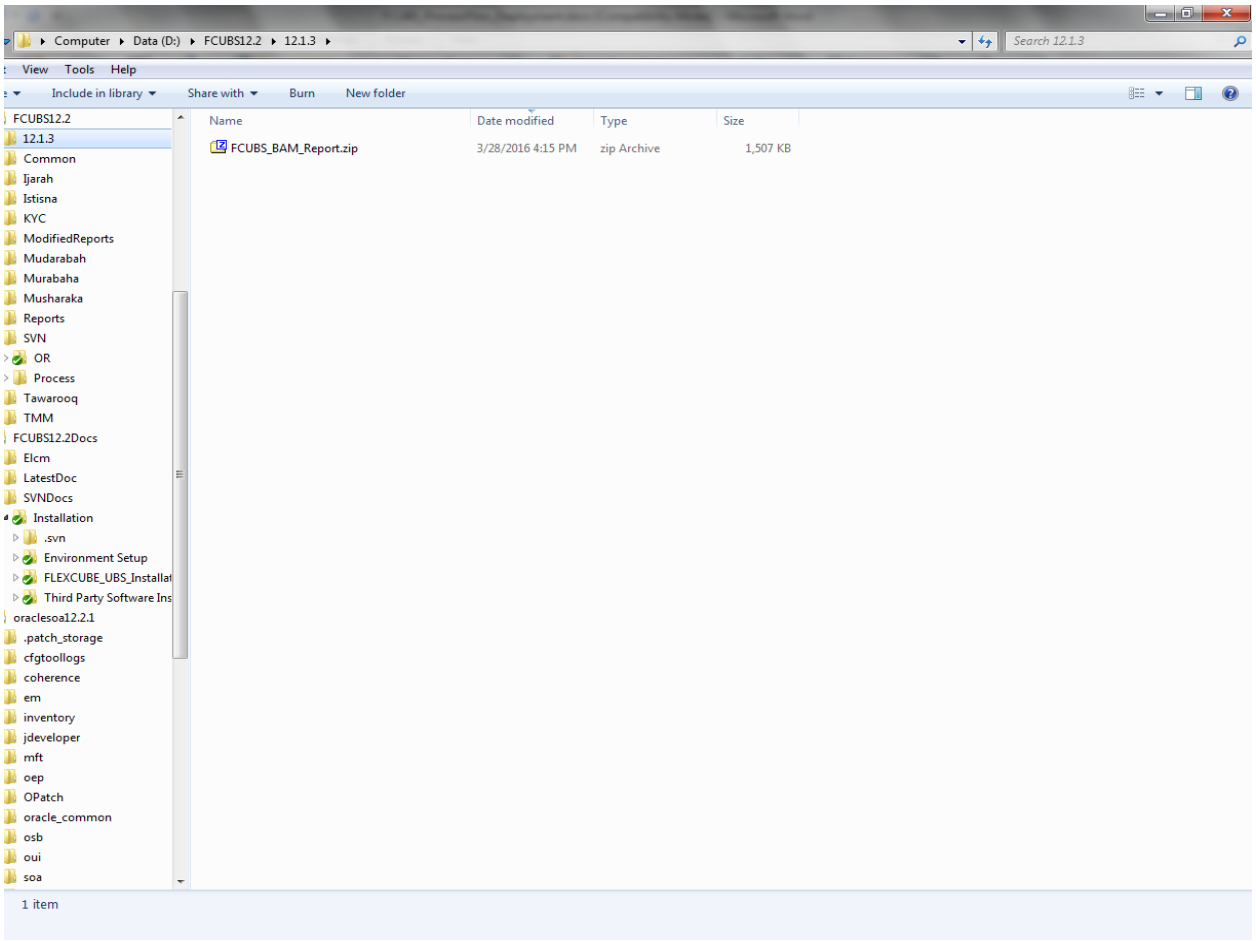
3) Click on the SOAData source.



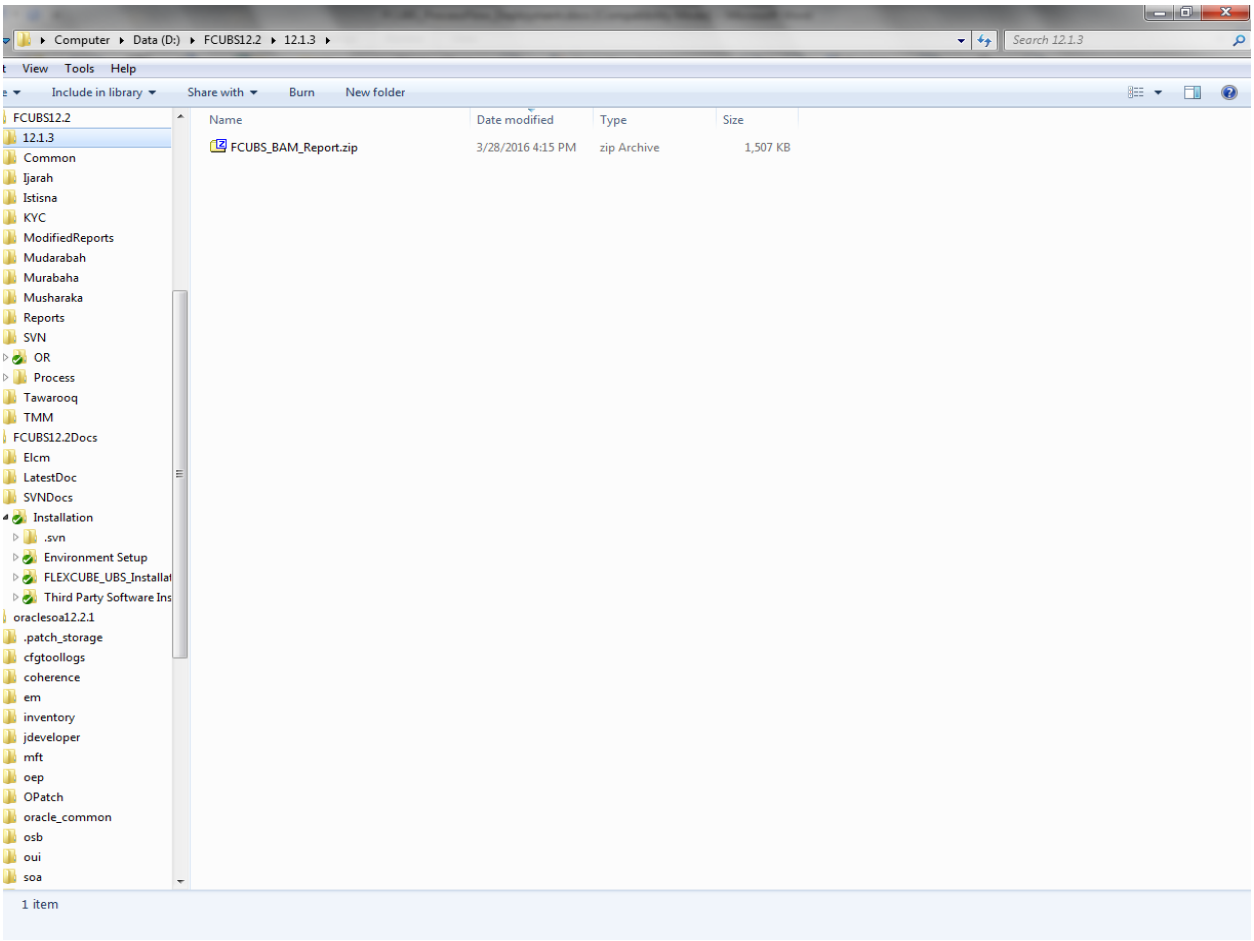
4) Click on Target tabs→Select bam_server check box→Click Save

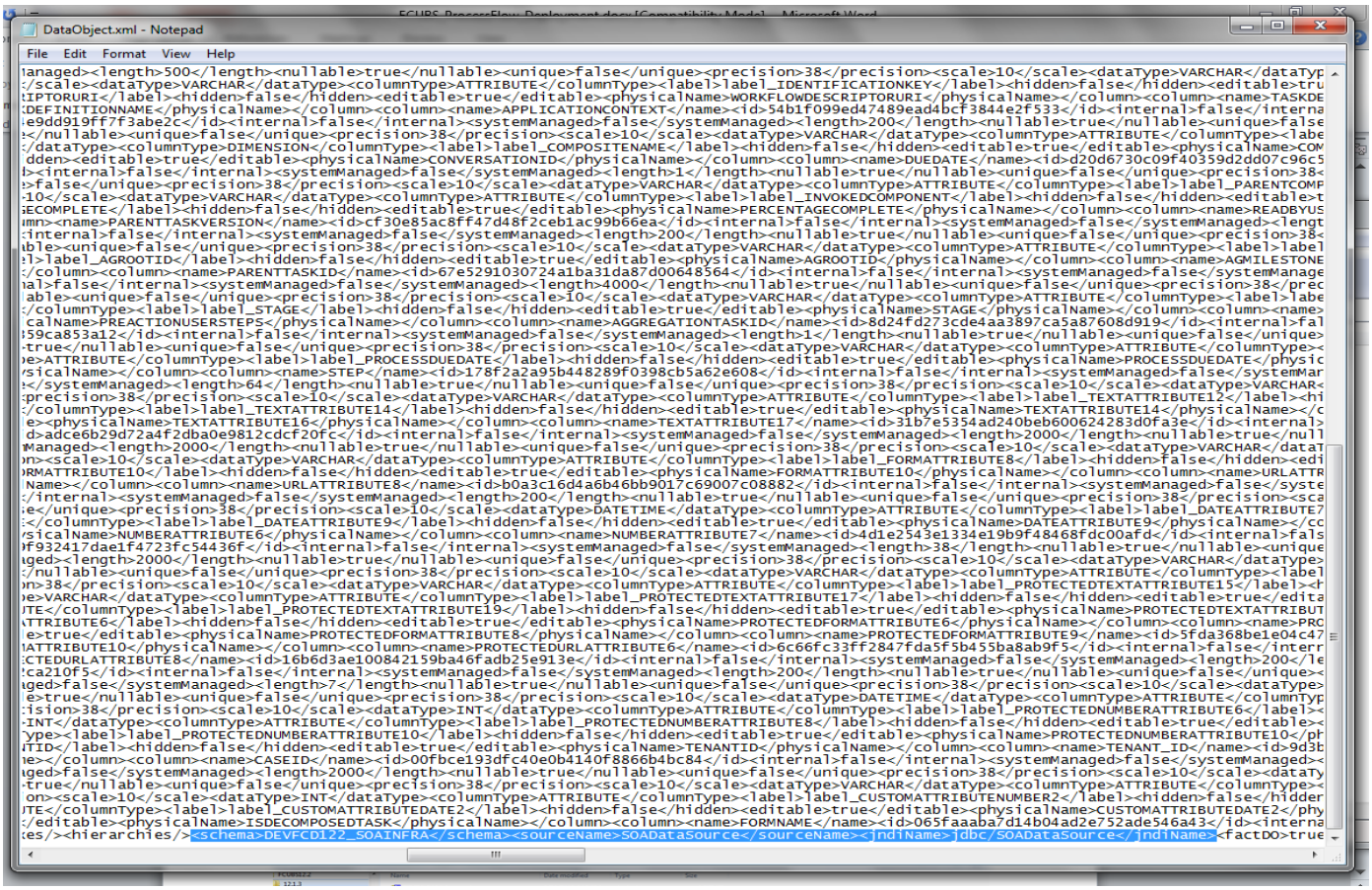


5) Copy the FCUBS_BAM_Report.zip project from SVN (**/SOFT/MAIN/OR/Process_infra/Reports/BAM**) to your local system.

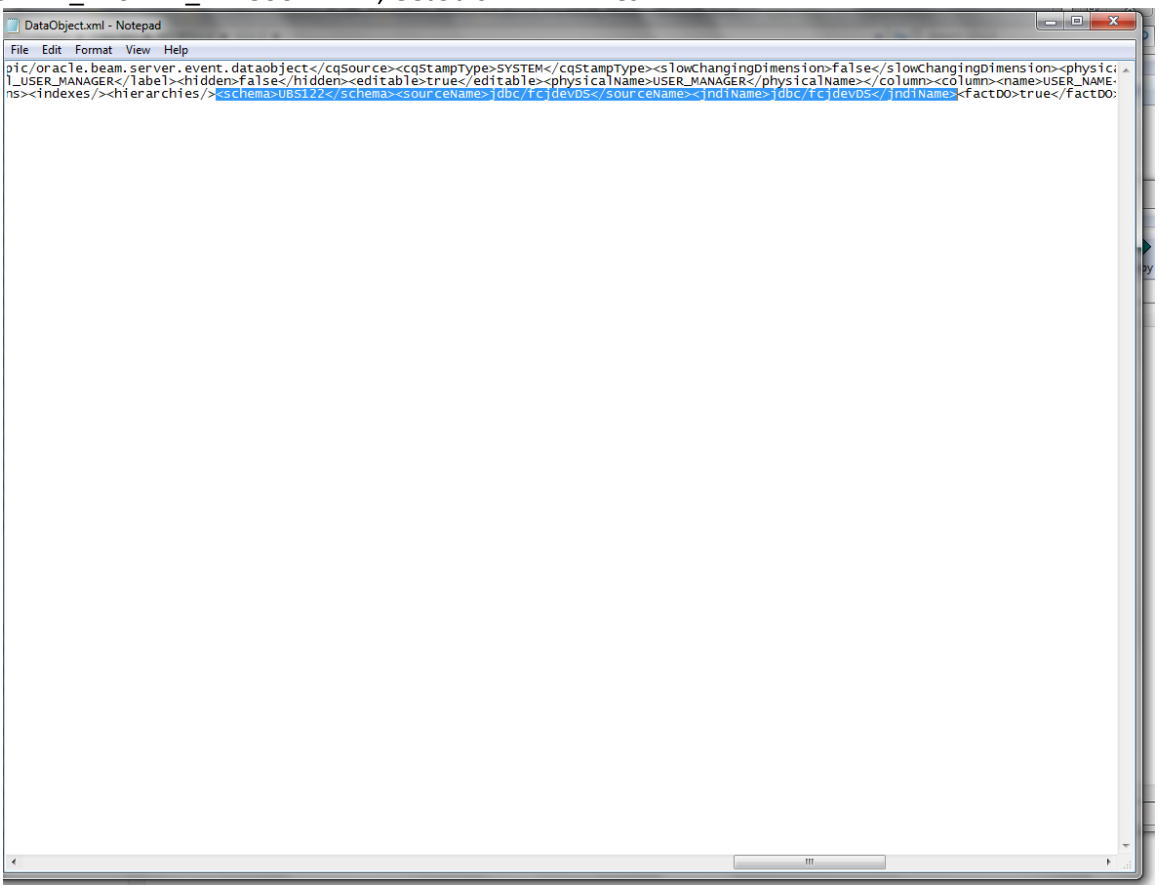


6) Open the FCUBS_BAM_Report.zip →Dataobject →Update the Schema element with the SOA_INFRA schema name for Wftask_Different_Stages.xml, CUBE_INSTANCE.xml,FCUBSDATAOBJECTS.xml files .

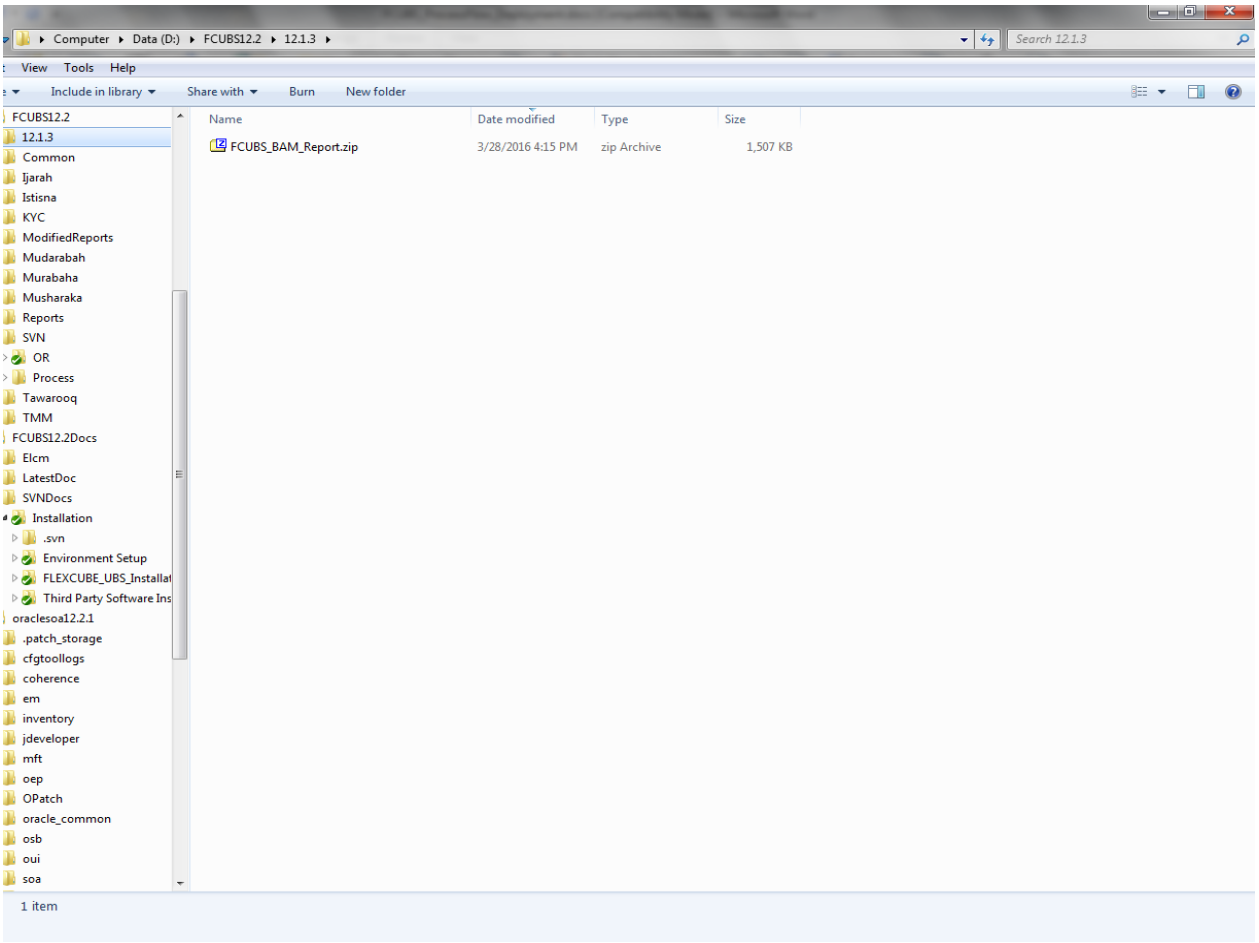

Computer ▸ Data (D:) ▸ FCUBS12.2 ▸ 12.1.3 ▸
Search 12.1.3
View Tools Help
Include in library
Share with
Burn
New folder
FCUBS12.2
12.1.3
Common
Ijarah
Istisna
KYC
ModifiedReports
Mudarabah
Murabaha
Musharaka
Reports
SVN
OR
Process
Tawarooq
TMM
FCUBS12.2Docs
Elcm
LatestDoc
SVNDocs
Installation
.svn
Environment Setup
FLEXCUBE_UBS_Installat
Third Party Software Ins
oraclesoa12.2.1
.patch_storage
cfgtoollogs
coherence
em
inventory
jdeveloper
mft
oep
OPatch
oracle_common
osb
oui
soa
Name
Date modified
Type
Size
FCUBS_BAM_Report.zip
3/28/2016 4:15 PM
zip Archive
1,507 KB
1 item


DataObject.xml - Notepad
File Edit Format View Help

7) Open the FCUBS_BAM_Report.zip →Dataobject →Update the Schema element with the FCUBS schema name for SMTB_USER_TYPE_CONVERSION_VIEW.xml, ORVW_TRACK_EXPOSURE.xml, ORVW_FACILITY_EXPOSURE.xml, GetUtilsDB.xml files.

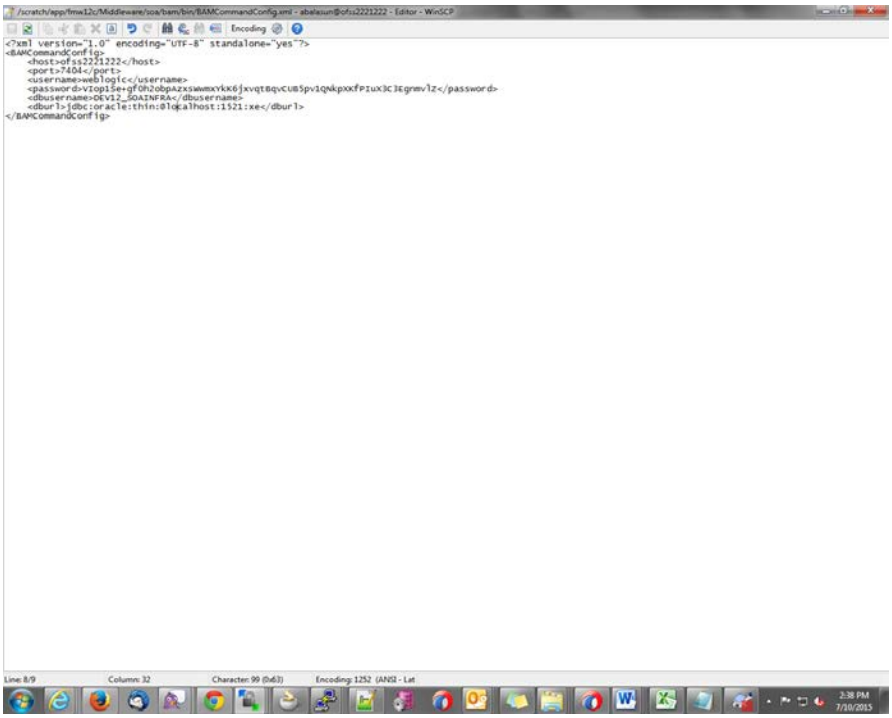


8) Move the BAM Project Unit (.Zip) Local to server location.



9) Configure the BAM server location ,port username and password in BAMCommandConfig.xml. It is available in MIDDLEWARE_HOME\soa\bam\bin\BAMCommandConfig.xml

EX:



10) Set proper JAVA_HOME.

```
bash-4.1$ export JAVA_HOME=/usr/java/jdk1.7.0_60
bash-4.1$ e
```

11) Execute the Below BAM Command to import the Dash Board in to the server.

./bamcommand -cmd import -file /scratch/work_area/DEV/app/FCUBS_BAM_Report.zip -mode append

from the below path MIDDLEWARE_HOME\soa\bam\bin.

```
Enter User Name: weblogic
Enter Password:
Connecting to BAM Server.."weblogic@10.184.133.168:7404".
Connected to BAM Server successfully.
Attempting import of artifacts from file "/scratch/work_area/DEV/app/FCUBS_BAM_R
eport.zip".............
"FCUBS_BAM_Report" has been imported successfully from file "/scratch/work_area/
DEV/app/FCUBS_BAM_Report.zip" in 63,498 milliseconds.
Import of 1 artifacts completed successfully in 64,251 milliseconds.
[fmw122@ofss220216 bin]$ ./bamcommand -cmd import -file /scratch/work_area/DEV/a
pp/FCUBS_BAM_Report.zip -mode append

Oracle BAM Import/Export Utility [Build 1, BAM Repository Version 2020] Copyrigh
t © 2014, Oracle and/or its affiliates. All rights reserved.
Enter User Name: weblogic
Enter Password:
Connecting to BAM Server.."weblogic@10.184.133.168:7404".
Connected to BAM Server successfully.
Attempting import of artifacts from file "/scratch/work_area/DEV/app/FCUBS_BAM_R
eport.zip".................
"FCUBS_BAM_Report" has been imported successfully from file "/scratch/work_area/
DEV/app/FCUBS_BAM_Report.zip" in 75,498 milliseconds.
Import of 1 artifacts completed successfully in 75,815 milliseconds.
```



FCUBS Process Flow Deployment
[November] [2020]
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