

FCIS Process Flow Deployment
Prerequisites for Oracle FLEXCUBE Installer
Oracle FLEXCUBE Investor Servicing
Release 12.1.0.0.0
[October] [2015]

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1. Introduction

1.1 Background

This document provides detailed description on deploying FCIS 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 FCIS 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

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. For instance, Oracle SOA suite – 12.1.3 + Oracle JDeveloper 12.1.3. 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>

Run fmw_12.1.3.0.0_bpm_quickstart.jar to install jdeveloper with bpm enabled.

3. Creating Application server connection

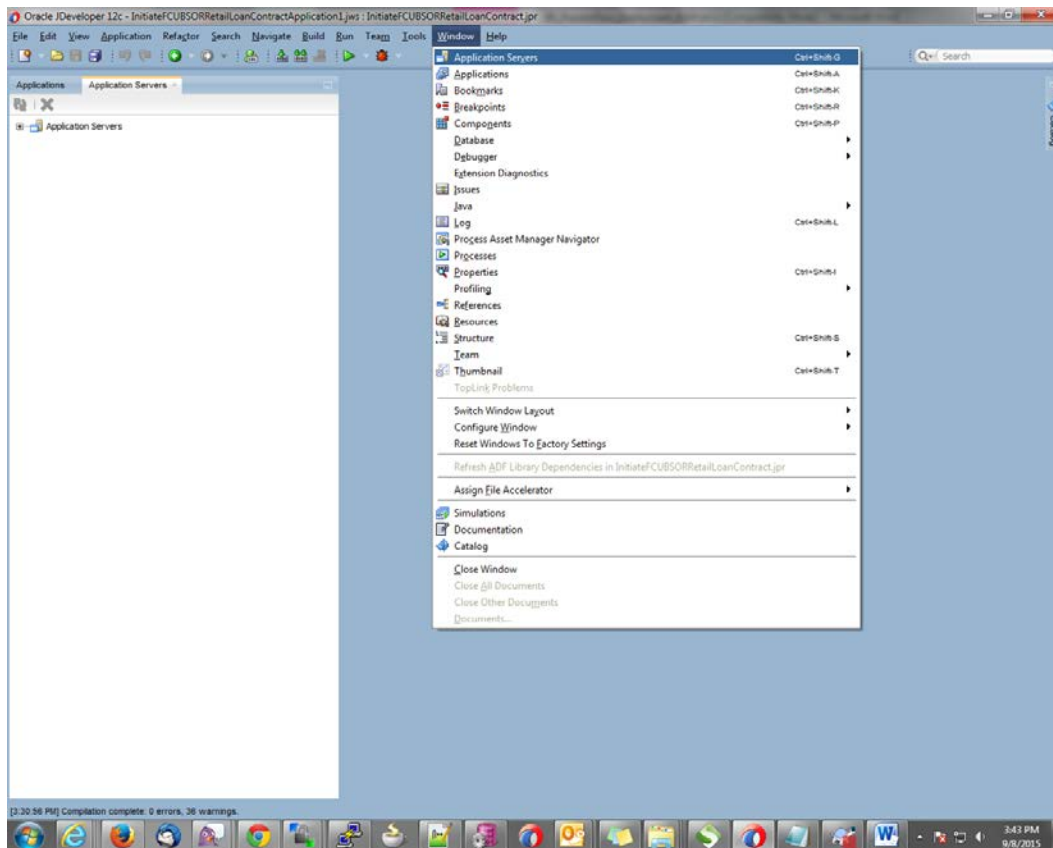
3.1 Introduction

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

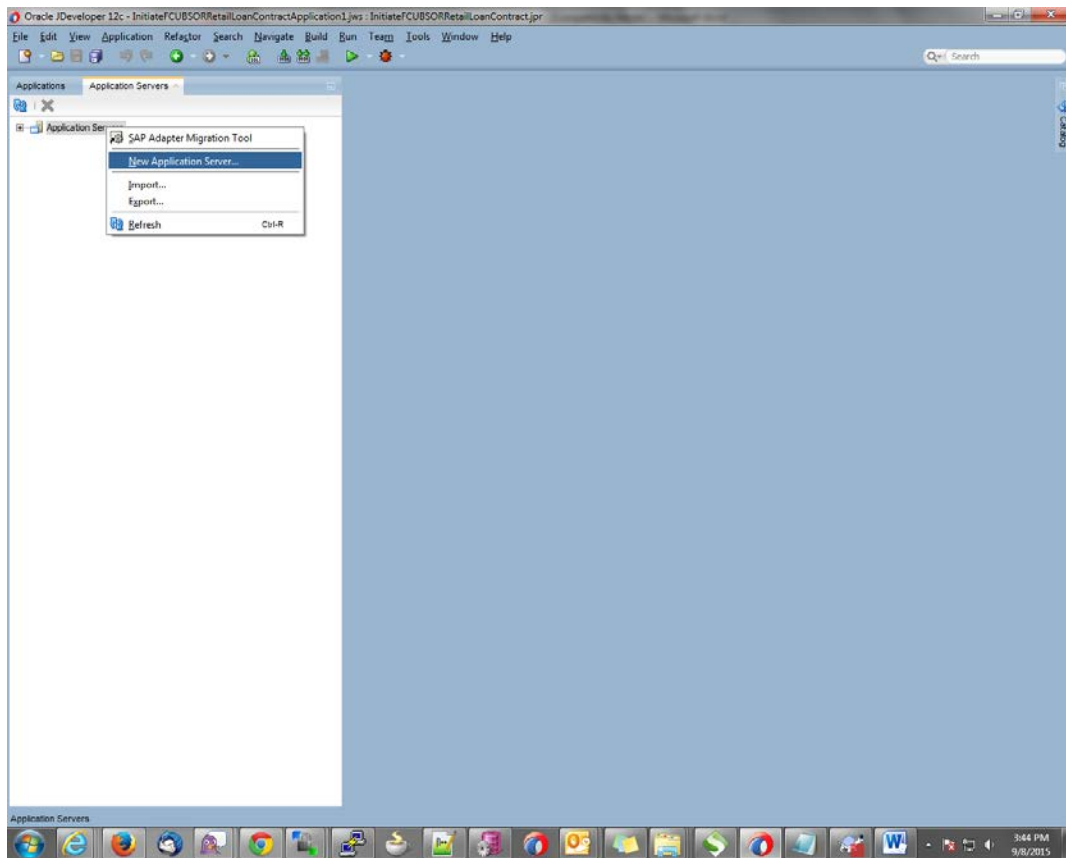
3.2 Application Sever Connection

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

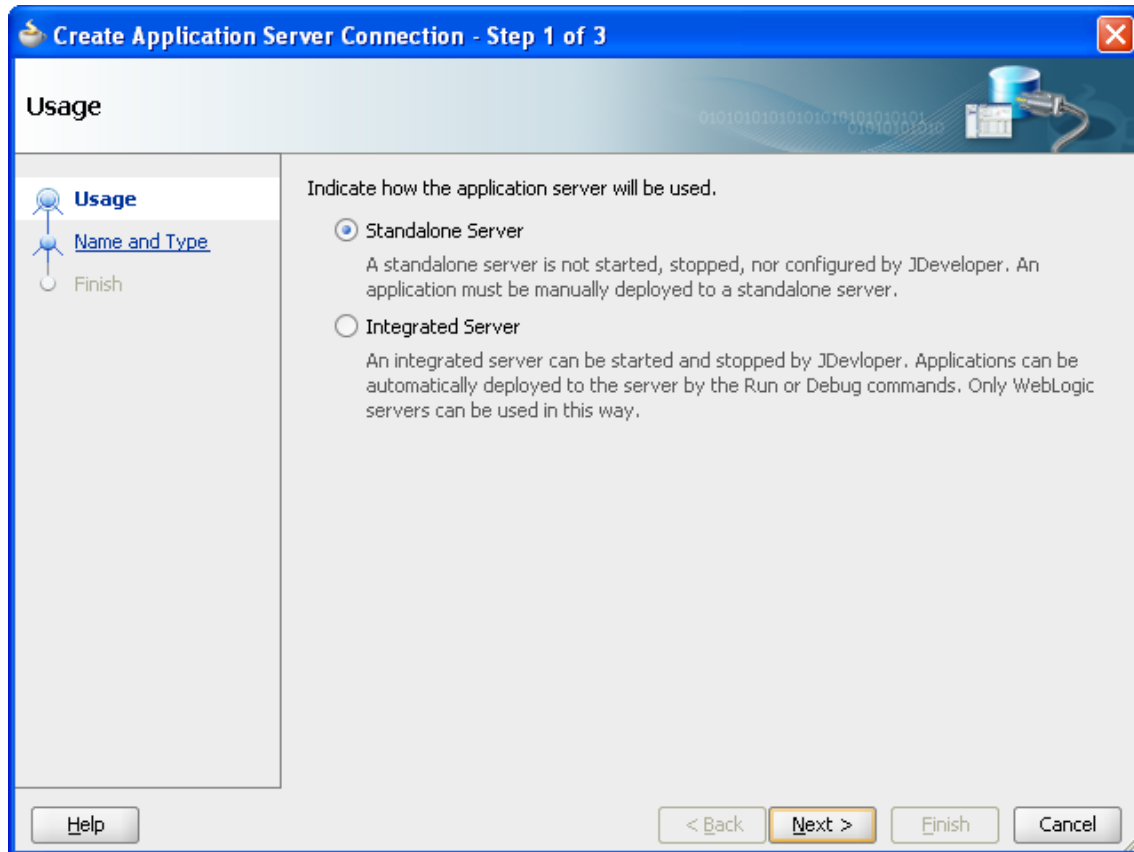
- After JDeveloper is launched
- Click on → windows → Application Servers Navigator



- 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

Create Application Server Connection - Step 2 of 3

Name and Type

Specify a unique name and type for the connection. The name must be a valid Java identifier.

Create connection in: IDE Connections

Connection Name:

Connection Type:

[Usage](#)
[Name and Type](#)
[Finish](#)

[Help](#) [< Back](#) **[Next >](#)** [Finish](#) [Cancel](#)

- 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

Create Application Server Connection - Step 3 of 6

Authentication

Specify a username and password to authenticate the connection.

Usage
Name and Type
Authentication
Configuration
Test
Finish

Username:
weblogic

Password:

Help < Back Next > Finish Cancel

- 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

Create Application Server Connection - Step 4 of 6

Configuration

WebLogic Server connections use a host name and port to establish a connection. The Domain of the target will be verified

WebLogic Hostname (Administration Server):
ofss2221222

Port: 7401 SSL Port: 7002

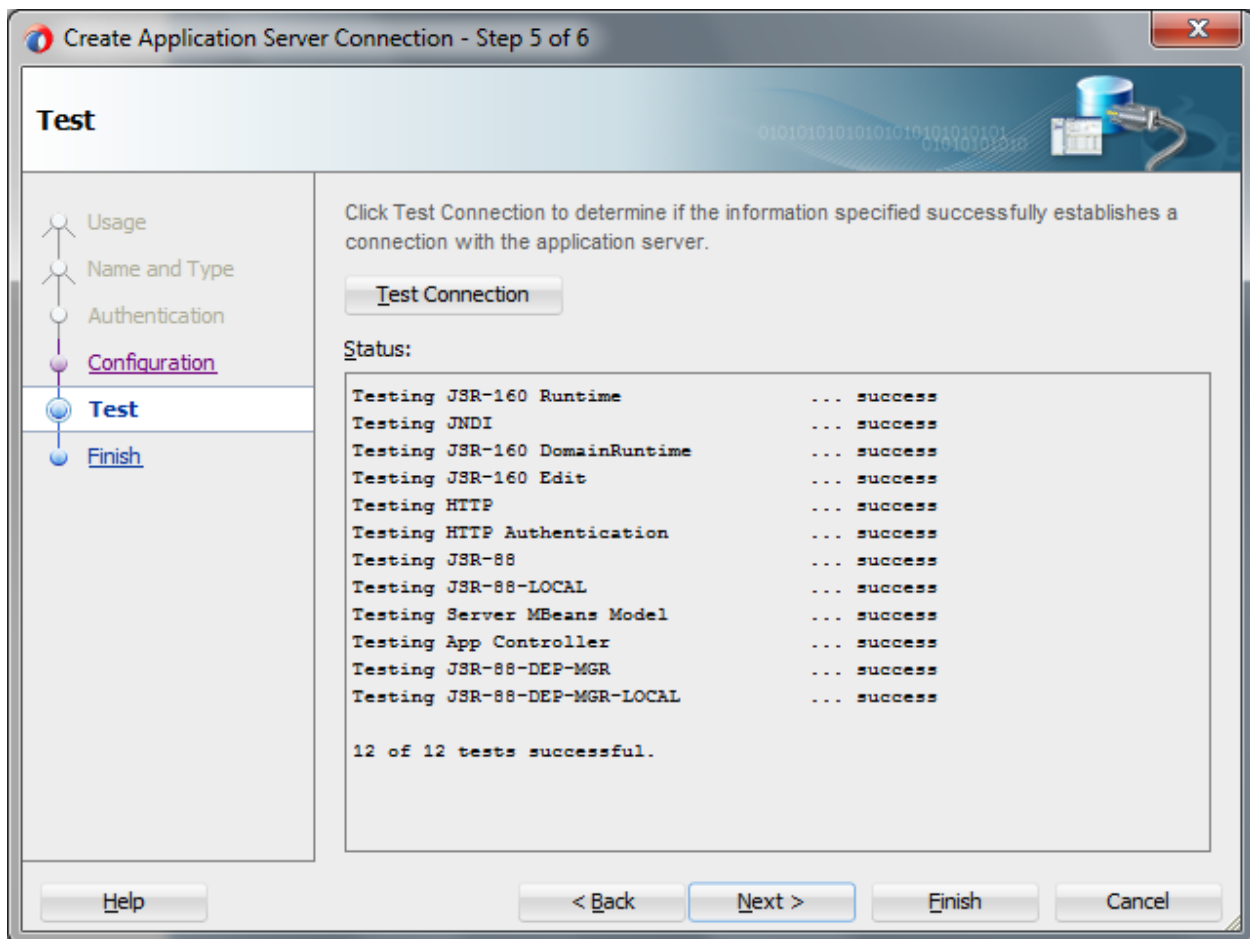
☐ Always use SSL

WebLogic Domain:
dev_domain

Usage
Name and Type
Authentication
Configuration
Test
Finish

Help < Back Next > Finish Cancel

- 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

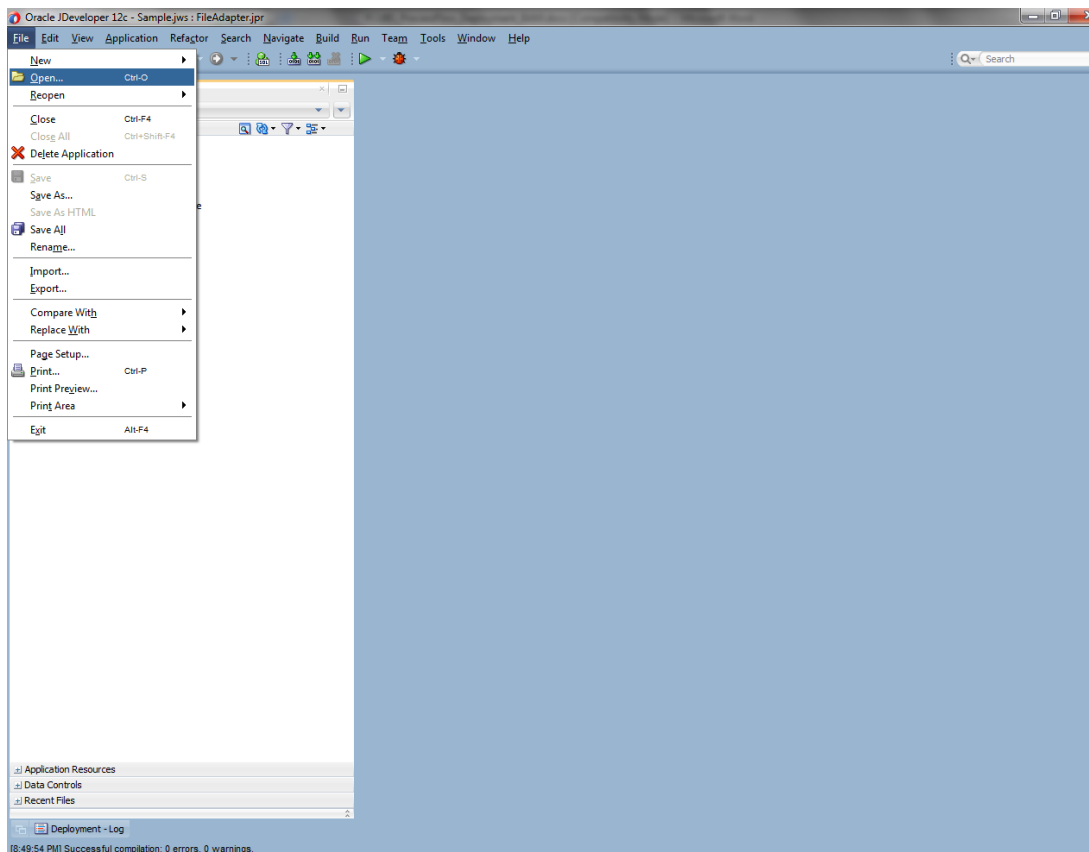
4.1 Introduction

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

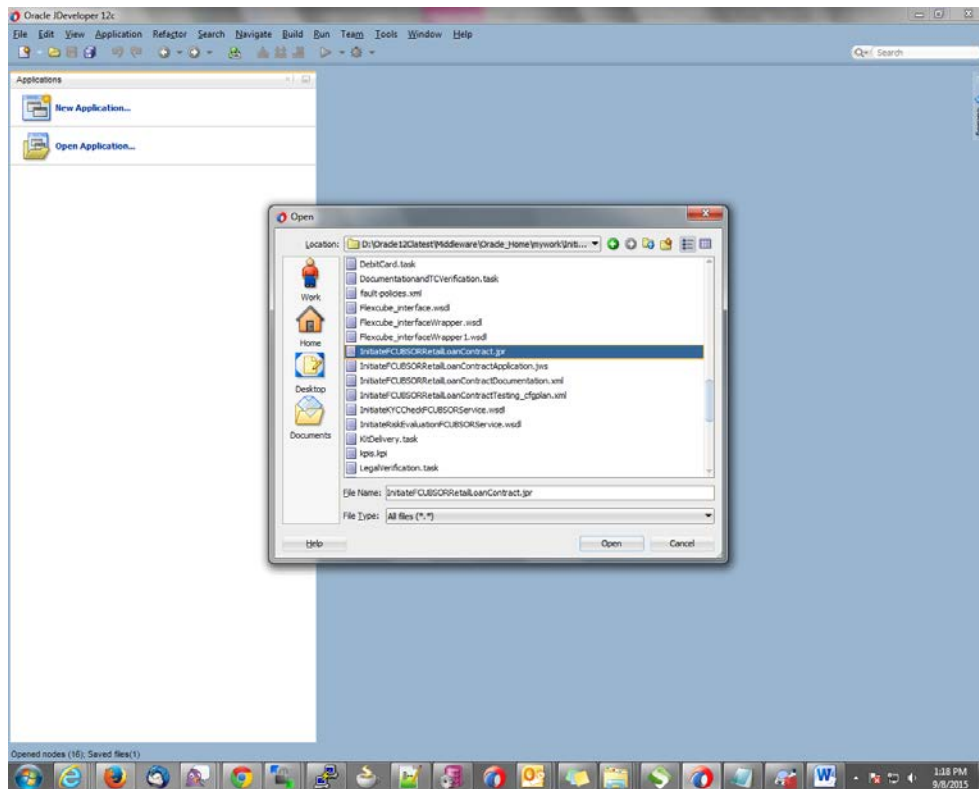
4.2 Loading the Process

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

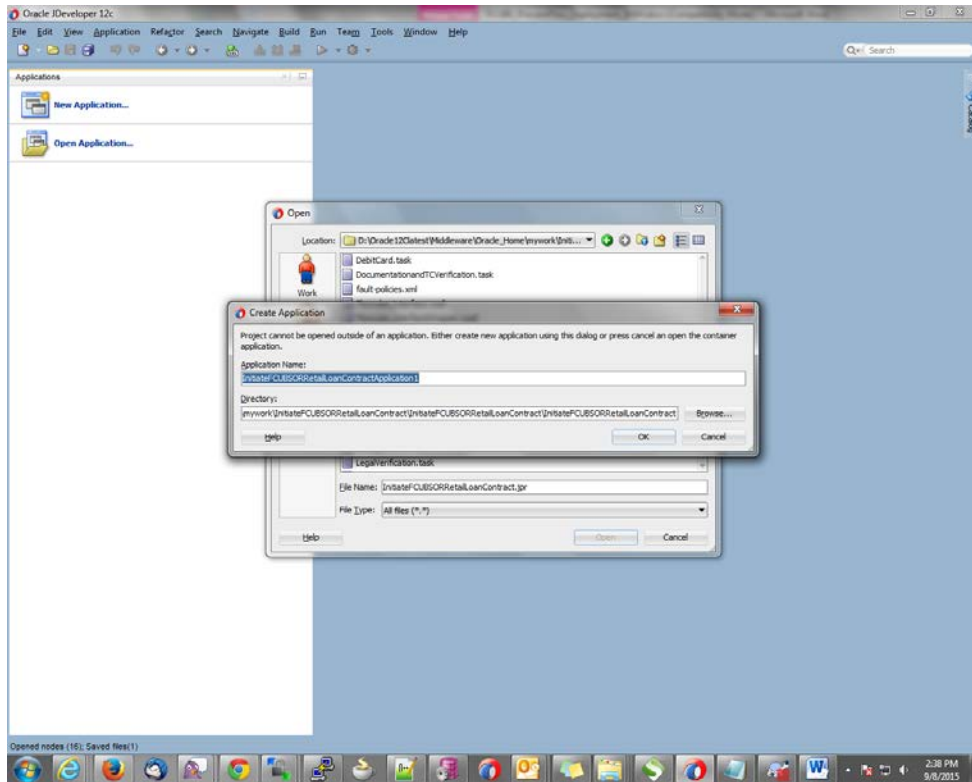
- Click on → File → Open



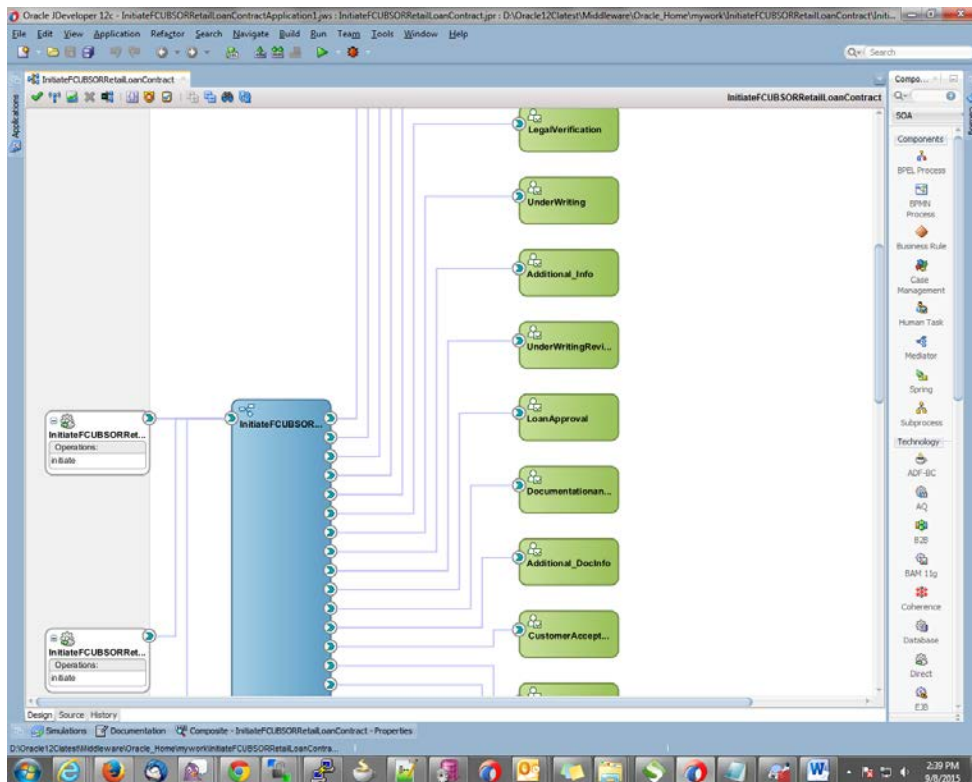
- Navigate to the folder where process flow is deployed
- Locate and select the ".jpr" file under the folder <process_name>
- Click 'Open' to load the process flow in JDeveloper



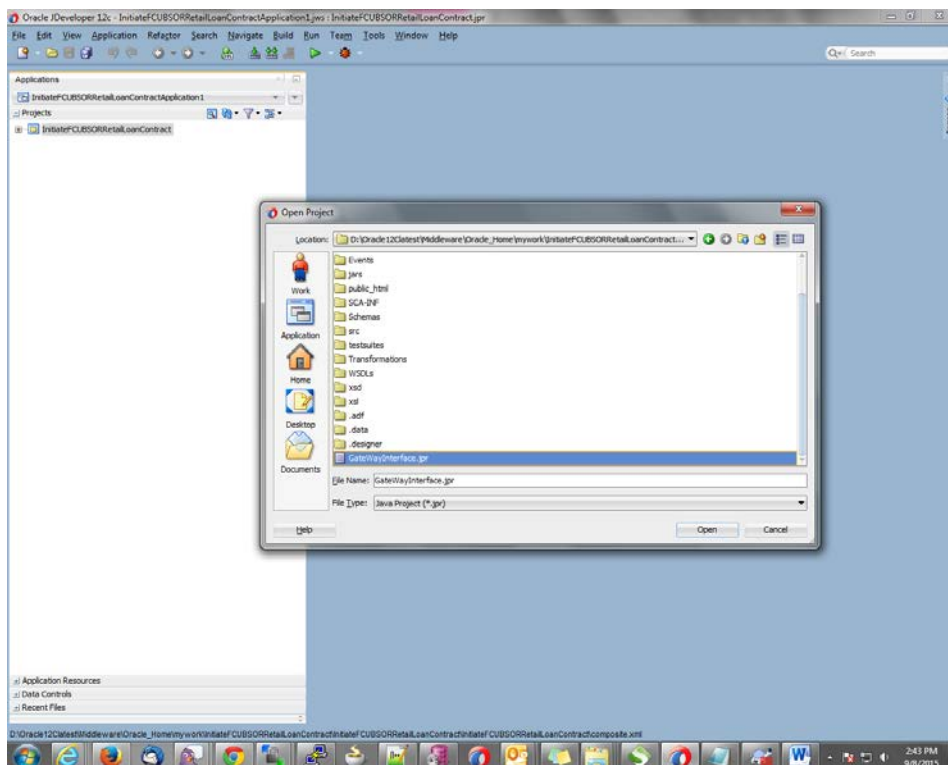
- If this is the first Process flow that is being loaded JDeveloper will prompt for an Application Name and Location where the application file will be stored
- Provide an application name and folder path for the same.
- Click in “Ok” to proceed with loading of the process flow.



- The process flow is loaded into JDeveloper and is displayed as given below
- Clicking on the “composite.xml” under “SOA Content” 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.

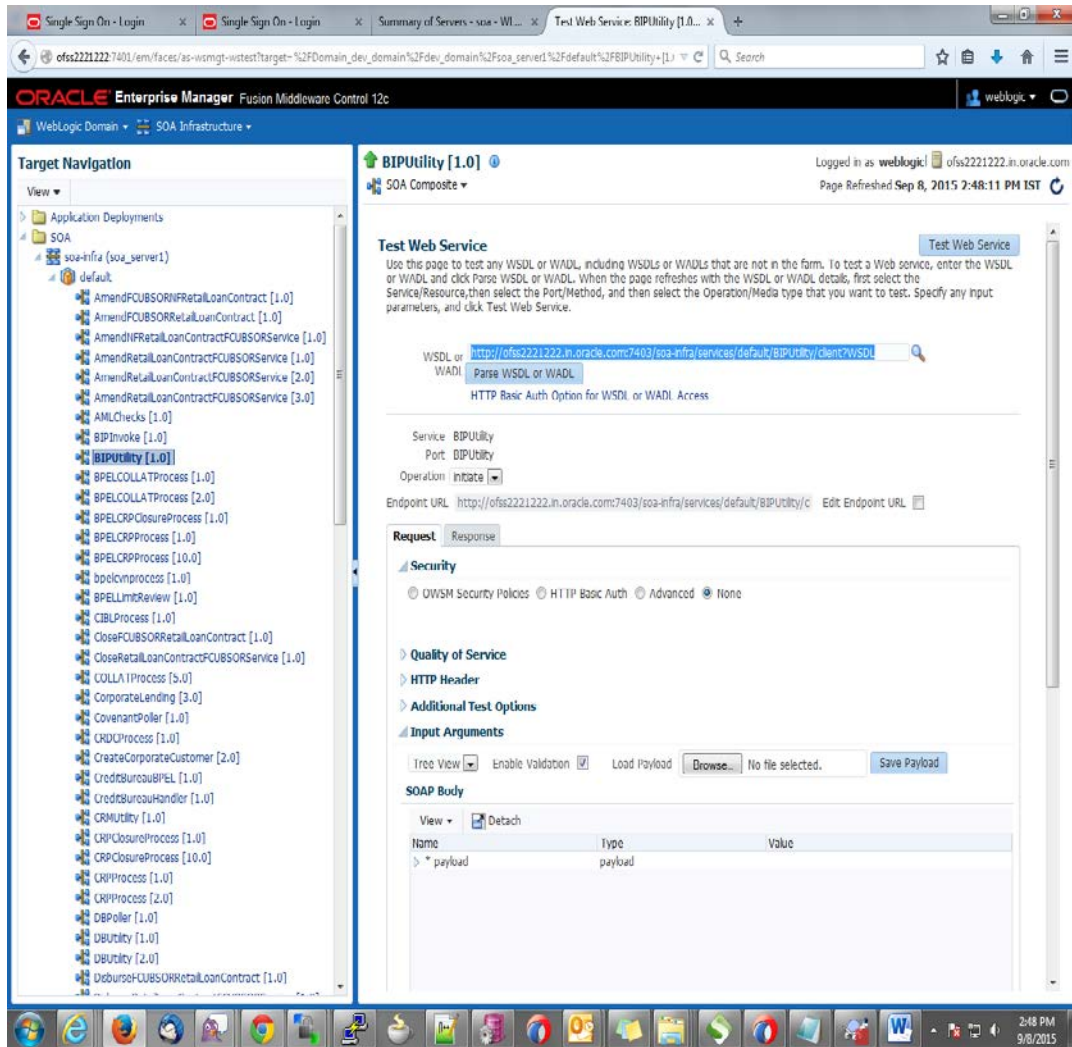
In case of Dependent Process Flows like InitiateFCUBSORRetailLoanContract, having other Process Flows as services and subprocesses the composite.xml file has to be modified with the runtime wsdl location of the subprocess (like BIPUtility). The Runtime wsdl is obtained from the em console as shown in the screen shot.

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

The screenshot displays the Oracle Enterprise Manager Fusion Middleware Control interface. On the left, the 'Target Navigation' pane shows a tree structure under 'SOA' > 'soa-infra (soa_server1)' > 'default'. The 'BIPUtility [1.0]' process is selected. The main pane shows the 'BIPUtility [1.0]' configuration page. The 'Components' section lists the BIPUtility component as a BPEL. The 'Services and References' section contains a table with the following data:

Name	Type	Usage	Total Messages	Average Processing Time (sec)
client	Web Service	Service	1	0.000
GetReportDetails	JCA Adapter	Reference	1	0.472
InsertReportDetails	JCA Adapter	Reference	0	0.000
FCDSmsService	Web Service	Reference	0	0.000

- 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.



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 there are no replacement values that needs to be replaced in the project and that project can be deployed without any config plans.

`<processflow_name>_cfgplan_dev.xml`

`<processflow_name>_cfgplan_testing.xml`

`<processflow_name>_cfgplan_production.xml`

```

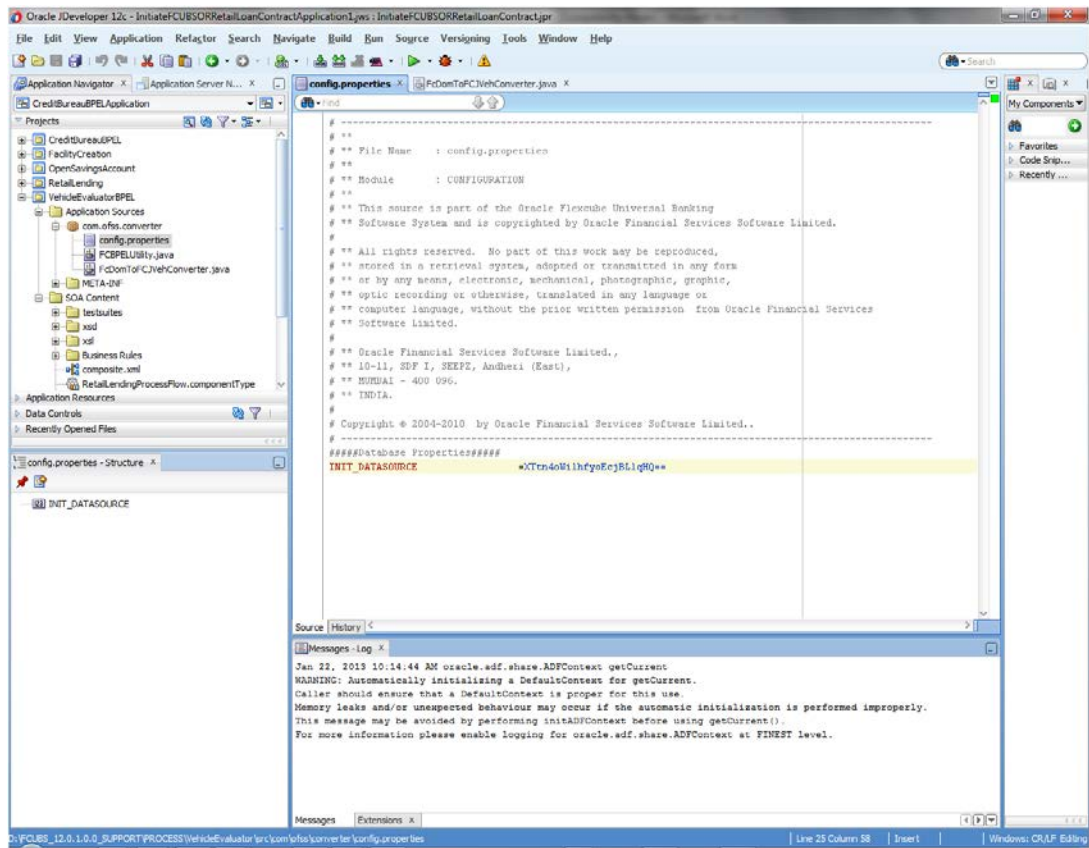
<search>
  <search>
    <replace>
      <search>
        <replace>
      </search>
    </replace>
  </search>
</search>
<import>
  <search>
    <search>
      <replace>
    </search>
  </search>
</import>
<service name="OpenCurrentAccount_client_ep">
  <binding type="soap">
    </binding>
  </service>
  <!-- Add search and replace rules for the component properties
  For components and service/reference bindings, you can add policy references.
  Example:
  <component name="">
    <policyReference category="management" scope="status"="enabled" URI="oracle/log_policy"/>
  </component>
  <reference name="KYCCorporateReview">
    <binding type="soap">
      <attribute name="port">
        <replace>http://xmlns.oracle.com/KYCCorporateReview/wsdl.endpoint(KYCCorporateReview/KYCCorporateReview)</replace>
      </attribute>
      <attribute name="location">
        <replace>http://mmbp4.ifilexolutions.com:8001/soa-infra/services/default/KYCCorporateReview/1.0/client/WSDL</replace>
      </attribute>
    </binding>
  </reference>
  <reference name="DBUtility">
    <binding type="soap">
      <attribute name="port">
        <replace>http://xmlns.oracle.com/DBUtility/wsdl.endpoint(DBUtility/DBUtility)</replace>
      </attribute>
      <attribute name="location">
        <replace>http://mmbp4.ifilexolutions.com:8001/soa-infra/services/default/DBUtility/1.0/client/WSDL</replace>
      </attribute>
    </binding>
  </reference>
  <reference name="CRMUtility">
    <binding type="soap">
      <attribute name="port">
        <replace>http://xmlns.oracle.com/CRMUtility/CRMUtility/CRMUtility/wsdl.endpoint(receiveCustomer_ep/CRMUtility_pt)</replace>
      </attribute>
      <attribute name="location">
        <replace>http://mmbp4.ifilexolutions.com:8001/soa-infra/services/default/CRMUtility/1.0/receiveCustomer_ep/WSDL</replace>
      </attribute>
    </binding>
  </reference>

```

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.



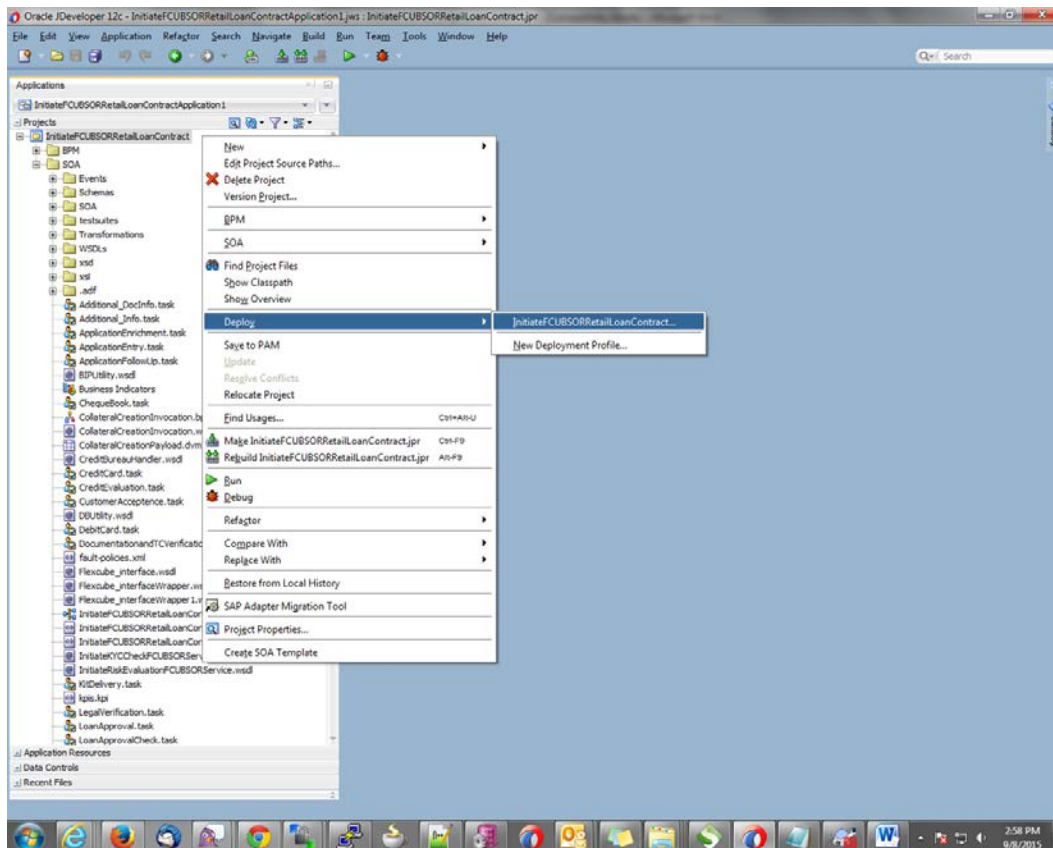
6. Deploying a Single Composite application using JDeveloper

6.1 Introduction

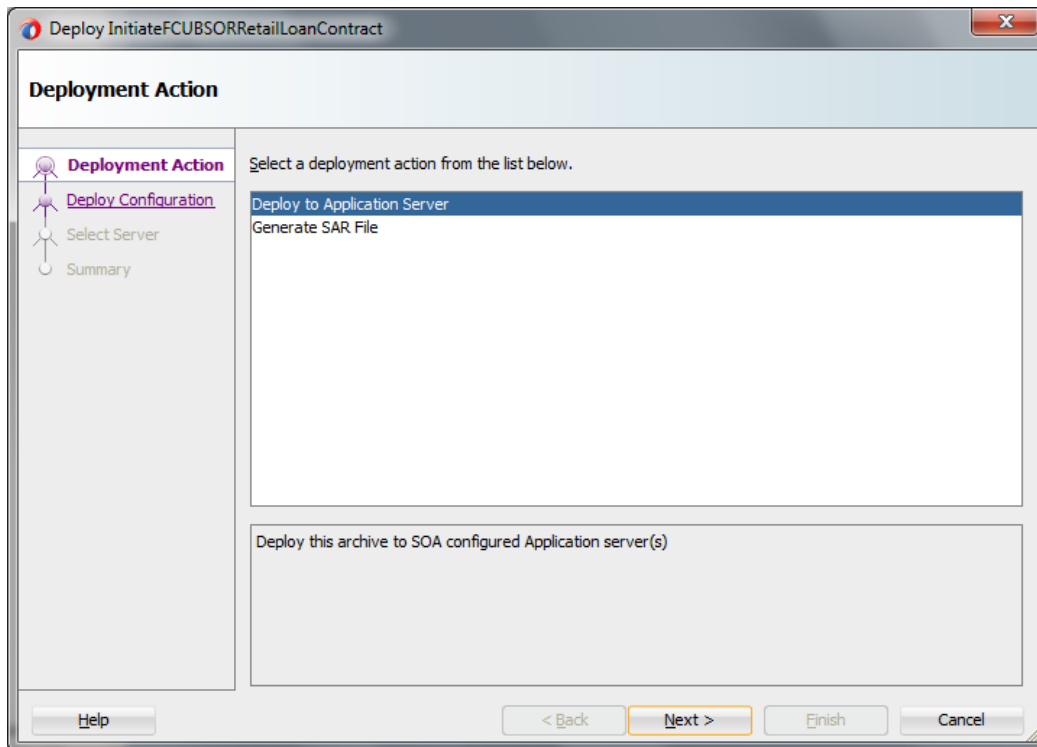
This section describes how to deploy a single SOA composite application with Oracle JDeveloper after completing updating of config plans with respective target environment replacement values.

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.

Deploy Configuration

Deployment Action
Deploy Configuration
 Select Server
 Summary

InitiateFCUBSORRetailLoanContract

Composite Revision ID

Project: InitiateFCUBSORRetailLoanContract

Current Revision ID: 1.0

New Revision ID: 2.0

SOA Configuration Plan

☐ Do not attach

☒ InitiateFCUBSORRetailLoanContractTesting_cfgplan.xml

☒ Mark composite revision as default.

☐ Overwrite any existing composites with the same revision ID.

☐ Keep running instances after redeployment.

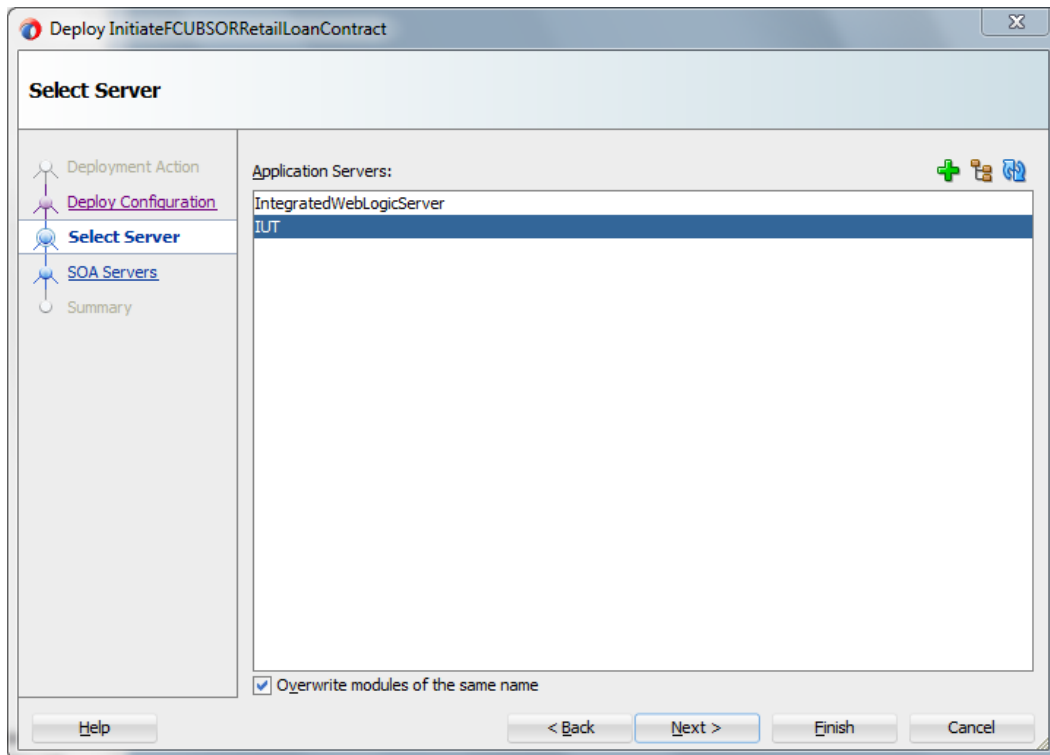
☐ Use the following SOA configuration plan for all composites:

Browse

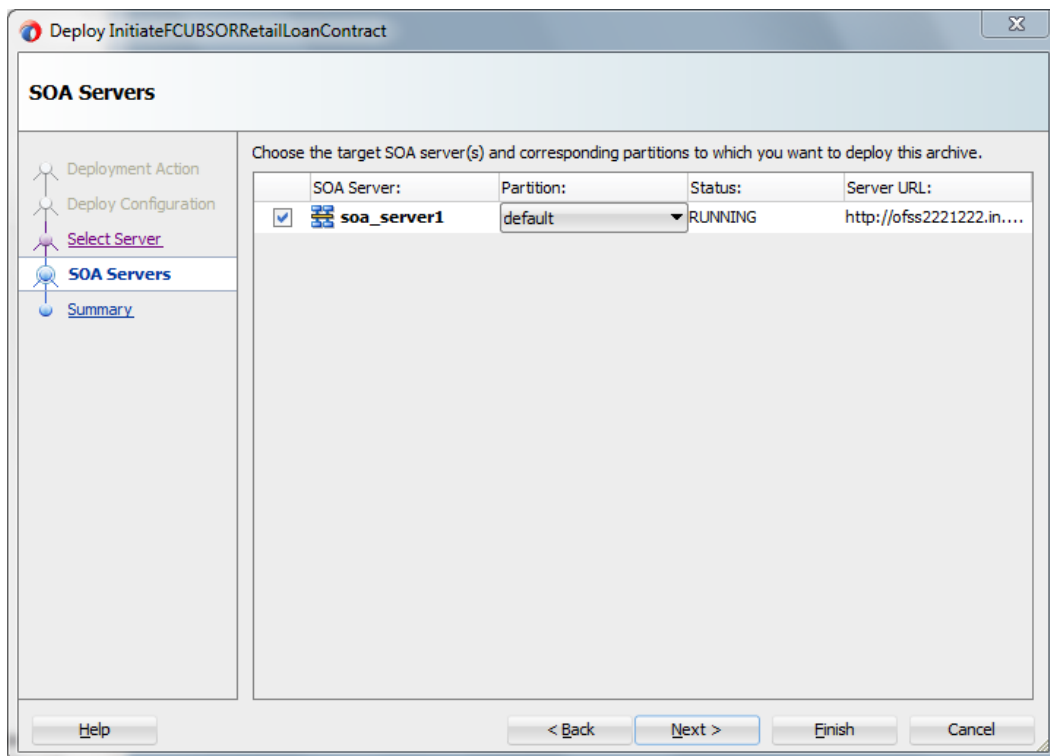
Help < Back Next > Finish Cancel

- 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.

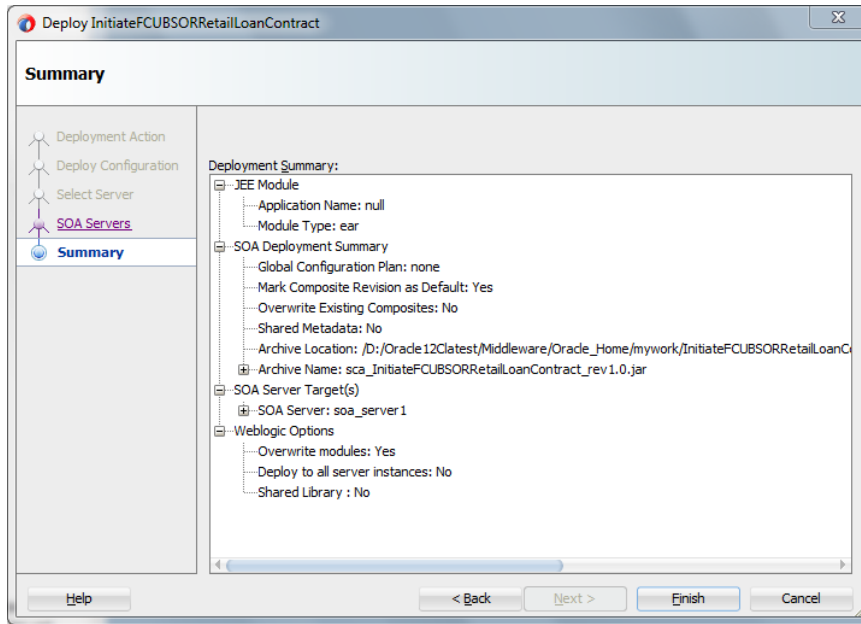
In case "Overwrite any existing composites with the same revision ID" checkbox is checked during the deployment, the active tasks which are currently running on the current revision of the process flow will be moved to "Stale" task status. The tasks which are in "Stale" status will not be displayed in 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.



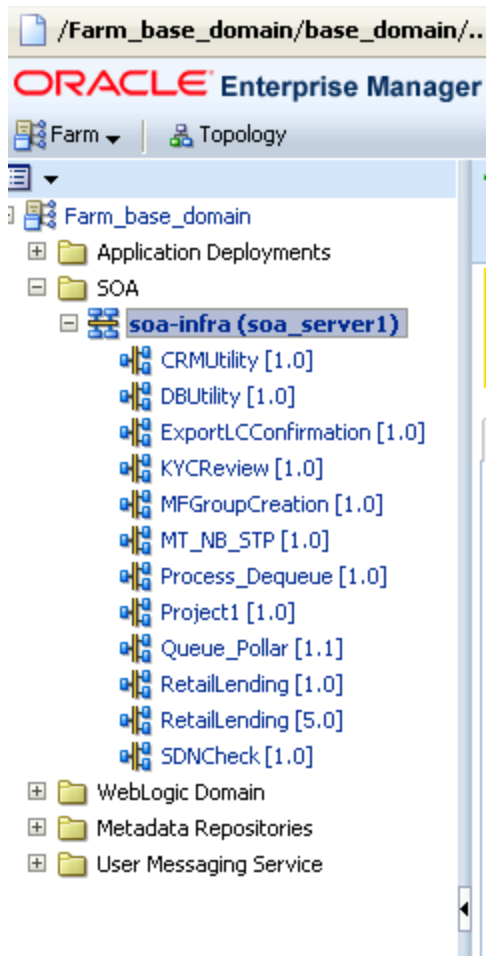
- View the summary of the deployment details and click 'Finish' to complete the deployment.



- 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



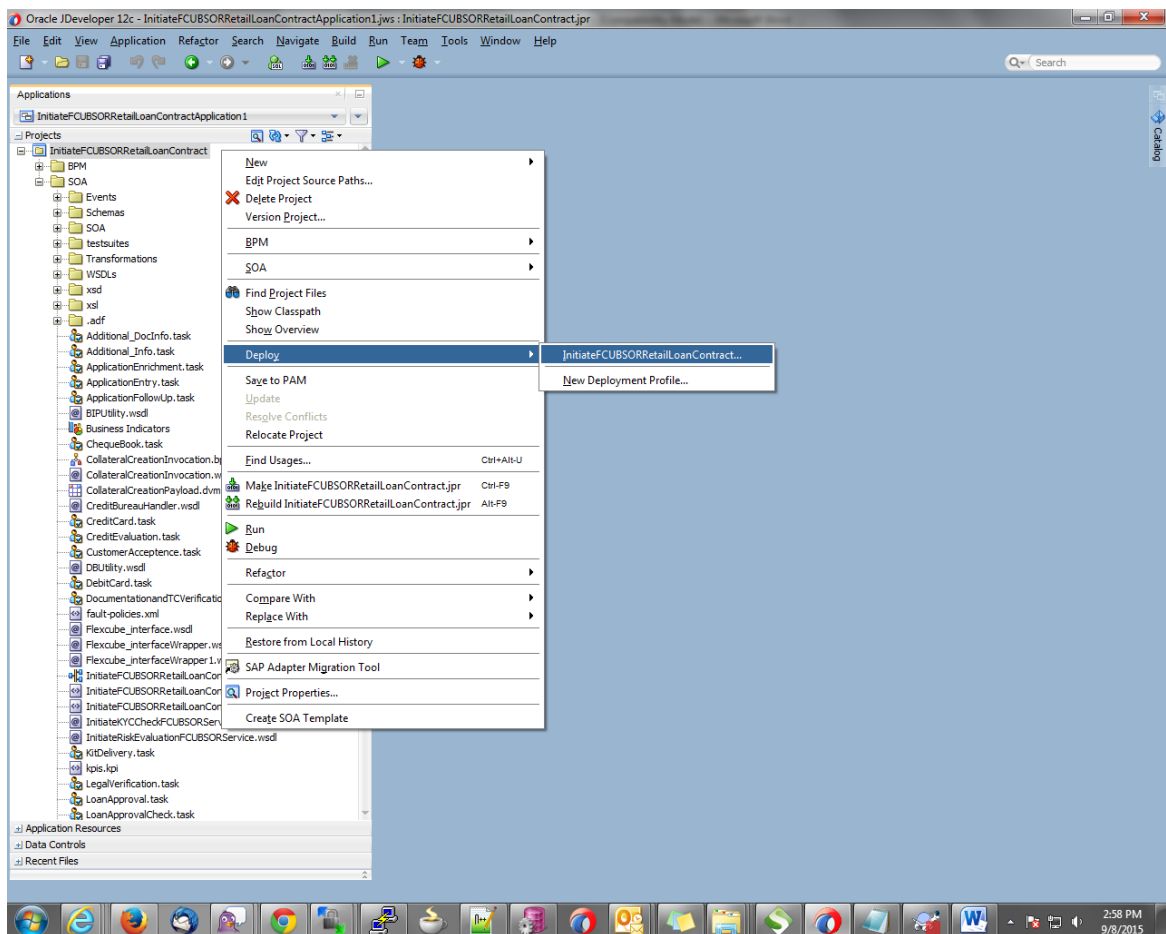
7. Deploying a Single Composite application via Enterprise manager console

7.1 Introduction

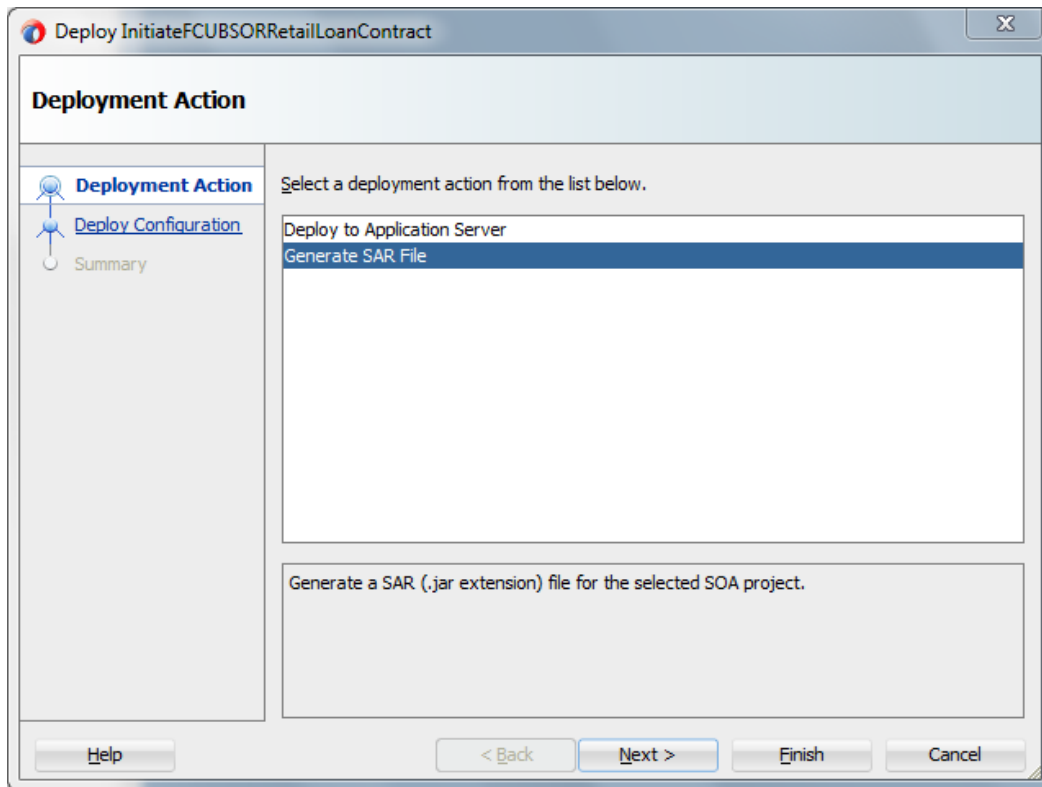
This section describes how to build a SAR file for a single SOA composite application with Oracle JDeveloper and deploy the same via enterprise manager console.

7.2 Deploying the Application

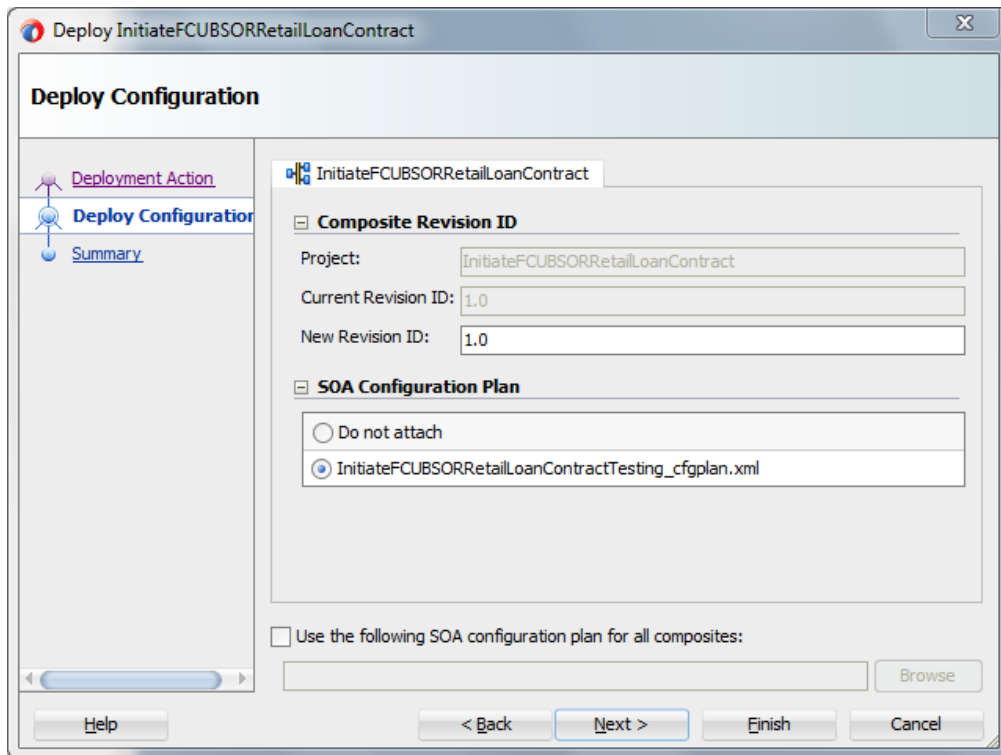
- Right click on the Application that needs to be deployed.
- Select 'Deploy' and then click on the default deployment profile which is the same as the application name.
- This will result in the deployment wizard screen being launched.



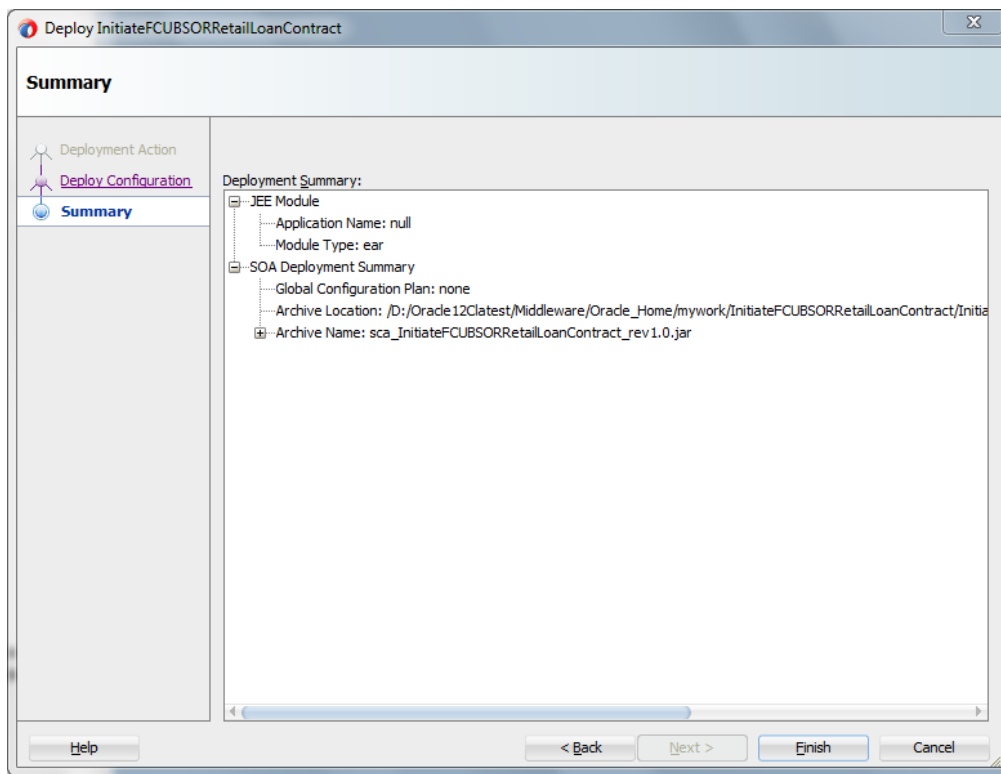
- In deployment action screen choose 'Deploy to SAR'
- Click 'Next' to proceed with the deployment.



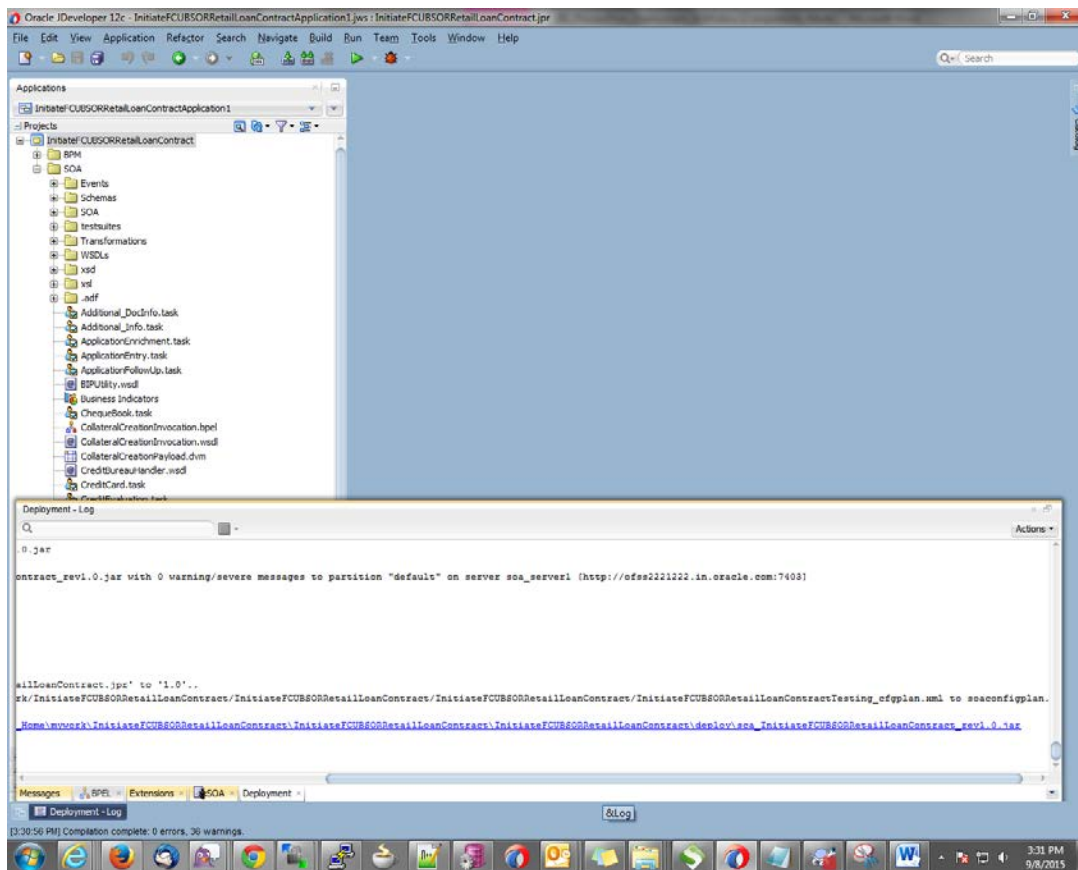
- In deployment configuration screen enter the revision
- Select the configuration plan.
- Click "Next" to proceed with the deployment.



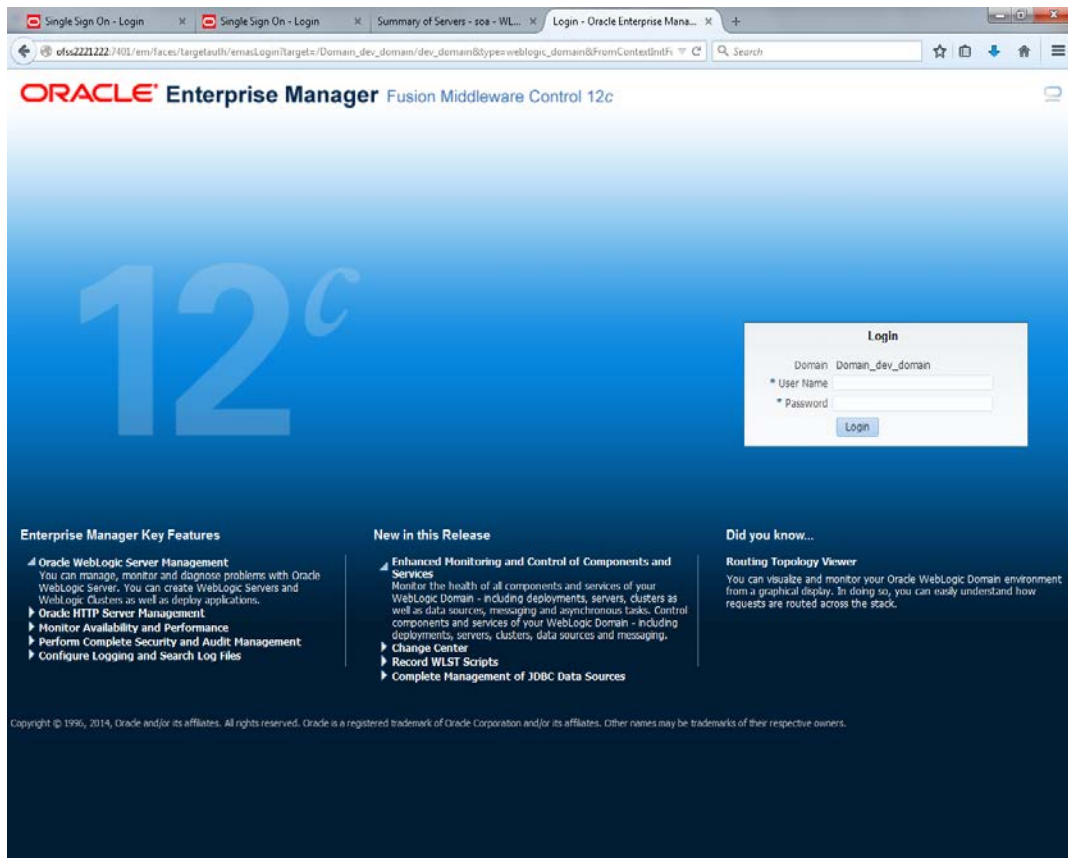
- Review the deployment summary screen
- Click “Finish” to proceed with the deployment.



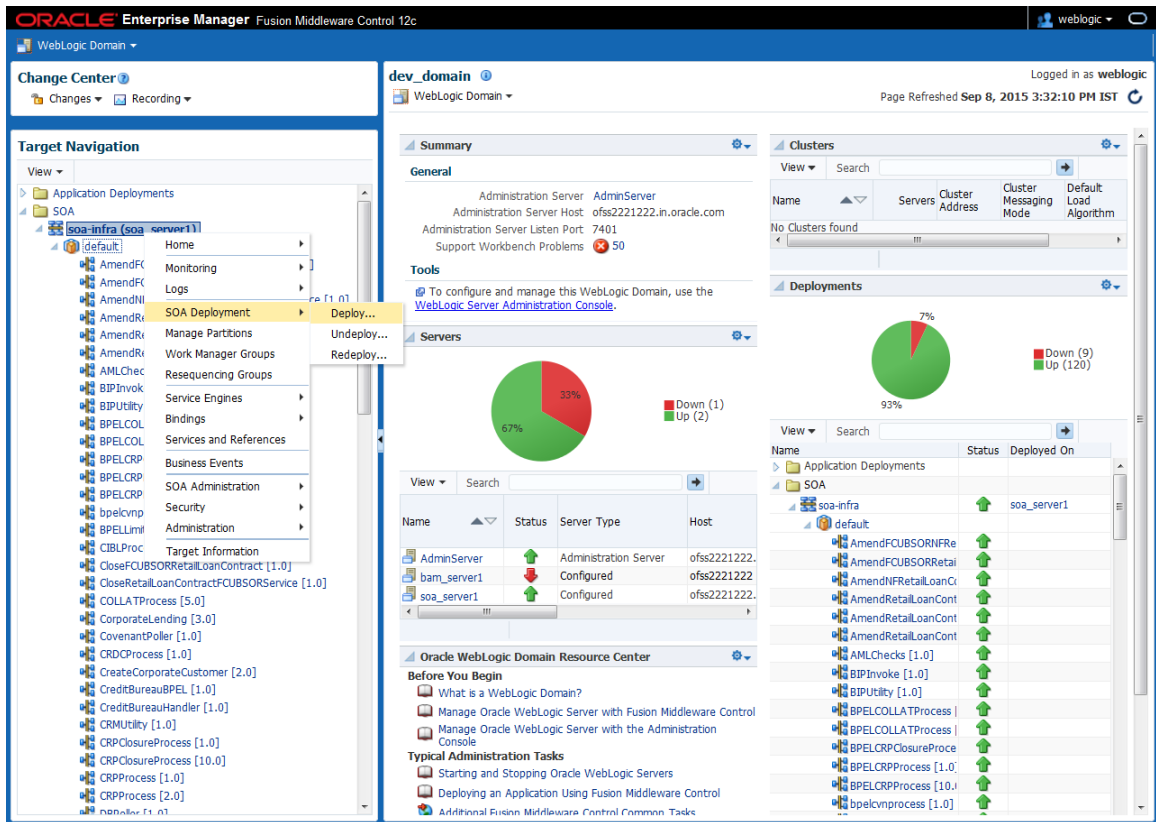
- Review the deployment log
- It shows the folder onto which the SAR file is written.



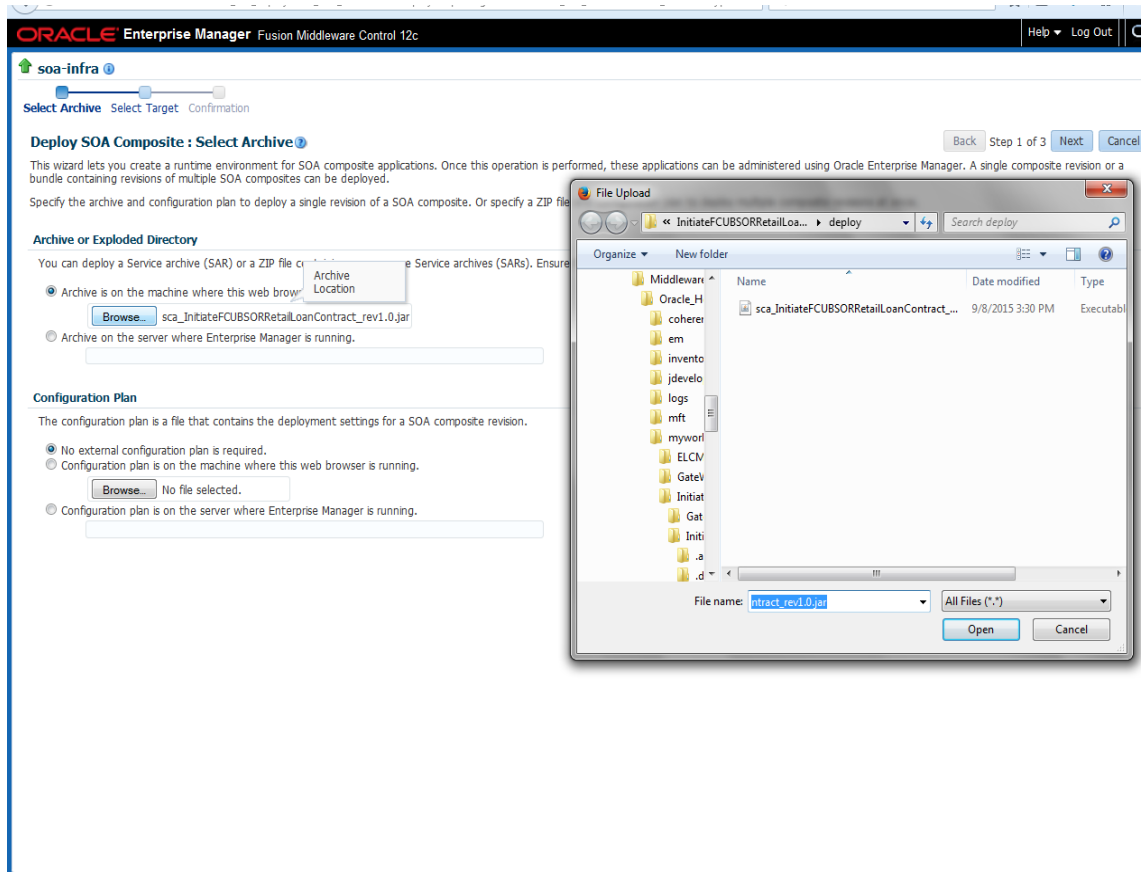
- Login to the enterprise manager console.
- Login to <http://<hostname>:<port>/em>



- 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.

ORACLE Enterprise Manager Fusion Middleware Control 12c Help Log Out

soa-infra

Select Archive Select Target Confirmation

Deploy SOA Composite : Select Target

Back Step 2 of 3 Next Cancel

WebLogic Server or Cluster

Based on the context from which you launched this wizard, the selected composite will be deployed to the WebLogic server or cluster shown below. If you wish to deploy to a different target, click Cancel to exit this wizard, navigate to a different WebLogic server or cluster or to the WebLogic Domain, and select Deploy again.

Deployment Target /Domain_dev_domain/dev_domain/soa_server1
 Type Oracle WebLogic Server
 SOA Composites Deployed 89

Token Configurations

As a good practice, configure the global token variables referenced by this composite before deploying it. Else the composite may not run properly, once it is deployed. Global token variables are used to resolve environment specific URIs when a composite is moved to another environment. Before starting the deployment operation, ensure that all the tokens referenced by the selected composite are configured. The Token Configurations page can be found in the SOA Administration section of the SOA Infrastructure target menu.
[\[More Info...\]](#)

SOA Partition

Partitions are logical groupings of composites that help you manage large deployments. The selected composite will be deployed to the partition shown below. If you wish to deploy to a different partition, select it from the list below.

*

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

ORACLE Enterprise Manager Fusion Middleware Control 12c Help Log Out

soa-infra

Select Archive Select Target Confirmation

Deploy SOA Composite : Confirmation

Back Step 3 of 3 Next Deploy Cancel

You are deploying the following SOA composite revision. Click "Deploy" to continue or click "Cancel" to cancel this operation.

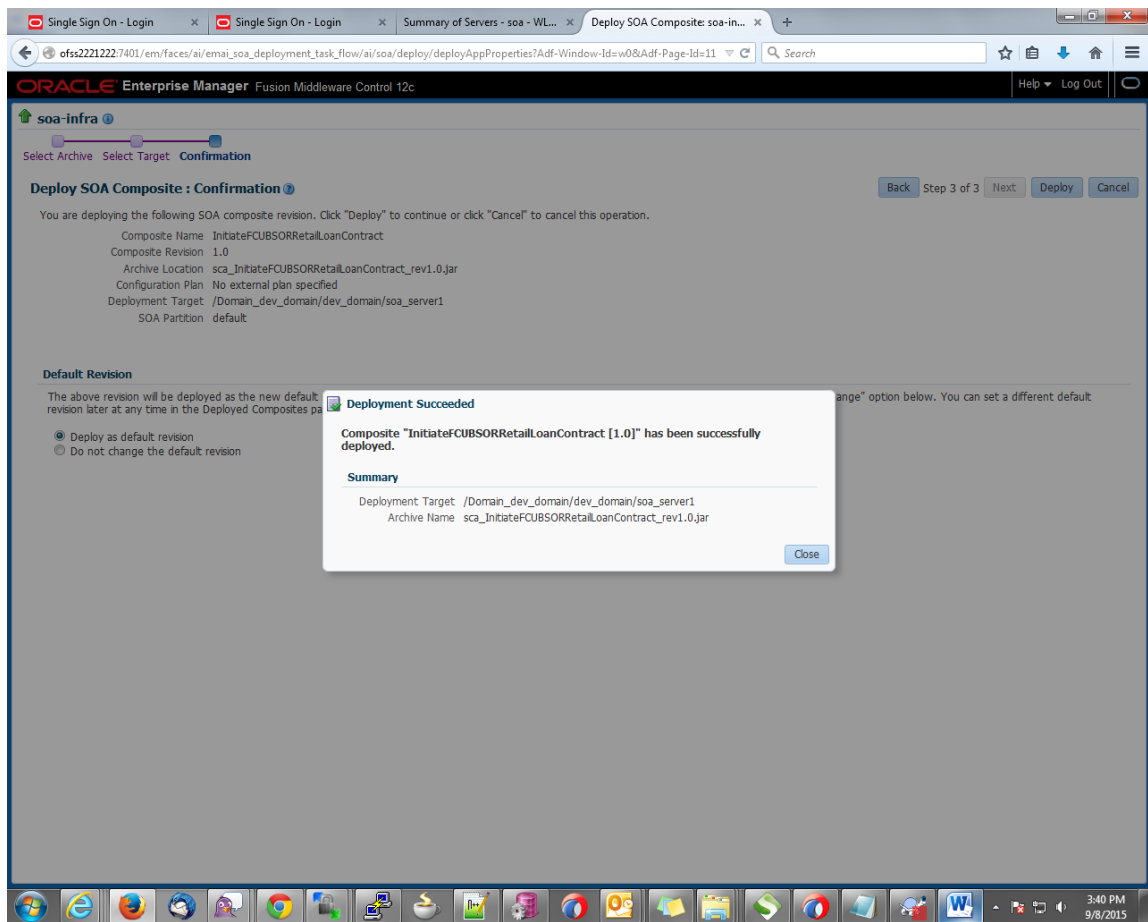
Composite Name	IntstateFCUBSORRetailLoanContract
Composite Revision	1.0
Archive Location	soa_IntstateFCUBSORRetailLoanContract_rev1.0.jar
Configuration Plan	No external plan specified
Deployment Target	/Domain_dev_domain/dev_domain/soa_server1
SOA Partition	default

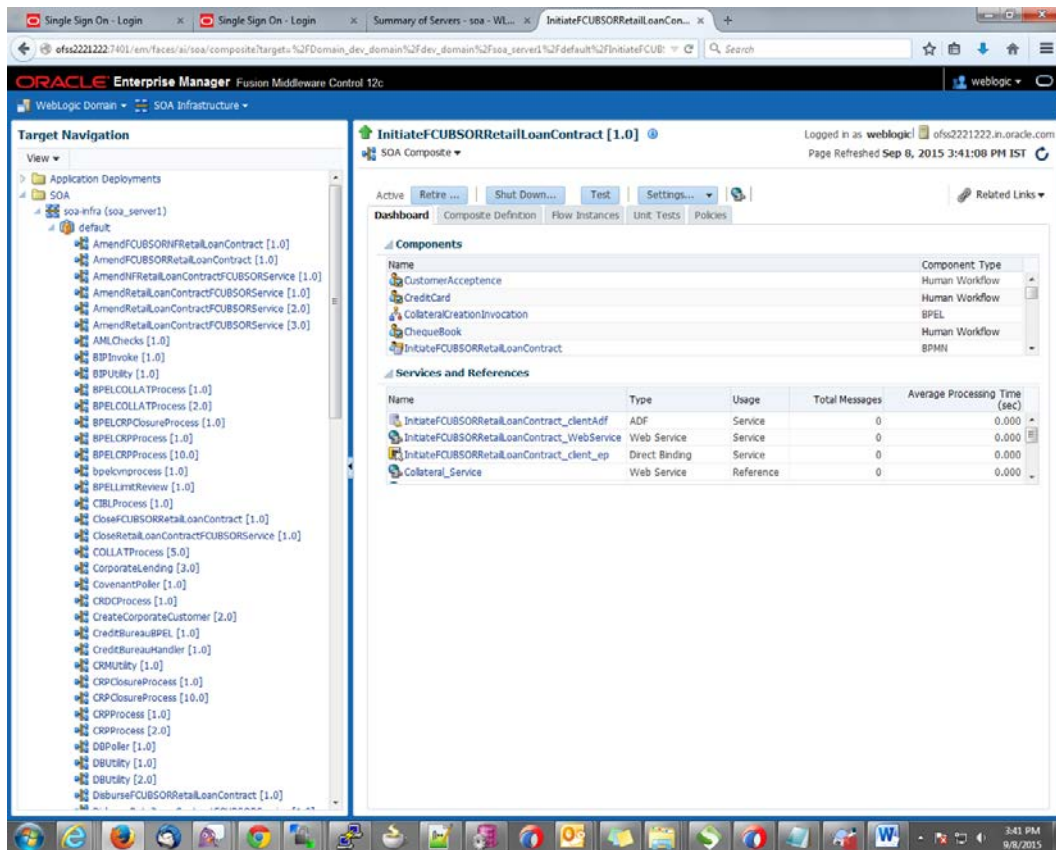
Default Revision

The above revision will be deployed as the new default revision of the composite. If you wish to keep the current default version, please choose the "Do not change" option below. You can set a different default revision later at any time in the Deployed Composites page that can be accessed from the SOA Infrastructure target menu.

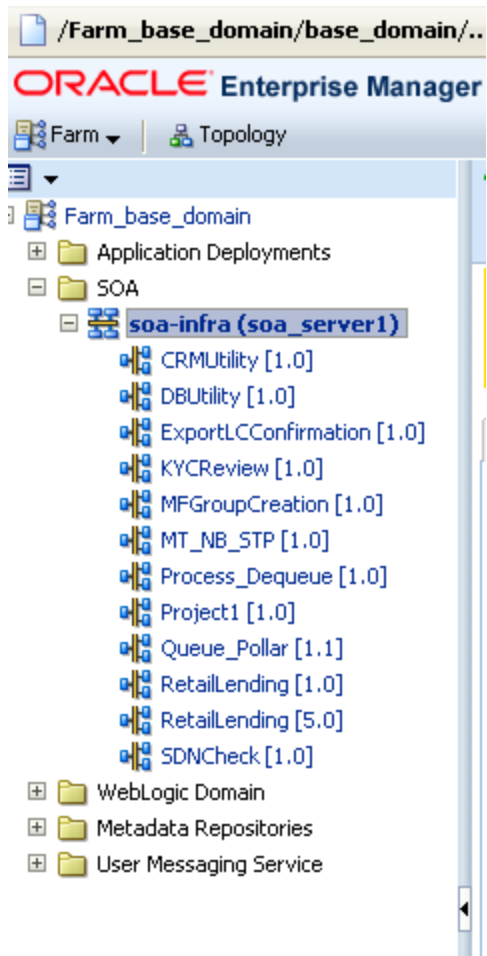
☒ Deploy as default revision
☐ Do not change the default revision

- Click on “Deploy” to complete the deployment





- Check the deployed process from the enterprise manager console



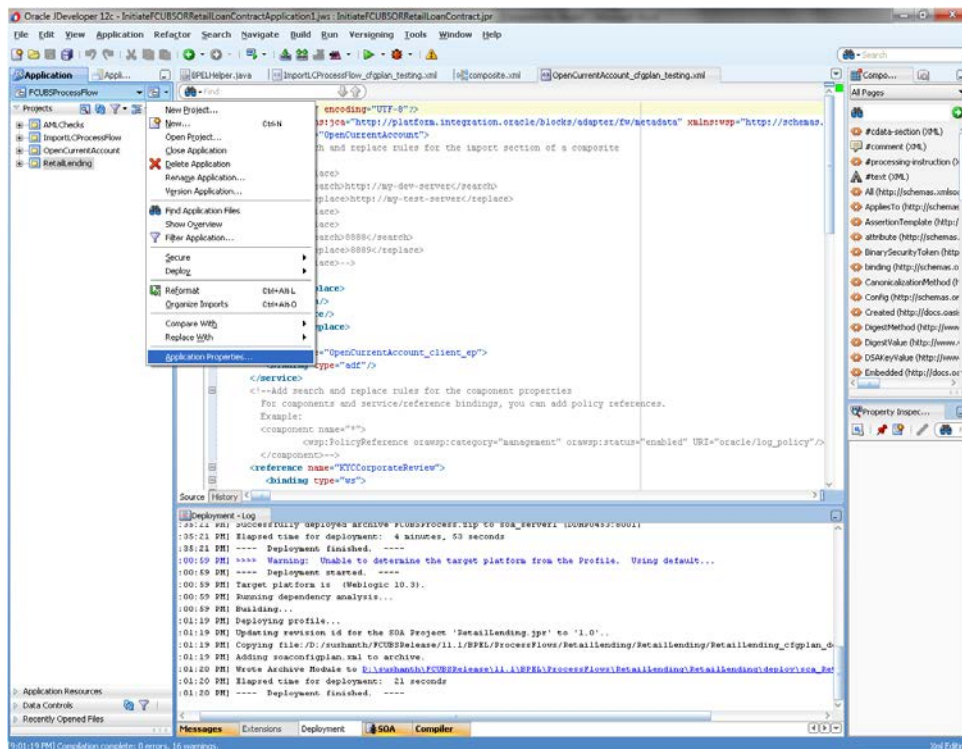
8. Deploying Multiple Composite application using JDeveloper

8.1 Introduction

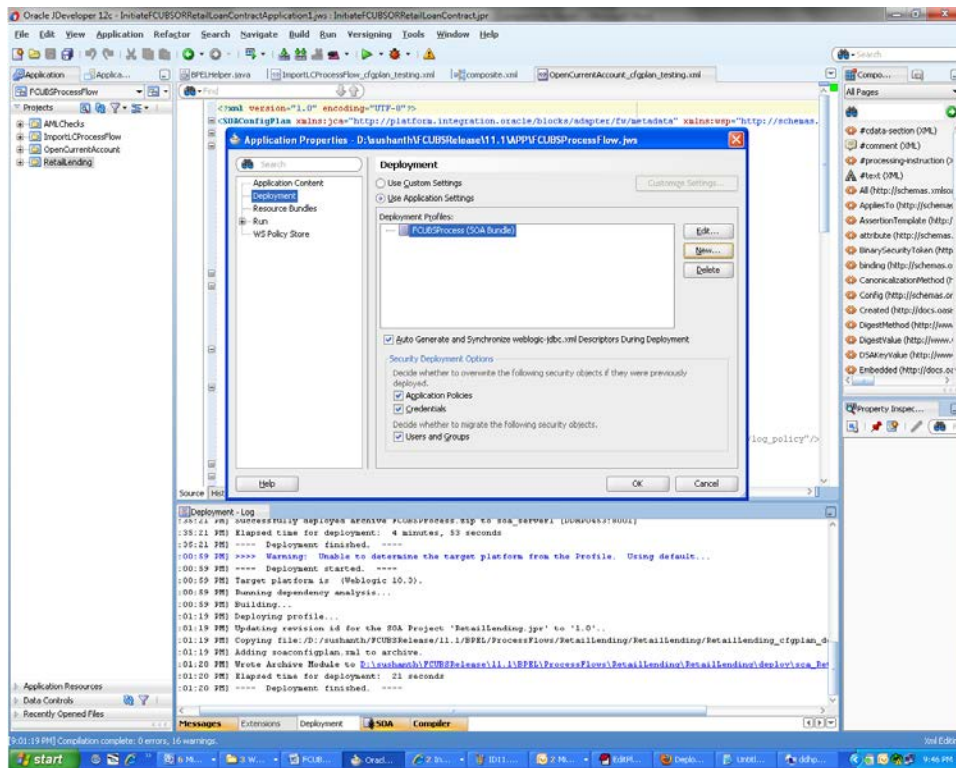
This section describes how to deploy a multiple SOA composite application with Oracle JDeveloper after completing updating of config plans with respective target environment replacement values.

8.2 Creating the Deployment Profile

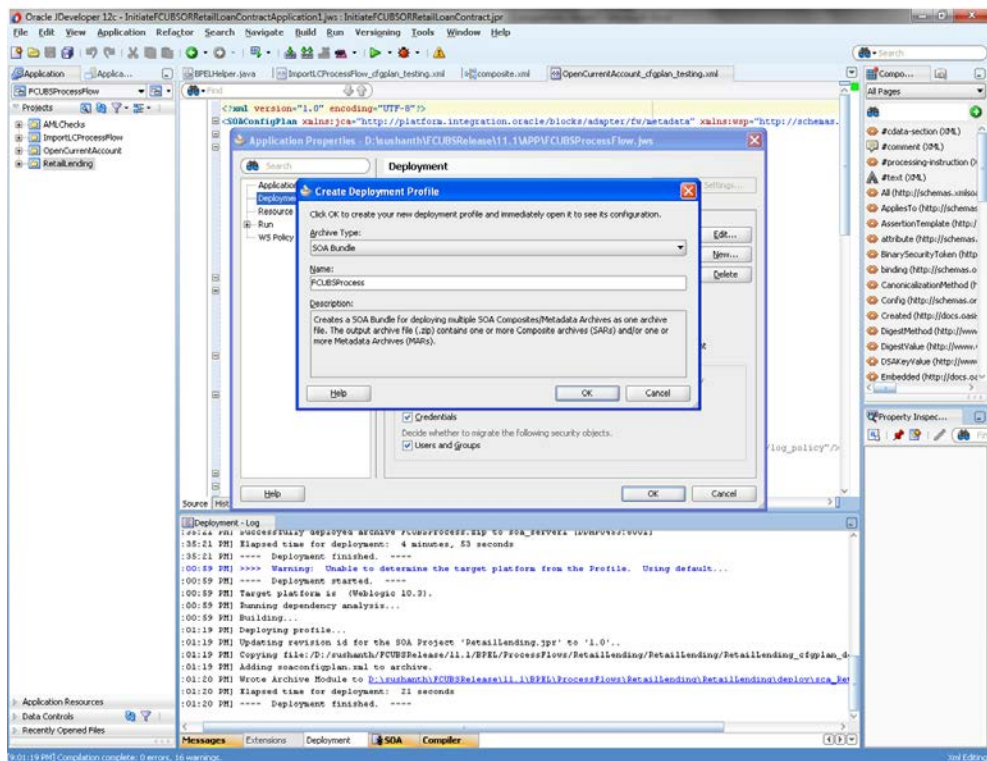
From the application menu select 'Application Properties' as illustrated in the screen shot.



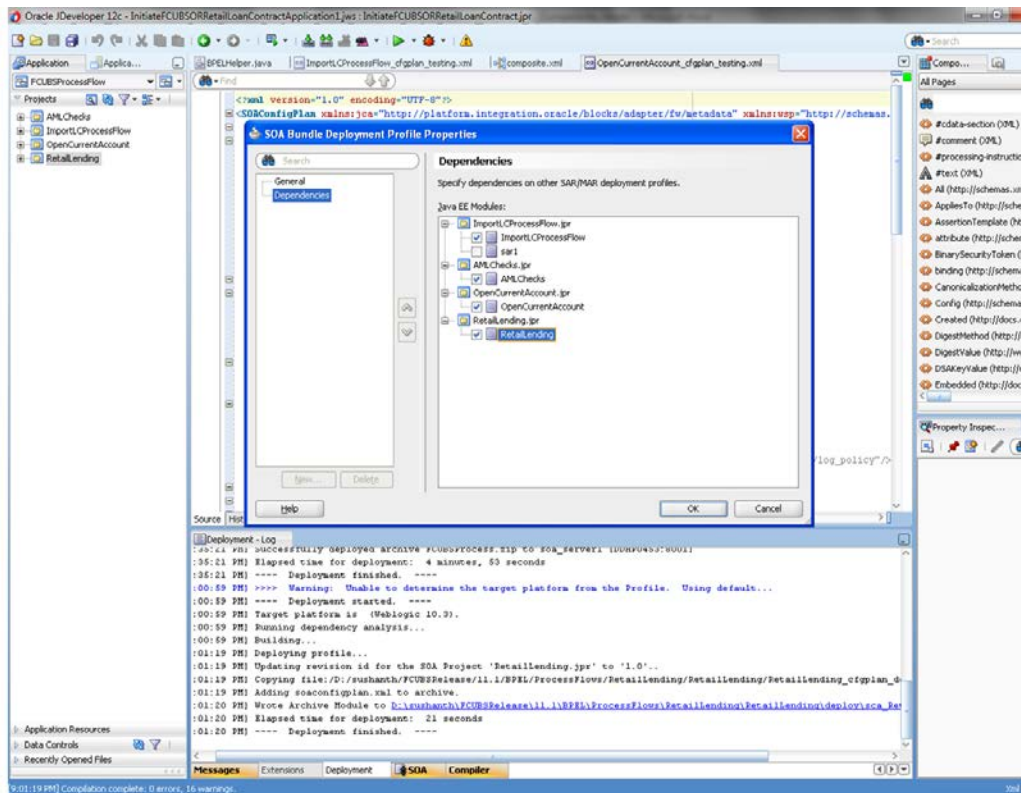
- In the Application Properties dialog, click Deployment.
- Click New.



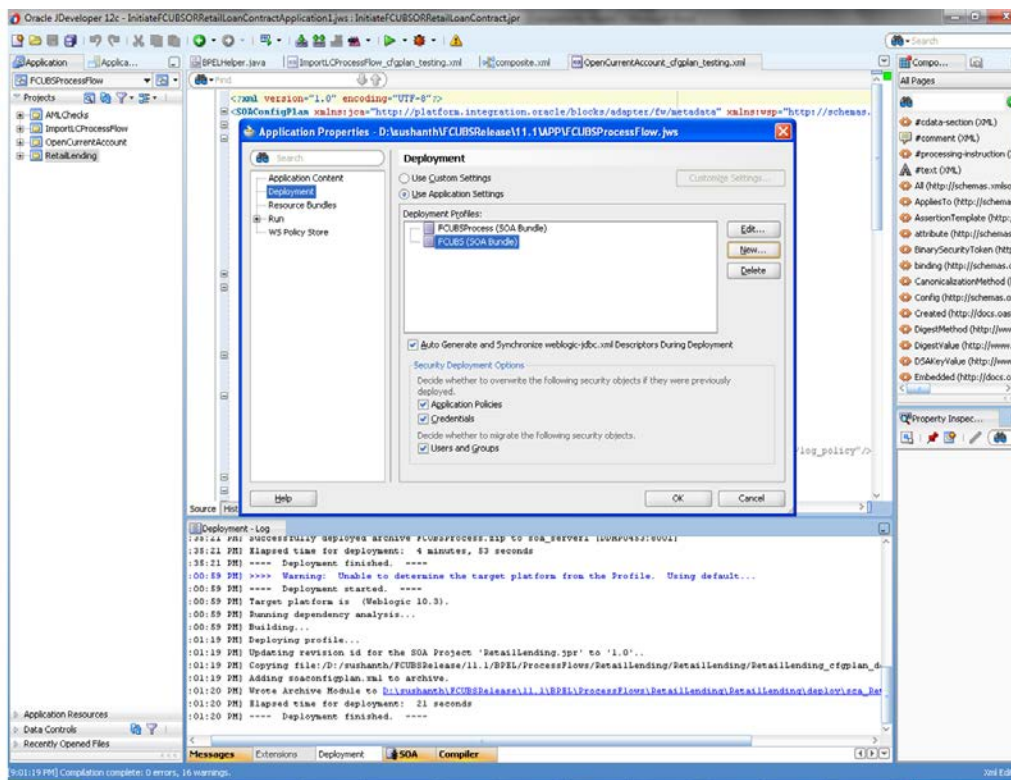
- The Create Deployment Profile dialog appears.
- In the Archive Type list, select SOA Bundle.
- In the Name field, enter a name and click 'OK'.



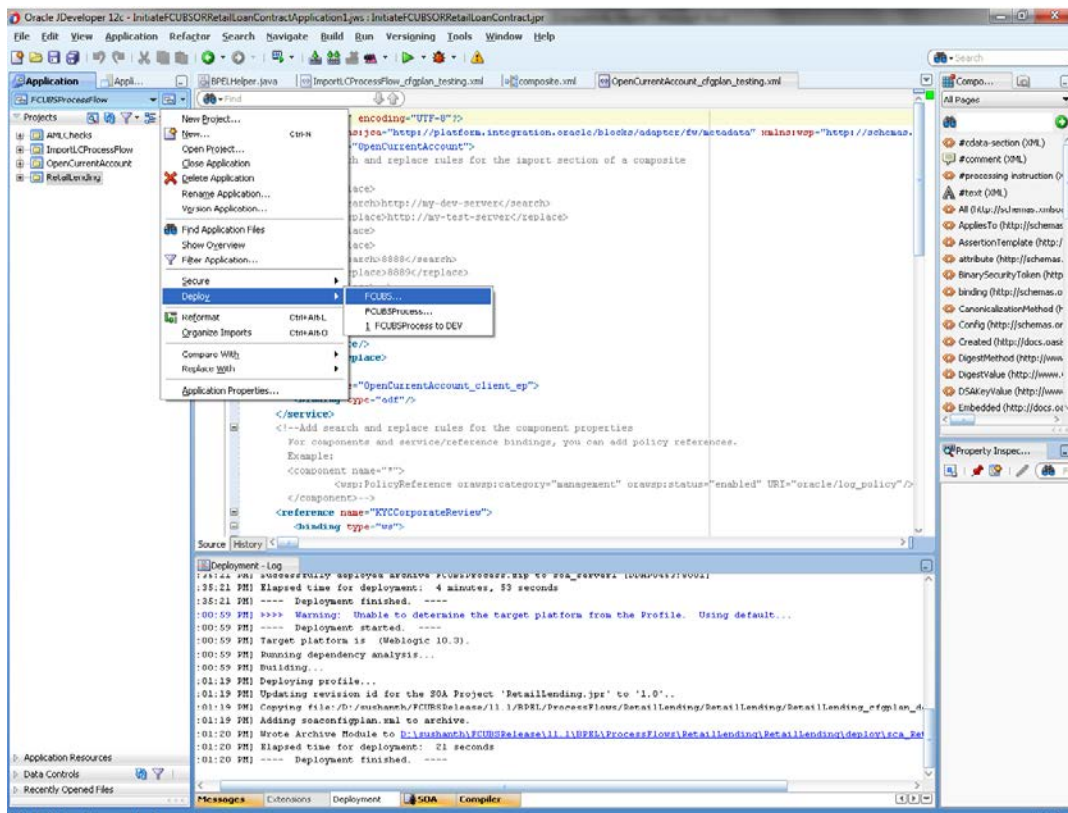
- In the navigator on the left, select the Dependencies node.
- Select the SARs you want to include in this bundle, as illustrated in the screen shot
- Click OK.



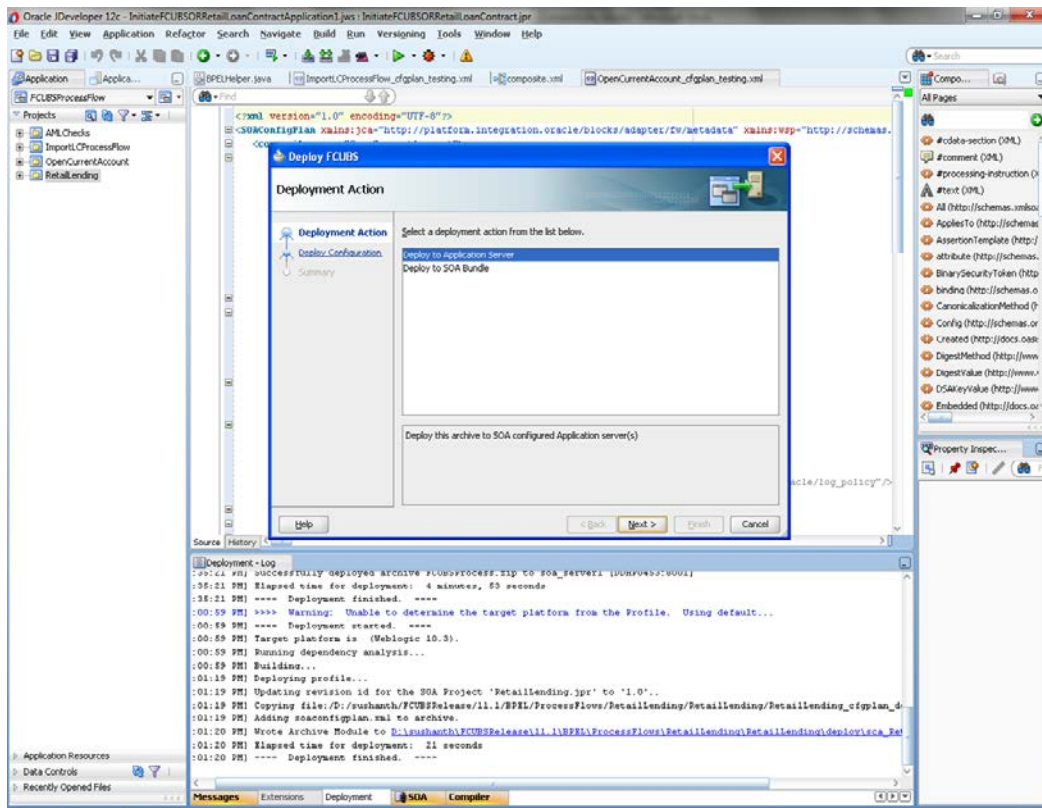
- Click OK to close the Application Properties dialog.



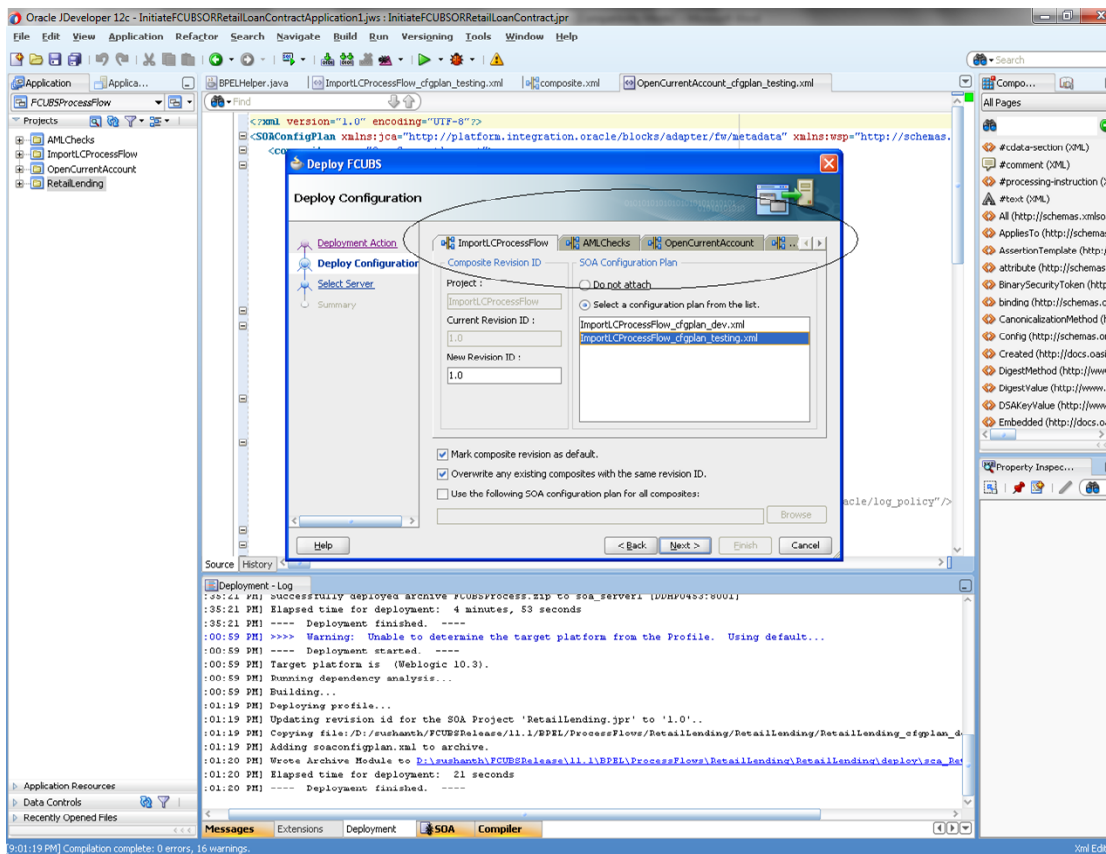
- Select the Application menu again, then select Deploy > SOA_bundle_name



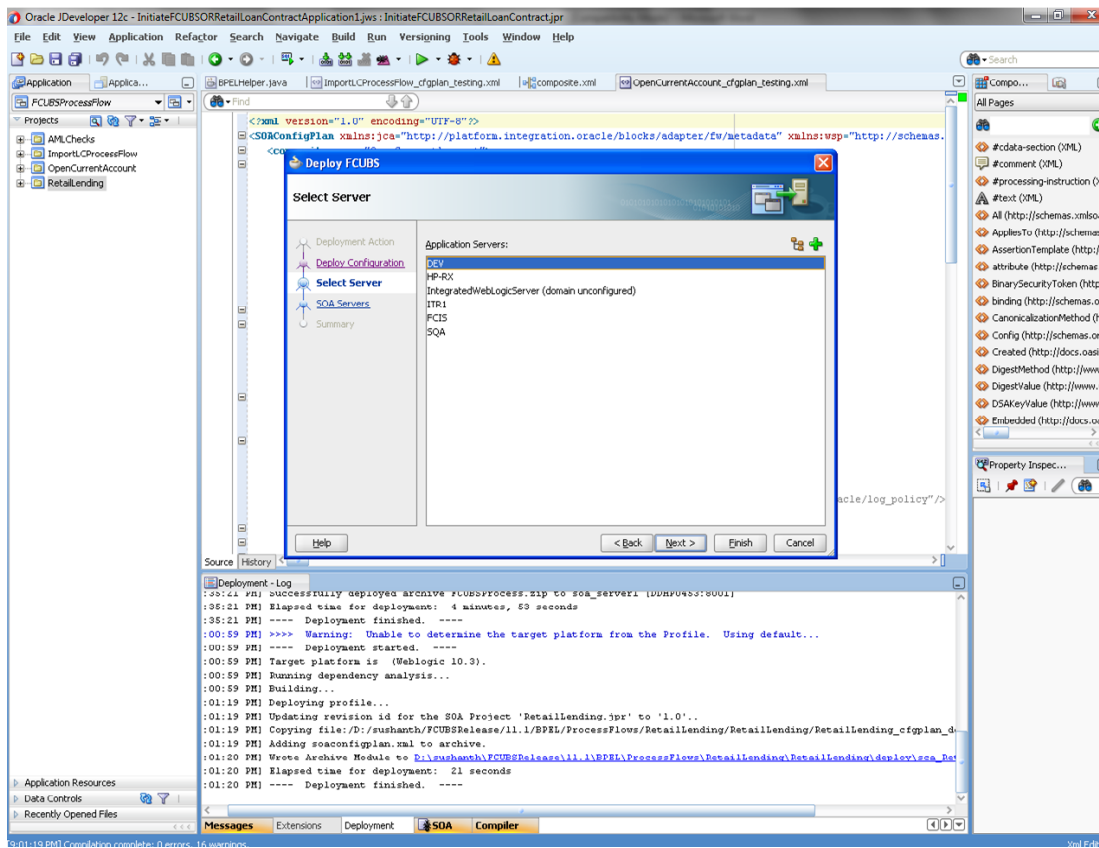
- Deployment screen is launched , Select 'Deploy to Application Server'



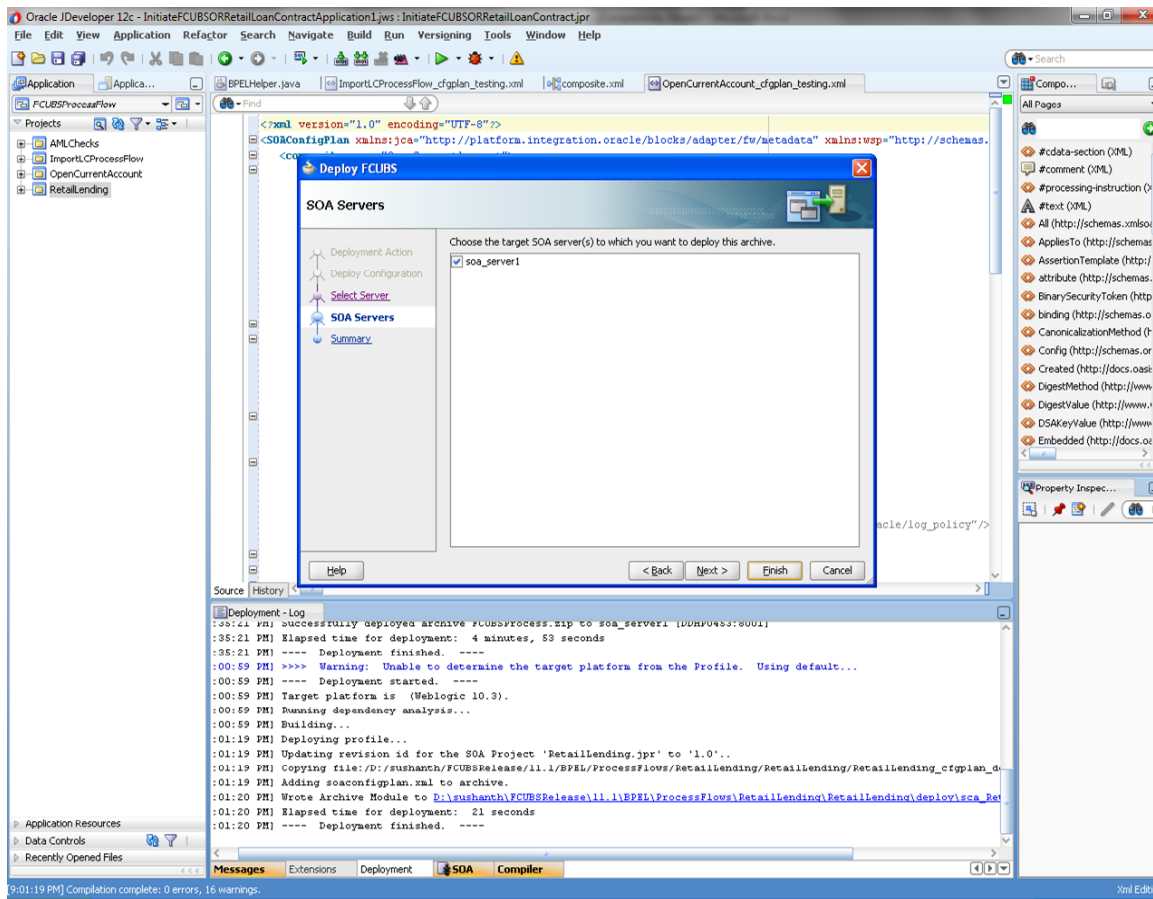
- Deployment configuration is done as illustrated in the below screen shot for each application which is displayed in the tab, application navigation can be done using the pointer provided at the end of the tab.
- Select a Revision with which the deployment should happen
- Select a " Configuration Plan"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



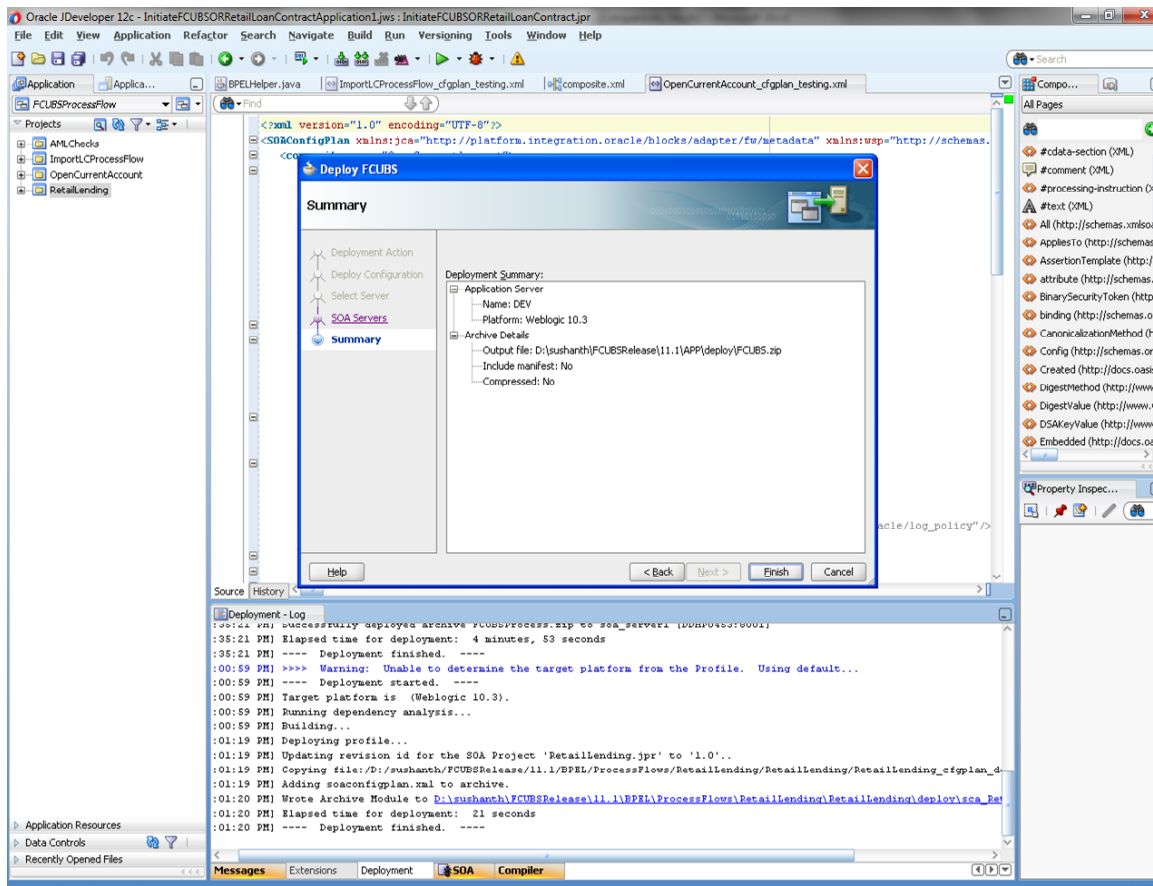
- Select the Application server 'Server Connection' configured that was done in Section 3 to which the deployment needs to be done
- Click 'Next' to proceed with the deployment.



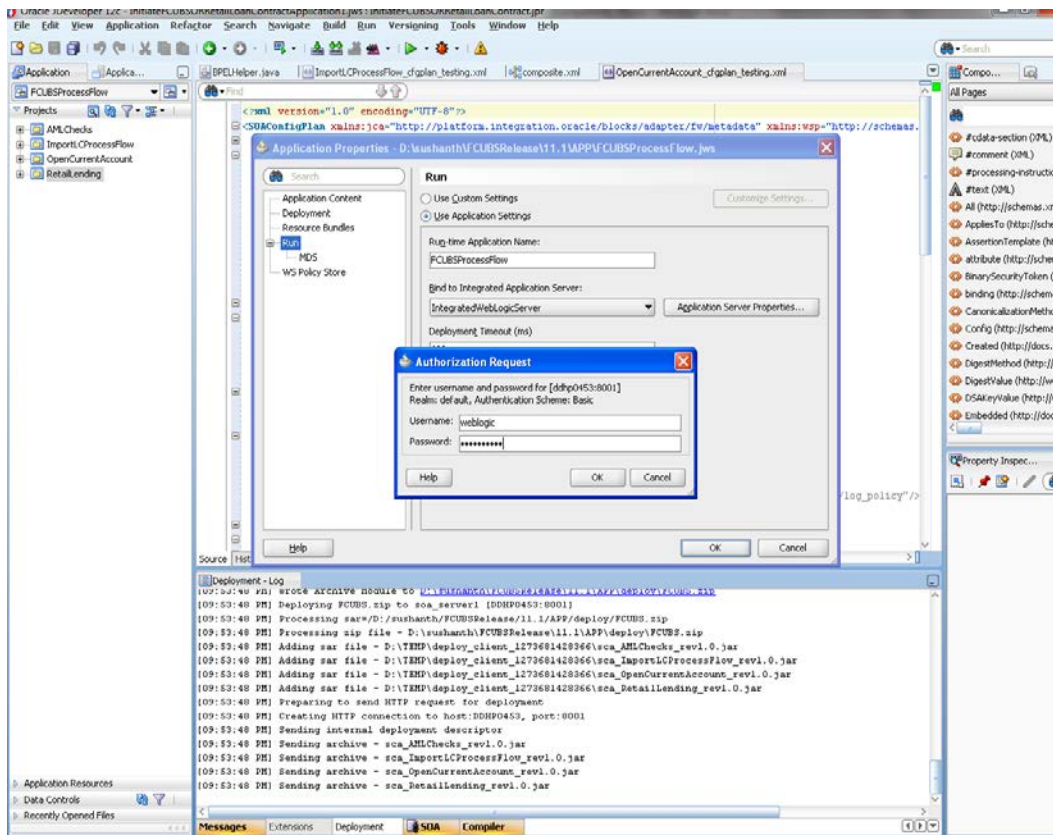
- Select the Application 'server' to which the deployment needs to be done.



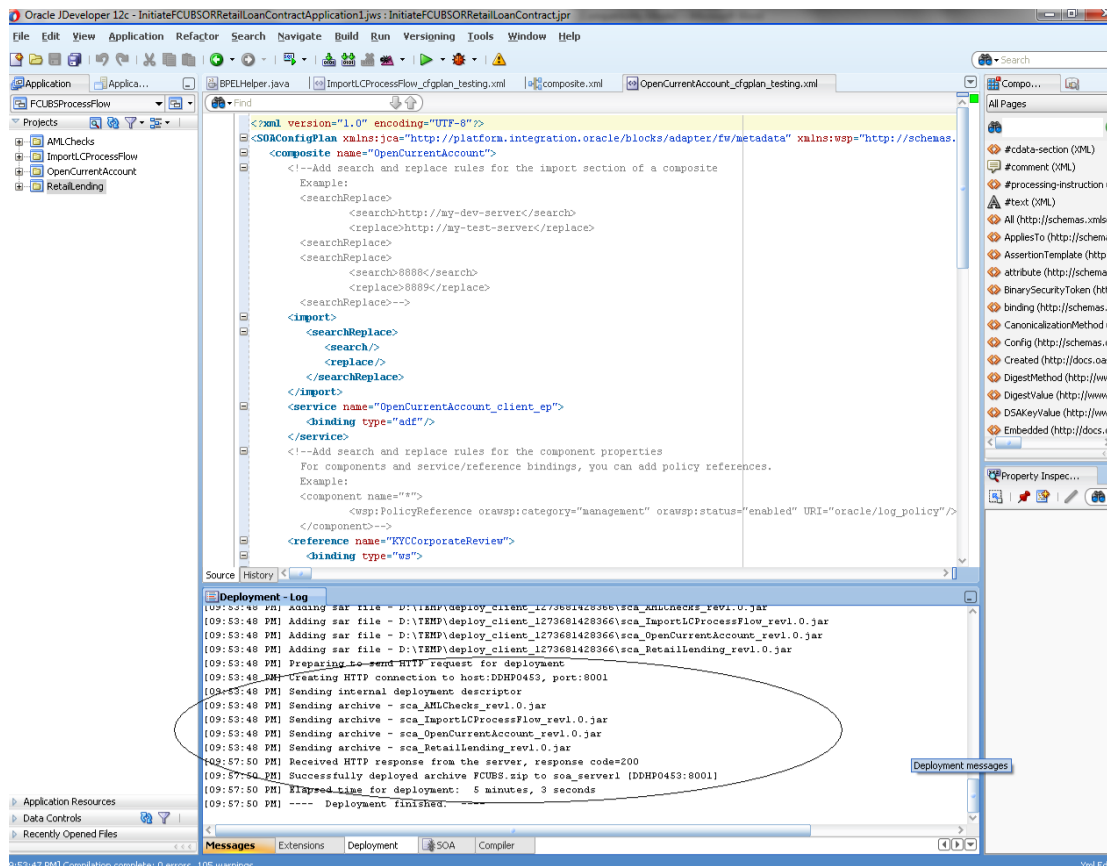
- View the summary of the deployment details and click 'Finish' to complete the deployment.



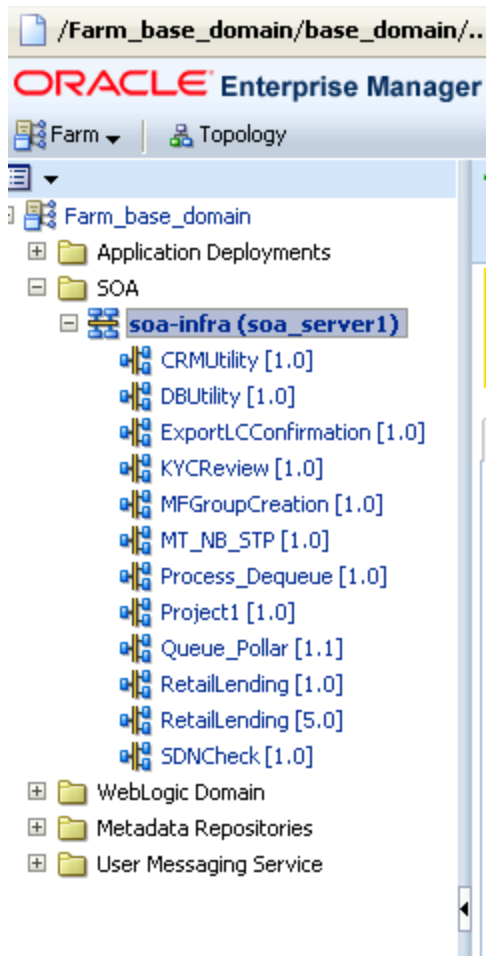
- If the server prompts for username / password provide the credentials for the server.



- 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



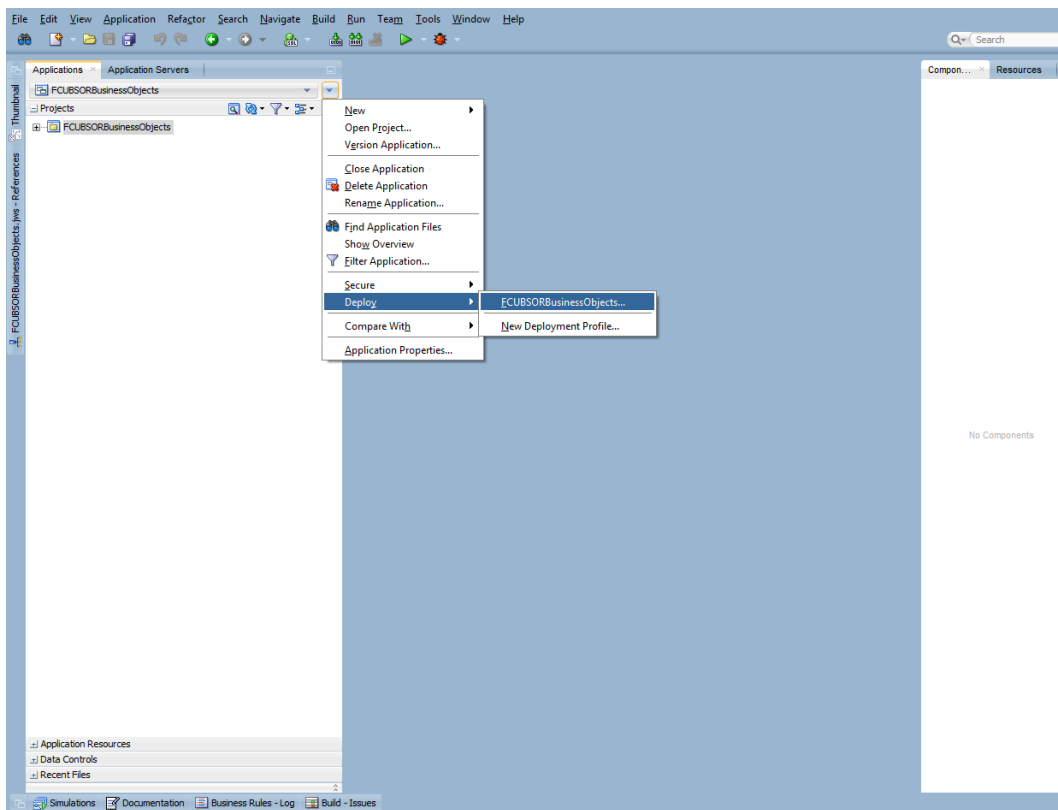
9. Deploying MDS application using JDeveloper

9.1 Introduction

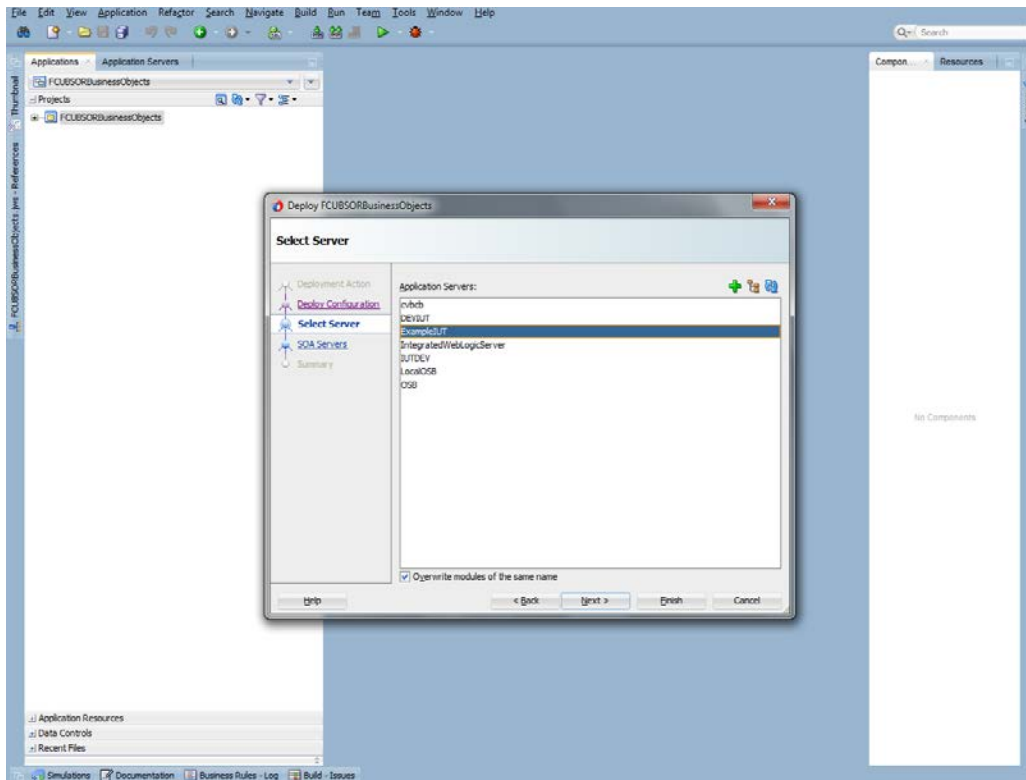
This section describes how to deploy a MDS application with Oracle JDeveloper with respective target environment.

9.2 Deploying the Application

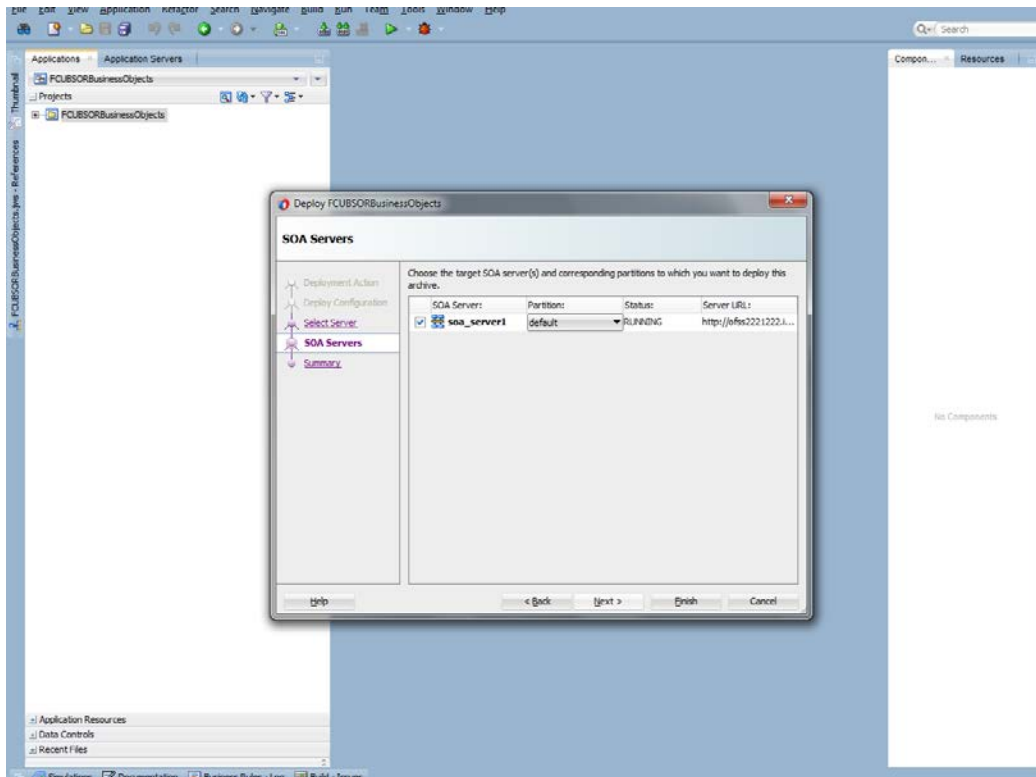
- Load the MDS Application(FCUBSORBusinessObjects,FCUBSORServiceObjects) in Jdeveloper
- Right click on the “Application” tab in the Jdeveloper
- Select ‘Deploy’ and then click on the default deployment profile which is the same as the application name.
- This will result in the deployment wizard screen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

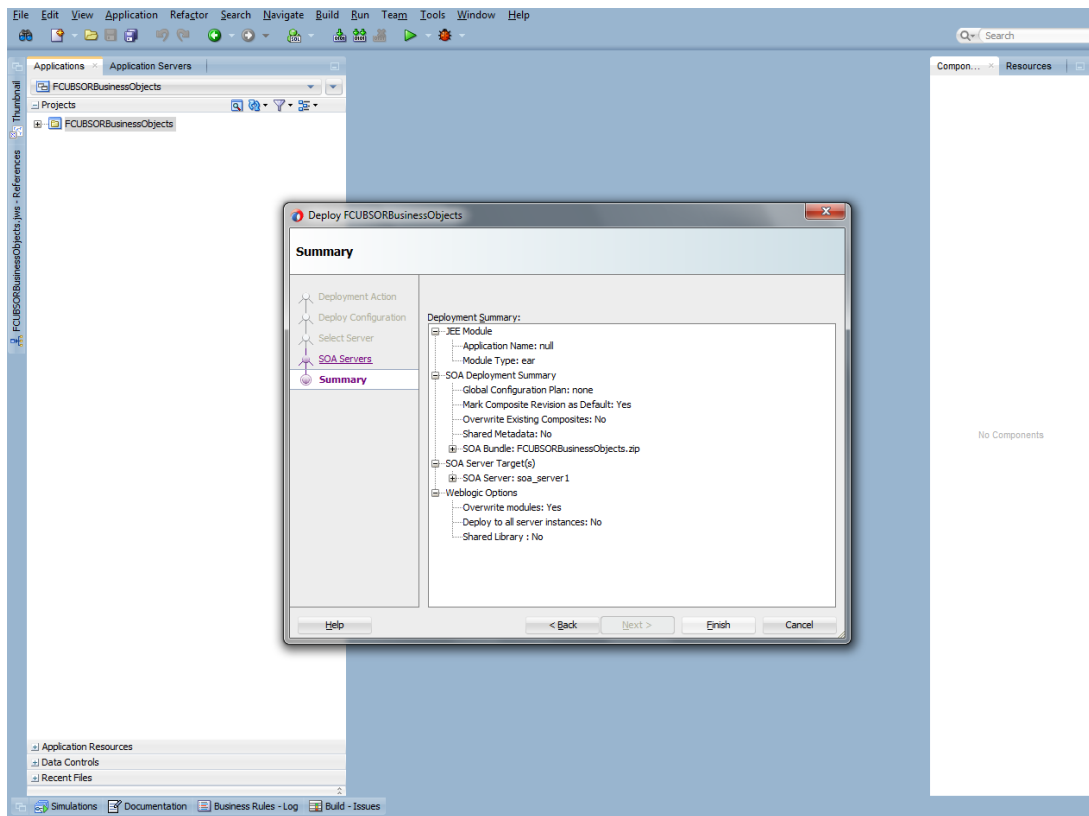


- In deployment action screen choose Deploy to Application Server.
- Click Next→Next to proceed with deployment.
- Select the Application Server to which the MDS Application Needs to Deploy.

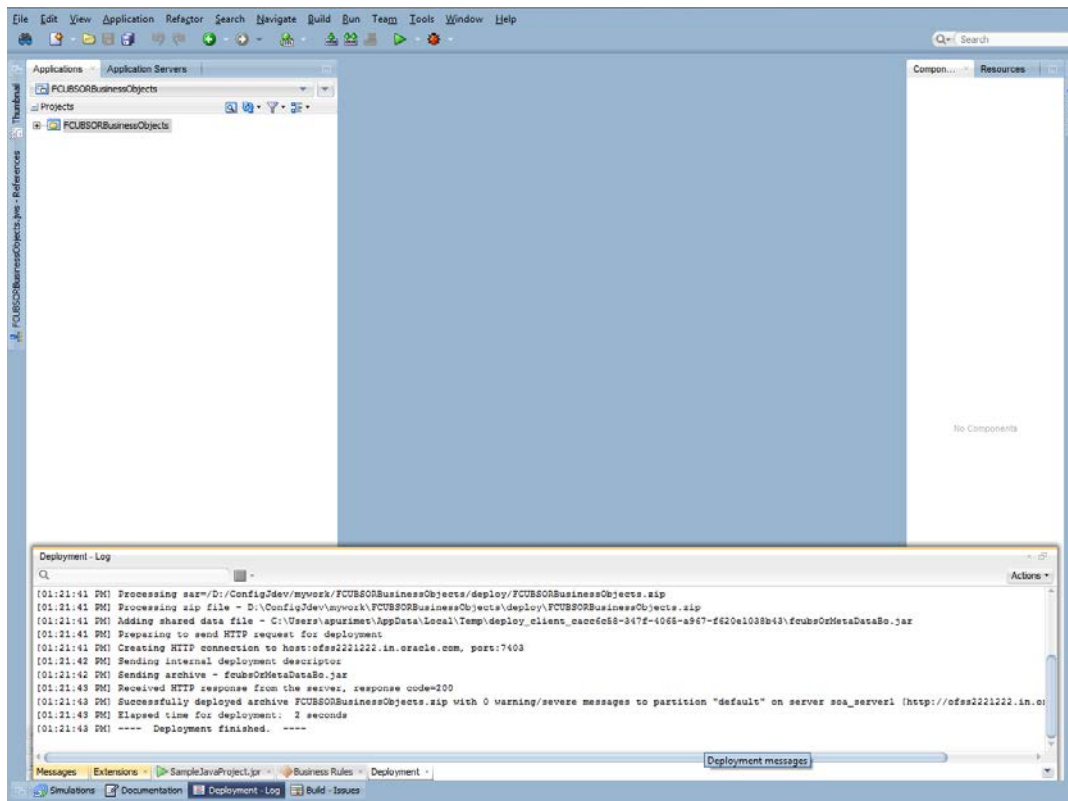


- Click Next and Finish buttons on the deployment wizard after selecting application server.



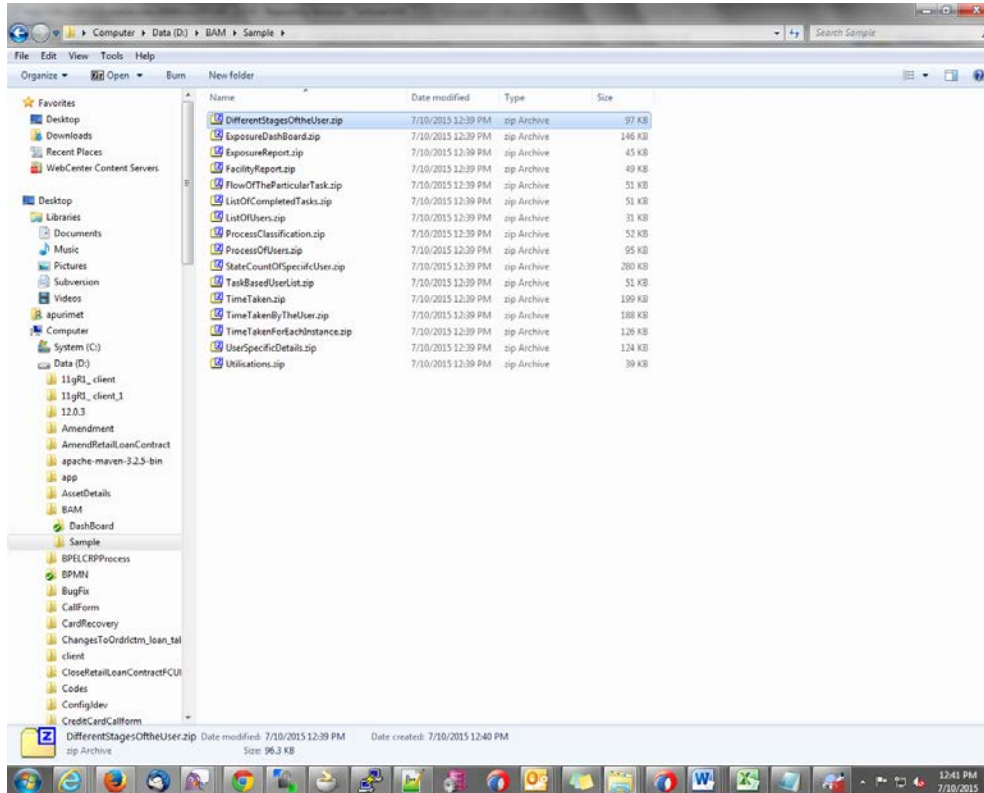


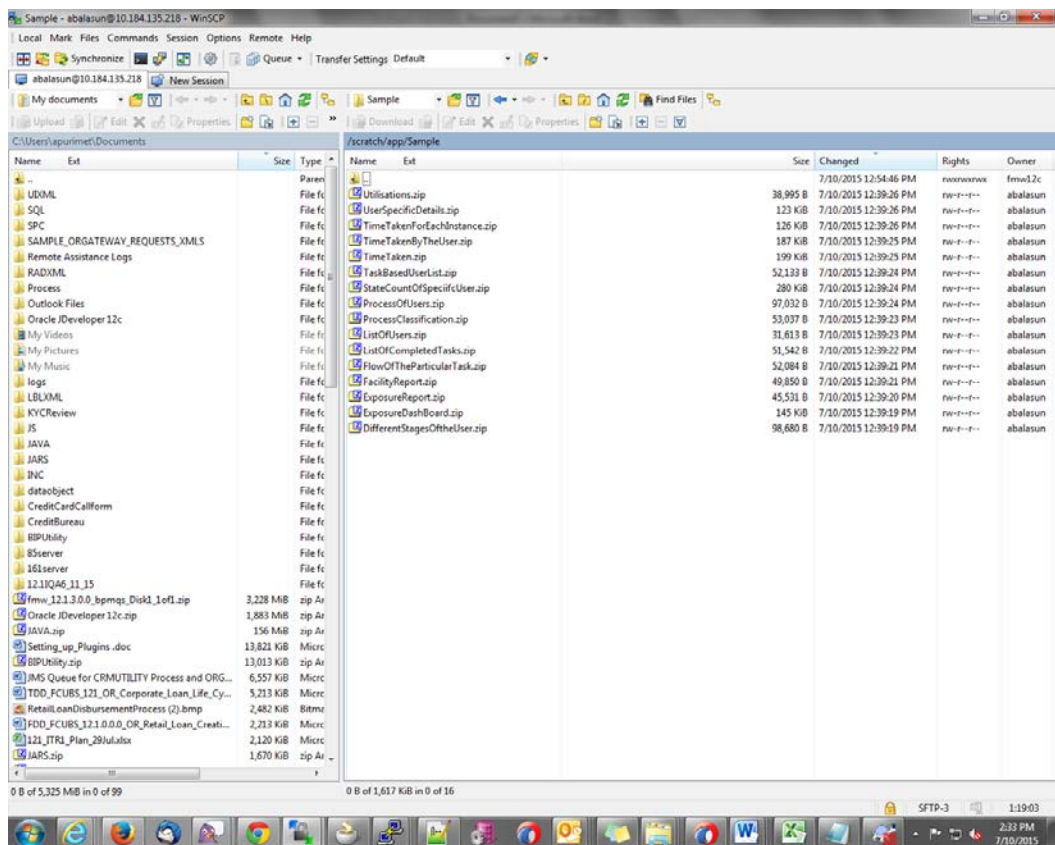
- Review the deployment log to see successfully deployed message as below



10. Deployment and configuration of Oracle BAM Reports

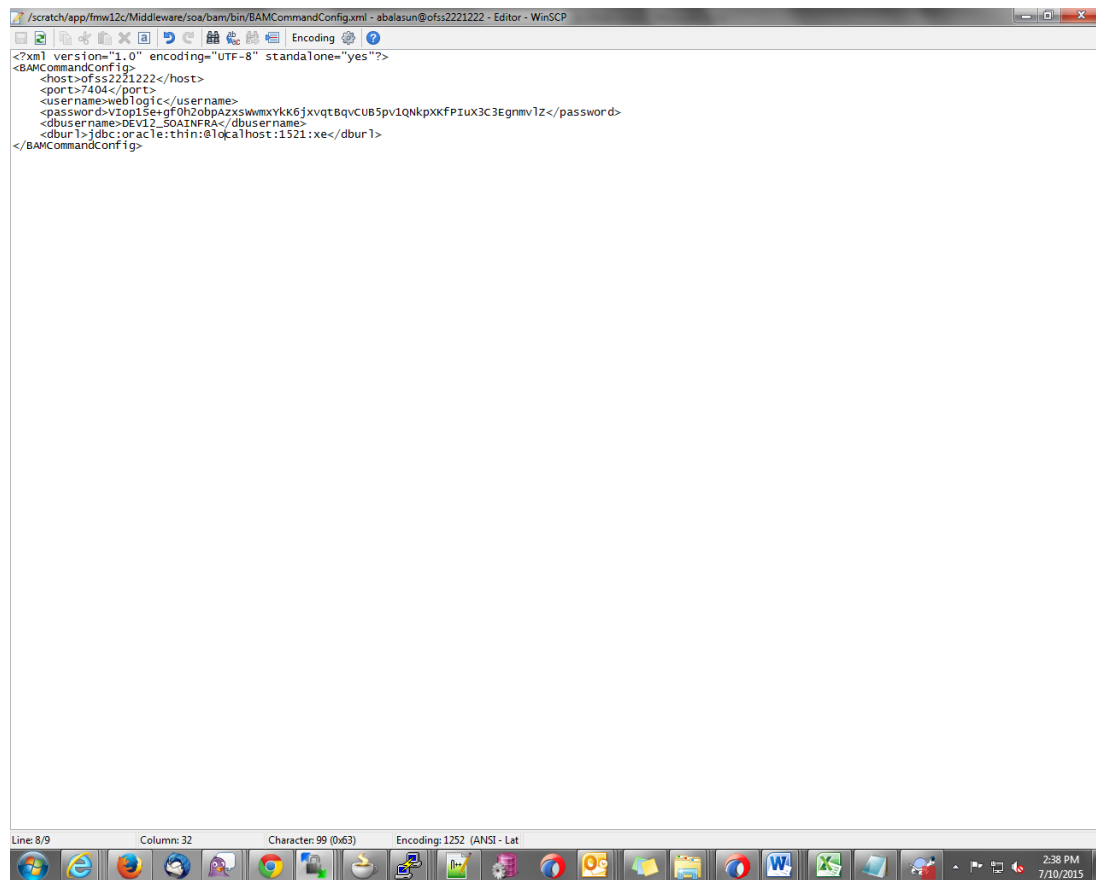
Copy the BAM Dashboards Units (.Zip) from /SOFT/MAIN/OR/Process_infra/Reports/BAM to server location.





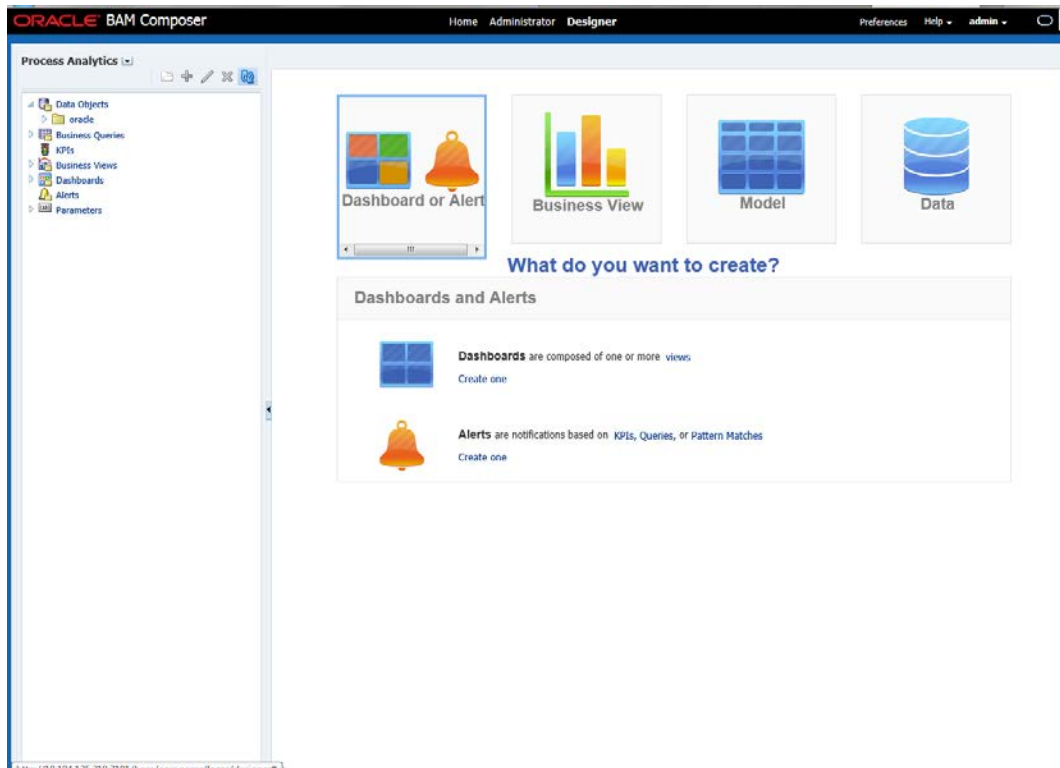
Configure the BAM server location ,port username and password in BAMCommandConfig.xml. It is available in MIDDLEWARE_HOME\soa\bam\bin\BAMCommandConfig.xml

Example:

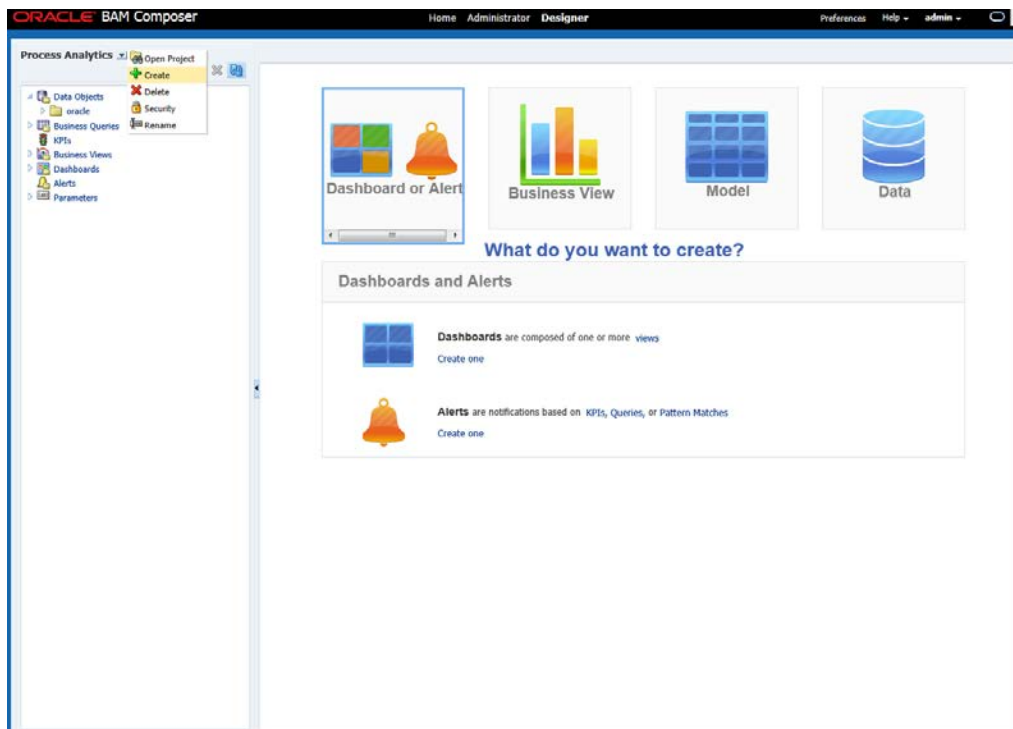


```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<BAMCommandConfig>
  <host>ofss2221222</host>
  <port>7404</port>
  <username>weblog1</username>
  <password>vIop15e+gf0h2obpAzzsWmxYkK6jxvqtBqVCUB5pv1QnkpxKFpIux3C3Egmv1Z</password>
  <dbusername>DEV12_SOA2NFRA</dbusername>
  <dburl>jdbc:oracle:thin:@10calhost:1521:xe</dburl>
</BAMCommandConfig>
```

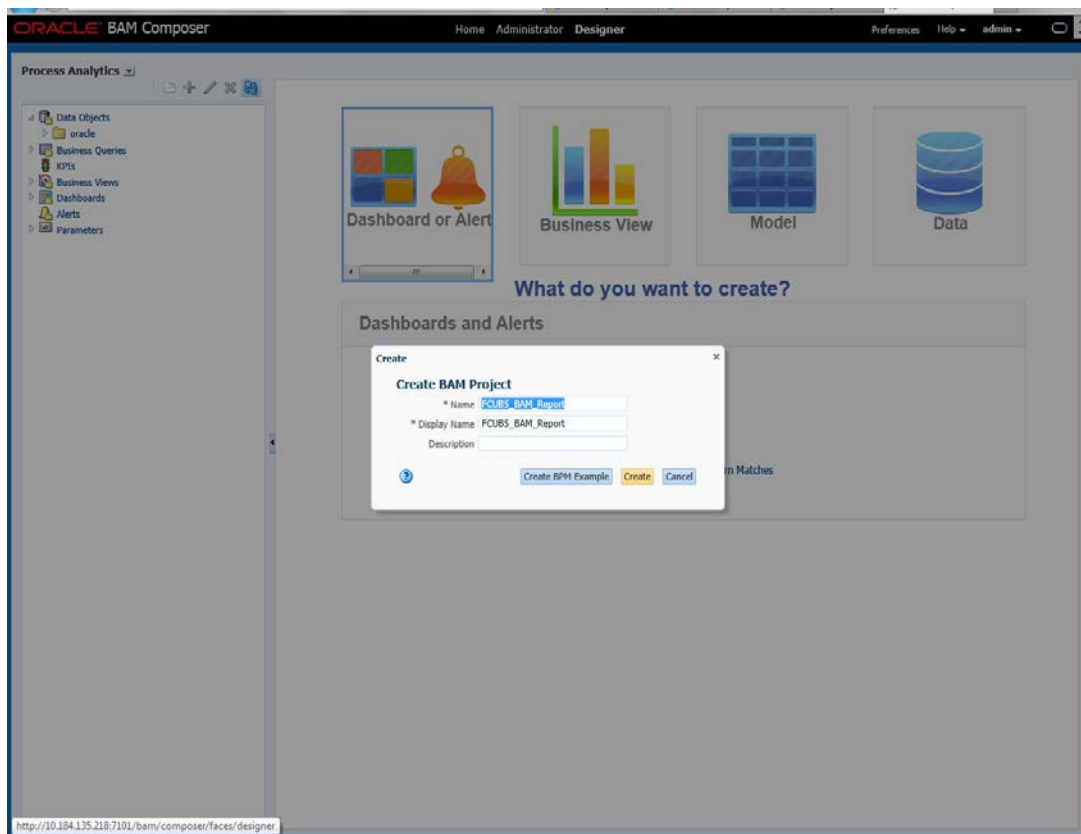
- 1) Login to BAM Composer. (<http://hostname:BAMserverPort/bam/composer>).
- 2) Go the Designer Page.

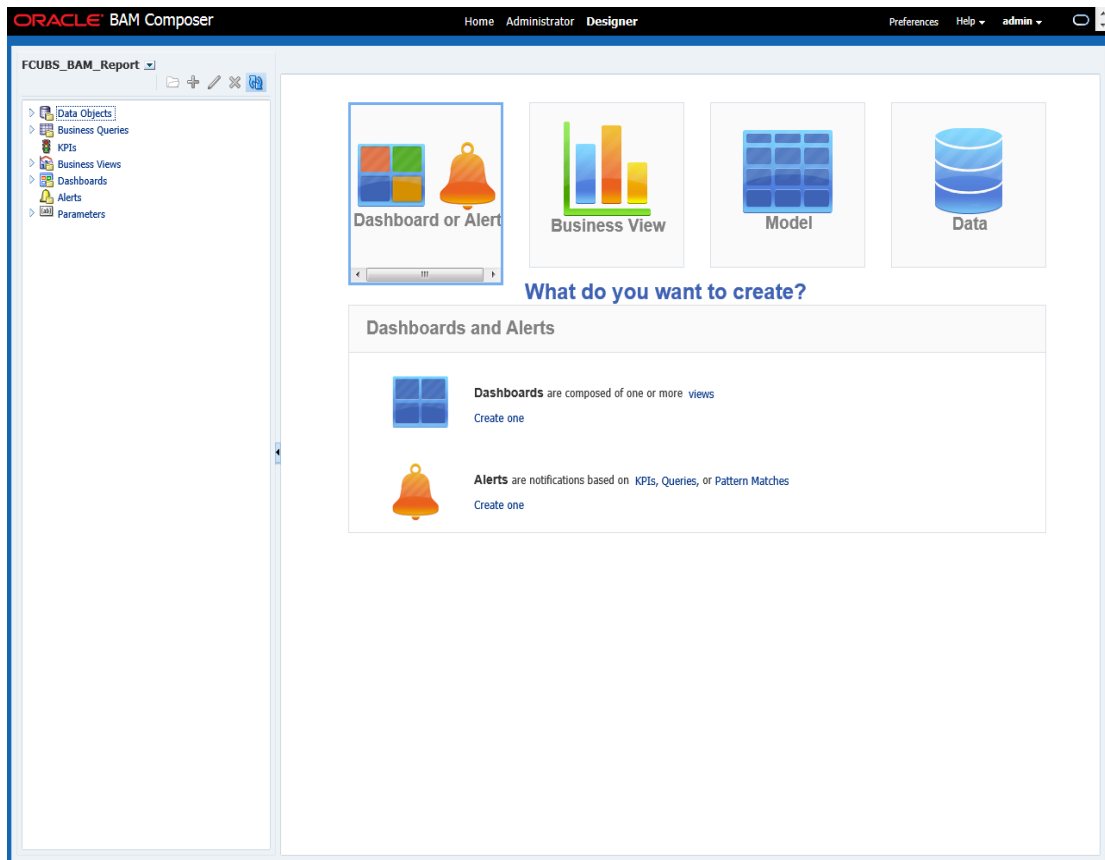


Click on create.



- Enter the Name and Display Name as **FCUBS_BAM_Report** and click on create





- Set proper JAVA_HOME.

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

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

`./bamcommand -cmd import -mode overwrite -name "FCUBS_BAM_Report/DifferentStagesOftheUser" -type dashboard -file "/scratch/app/Sample/DifferentStagesOftheUser.zip"` from the below path
MIDDLEWARE_HOME\soa\bam\bin.



FCIS Process Flow Deployment
[October] [2015]
Version 12.1.0.0.0

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