SIEBELCRM-IFLEXUBS Installation Document
Oracle FLEXCUBE Universal Banking
Release 12.87.7.0.0
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Contents

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1. Introduction

1.1 Scope of the Document

This document is intended to give details about the setup related activities that are required for the integration of FLEXCUBE and Siebel CRM. The setup involves the following components:

1. Installing the FLEXCUBE UBS Gateway infrastructure

2. Installation of BPEL Middleware required for Siebel CRM integration

3. Installation of FLEXCUBE backend components required for Siebel CRM integration

4. Updation of Domain Value Map

5. FLEXCUBE maintenances specific to Siebel CRM integration

This document talks in length about the above mentioned items except for "Installing the FLEXCUBE UBS Gateway infrastructure" for which respective file links has been provided to facilitate the installation of those.

1.2   Intended Audience

The document is intended for the following audience

- *Implementers*
- *End-Users*

1.3 Organization of the Document

The SIEBELCRM-IFLEXUBS Installation document talks about prerequisites, components to be installed from i-flex side and at BPEL deployment level, the maintenances to be done in the BPEL server and then the steps to be followed to compile and deploy the BPEL Process in the application server.

There will also be components from Siebel's side as a part of this integration.

1.4 Common abbreviation and Terms used

Terms	Expansion / Meaning
SOA	Service Oriented Architecture
BPEL	Business Process Execution Language

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ESB	Enterprise Service Bus
DVM	Domain Value Map
CO	Common Object
OS	Operating System

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2. Prerequisite

1. Oracle 10.1.3.1 SOA suite – This is the server on which all the BPEL processes will be installed. This will be a common server on which both the iflex and Siebel BPEL processes will be jointly hosted.

2. Oracle 10.1.3 Application Server – This is the server on which the FLEXCUBE UBS Gateway infrastructure will be installed.

3. Required DVMs should be available in ESB for value translation. For this, please refer to the **"Siebel CRM Integration Pack for i-flex FLEXCUBE Implementation Guide"** for this.

4. Siebel BPEL processes should be available in the SOA server. Also, these processes should be in active state.

5. Admin Rights.

6. FLEXCUBE has been installed.

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3.   Components to Be Installed

3.1   Installation Sequence of Various Components:

3.1.1 Installation of EJB Component

Please, refer to OC4J_GW_EJB_Installation.doc for installation guidelines and know how information. This is available in the Install-Docs of Gateway.

3.1.2 Installation of Web Service Component

Following is the list of web services that needs to be deployed:

1.   FCUBSCustomerService

2.   FCUBSAccService

3.   FCUBSAccAddrService

4.   FCUBSAccFinService

5.   FCUBSTDService

6.   FCUBSTDFinService

7.   FCUBSTDAddrService

8.   FCUBSSCVService

9.   FCUBSAccClassService

10. FCUBSCLProdService

Please, refer to OC4J_GW_Web Services_Installation.doc for installation guidelines and know how information. This is available in the Install-Docs of Gateway.

3.1.3 Installation of Notify MDB Component

Please, refer to OC4J_GW_Notify_MDB_Installation.doc for installation guidelines and know how information. This is available in the Install-Docs of Gateway.

3.1.4 Installation of BPEL Process

3.1.4.1 Introduction

BPEL processes are normally used to define workflow of a project. In i-flex-UBS and SIEBLE-CRM integration, i-flex BPEL processes are used as adapters which accept the service request in CO format; transforms it to FCUBS format. It also does an inter domain value translation with the assistance of ESB DVMs. BPEL process, then forwards the service request to i-flex web services. It receives the response and sends it back to the request initiator.

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Following is the list of BPEL processes that needs to be deployed:

- *IFLEXUBSIntegAccOrigWrapperSEBL782ToIFLEXUBS72Sync*
- *IFLEXUBSIntegCreateAccSEBL782ToIFLEXUBS72Sync*
- *IFLEXUBSIntegCreateCustSEBL782ToIFLEXUBS72Sync*
- *IFLEXUBSIntegModifyAccAddrSEBL782ToIFLEXUBS72Sync*
- *IFLEXUBSIntegModifyCustSEBL782ToIFLEXUBS72Sync*
- *IFLEXUBSIntegModifyTDRolloverSEBL782ToIFLEXUBS72Sync*
- *IFLEXUBSIntegQueryAccountClassIFLEXUBS72ToSEBL782Async*
- *IFLEXUBSIntegQueryAccountIFLEXUBS72ToSEBL782Async*
- *IFLEXUBSIntegQueryCLAccountIFLEXUBS72ToSEBL782Async*
- *IFLEXUBSIntegQueryCLProductIFLEXUBS72ToSEBL782Async*
- *IFLEXUBSIntegQuerySCVCustSummSEBL782ToIFLEXUBS72Sync*
- *IFLEXUBSIntegQuerySCVTxnDetailsSEBL782ToIFLEXUBS72Sync*
- *IFLEXUBSIntegQueryTDAccountIFLEXUBS72ToSEBL782Async*
- *IFLEXUBSIntegQueueListenerSEBL782ToIFLEXUBS72Notify*
- *IFLEXUBSIntegRequestAccStmtSEBL782ToIFLEXUBS72Sync*

Installation of BPEL process is slightly different depending on the Operation System on which BPEL SOA server is installed. Please, refer the relevant guidelines depending on the OS.

- **Windows Server**

Please, click **here** for installation guidelines and know how information.

- **UNIX/Linux Server**

Please, click **here** for installation guidelines and know how information.

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4. BPEL Process Deployment

4.1 Deployment on Windows

Following are the steps to be followed for installation.

All the below mentioned steps need to be done on the BPEL SOA server.

4.1.1 XSD File Maintenance In The SOA Server

1. Create a folder structure SEBLAcctOrigIntegPkIFLEXUBS\FCUBS_XSD under

   <SOA_HOME>\bpel\system\xmlib

   Note: *SOA_HOME* is the directory location where Oracle 10.1.3.1 SOA related files and folders are available. In this document we refer to the following directory location as **SOA_HOME**.

   D:\product\10.1.3.1\OracleAS_1

2. Copy the XSD files from the **<FLEXCUBE_HOME>\GATEWAY\Service-Operations\XSD** and paste it in the following location:

   <SOA_HOME>\bpel\system\xmlib\SEBLAcctOrigIntegPkIFLEXUBS\FCUBS_XSD

   Note: In this document, we refer to **D:\FLEXCUBE** as **<FLEXCUBE_HOME>**. Here, we consolidate all our source files, executable files and other files released.
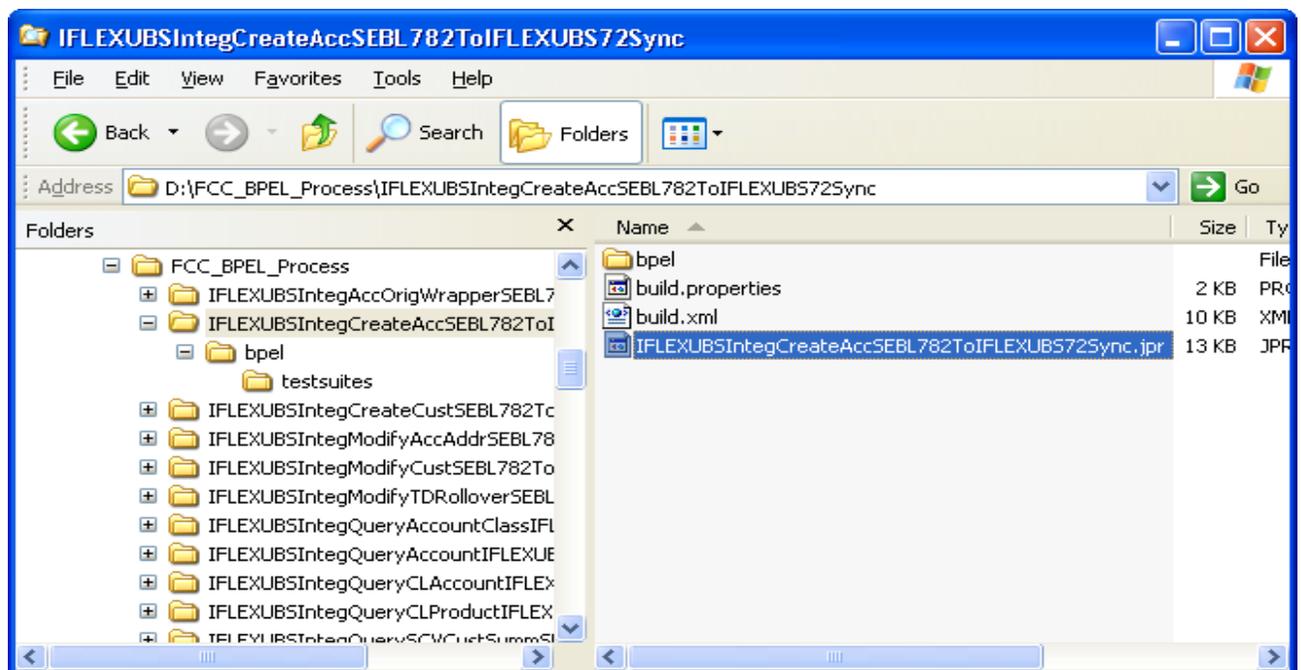
ORACLE®
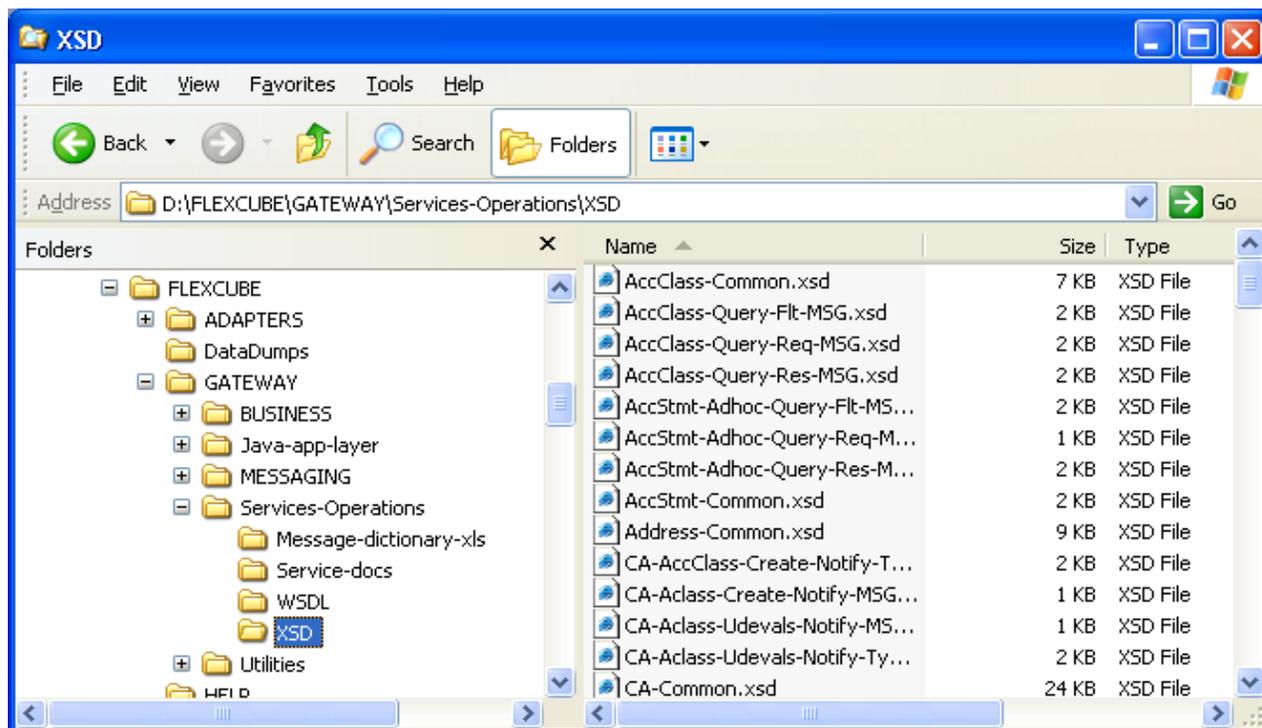
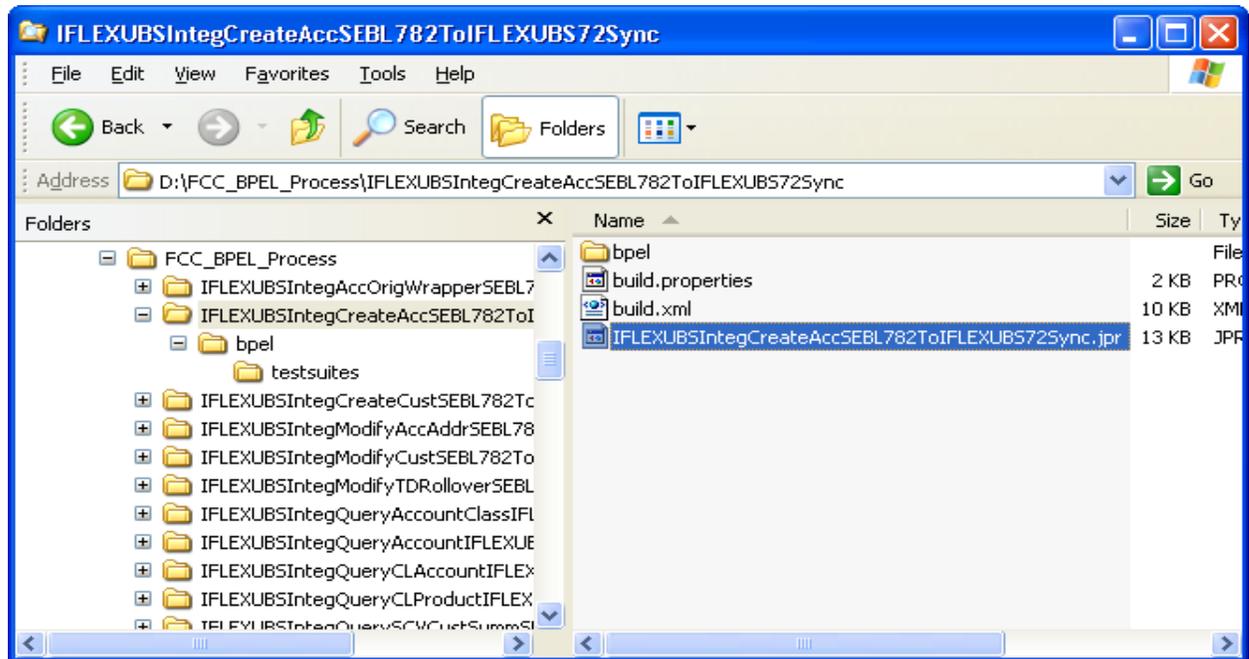### 4.1.2 Steps for Compiling and Deploying a BPEL Process

1. Copy the zipped folder of the respective BPEL process from the **<FCCROOT >\ADAPTERS\SIEBEL-CRM\BPEL** and paste it inside a newly created folder [**D:\FCC_BPEL_Process** in this document] in your server machine. Unzip the folder.
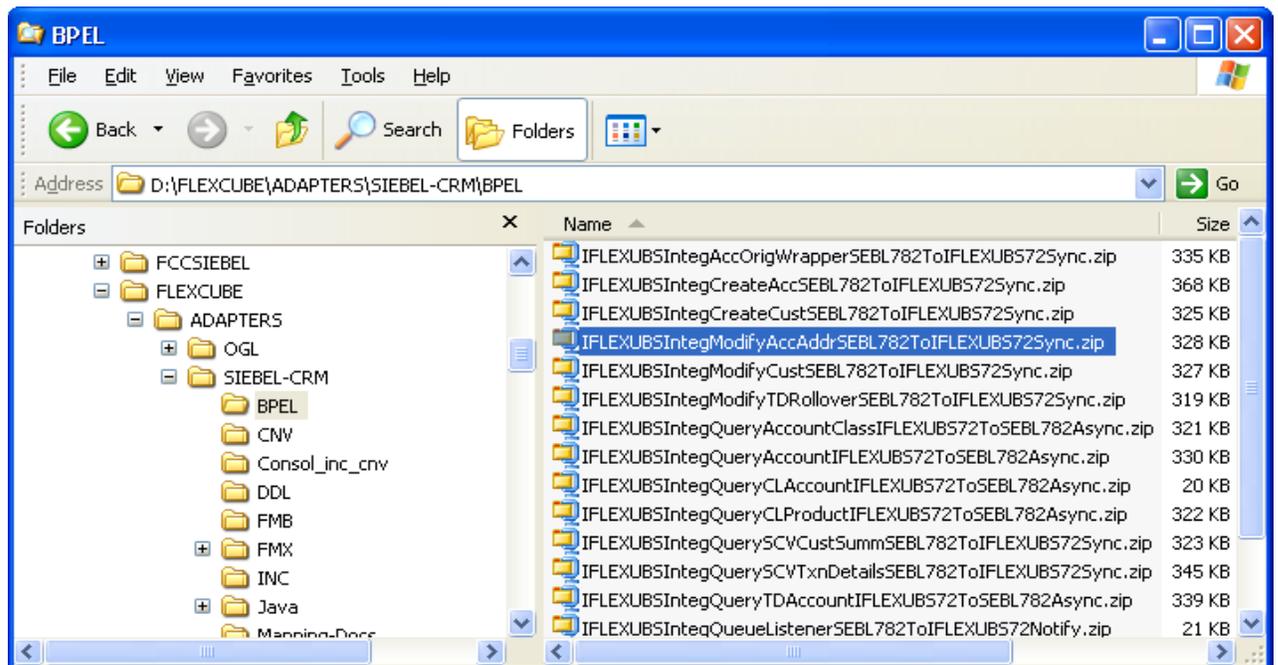
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2. Open the BPEL process folder. In this document, BPEL process folder is in the location marked in red as shown in the screen-shot below. All further references to this folder will be made by saying *BPEL process folder*.

3. Open the build.properties file.

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4. Edit this file to override the default property settings. This file contains all the property fields with their default values. All the fields are generally commented. In case, we need to override the default value of a particular field, copy that particular line paste it to the very next line. Uncomment the newly created line and type the new value. Once everything is done save the file.

    We will have to override the *admin.password* property value. Care should be taken to provide the correct Admin Password.

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```
##########################################################################
# Use this file to OVERRIDE default properties when deploying this project
# using "ant" from Developer Prompt or "ant" on project's build.xml in Jdev
# These properties do not get used when deploying from Jdev project -> Deploy
##########################################################################

# AppServer platform: currently supported values are ias_10g, oc4j_10g
#platform = ias_10g

# Change below if deploying in domain other than "default"
#domain = default

# Change below if deploying with process revision other than 1.0
#rev = 1.0

# Make sure admin.user, admin.password is correct for appserver
#admin.user = oc4jadmin
#admin.password =
admin.password =welcome1

# http.hostname and http.port should point to BPEL Server's host and http port
#http.hostname = localhost
#http.port = 9700

# For BPEL in cluster environemnt, j2ee.hostname may not be same as
# http.hostname, where j2ee.hostname will be local hostname,
# while http.hostname will be virtual hostname
# For deployment of applications in oc4j cluster, set cluster = true
# and oc4jinstancename to opmn cluster group it belongs to such as default_group
#cluster = false
#j2ee.hostname = localhost

# rmi.port or opmn.requestport is used in jndi.url/deployment-url in
# standalone or midtier installation respectively.
# rmi.port value below is default value as in BPEL standalone-developer install.
# If you rely on this value, make sure it's correct for your installation
# as from command "opmnctl status -l" output in midtier/SOA install.
#rmi.port = 23791
#opmn.requestport = 6003

#oc4jinstancename = home
```

5. Edit the .wsdl files under <BPEL process folder>/bpel to replace the each occurrence of http://bpelhost:8888 with http://<actual bpel host name>:port number. Also, replace each occurrence of http://gatewayhost:8888 with http://<actual gateway host name>:port number.

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Before Replacement

```
                </wsdl:operation>
        </wsdl:portType>

        <wsdl:binding name="FCUBSTDService" type="tns:FCUBSTDServiceSEI">
                <wsdlsoap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
                <wsdl:operation name="CreateTDAcc">
                        <wsdlsoap:operation soapAction=""/>
                        <wsdl:input>
                                <wsdlsoap:body use="literal"/>
                        </wsdl:input>
                        <wsdl:output>
                                <wsdlsoap:body use="literal"/>
                        </wsdl:output>
                </wsdl:operation>
                <wsdl:operation name="ModifyTDRollover">
                        <wsdlsoap:operation soapAction=""/>
                        <wsdl:input>
                                <wsdlsoap:body use="literal"/>
                        </wsdl:input>
                        <wsdl:output>
                                <wsdlsoap:body use="literal"/>
                        </wsdl:output>
                </wsdl:operation>
        </wsdl:binding>

        <wsdl:service name="FCUBSTDService">
                <wsdl:port name="FCUBSTDServiceSEI" binding="tns:FCUBSTDService">
                        <soap:address xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/" location="(http://gatewayhost:8888)FCUBSTDServi
                </wsdl:port>
        </wsdl:service>
</wsdl:definitions>
```

After Replacement

```
        </wsdl:operation>
    </wsdl:portType>

    <wsdl:binding name="FCUBSTDService" type="tns:FCUBSTDServiceSEI">
        <wsdlsoap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
        <wsdl:operation name="CreateTDAcc">
            <wsdlsoap:operation soapAction=""/>
            <wsdl:input>
                <wsdlsoap:body use="literal"/>
            </wsdl:input>
            <wsdl:output>
                <wsdlsoap:body use="literal"/>
            </wsdl:output>
        </wsdl:operation>
        <wsdl:operation name="ModifyTDRollover">
            <wsdlsoap:operation soapAction=""/>
            <wsdl:input>
                <wsdlsoap:body use="literal"/>
            </wsdl:input>
            <wsdl:output>
                <wsdlsoap:body use="literal"/>
            </wsdl:output>
        </wsdl:operation>
    </wsdl:binding>

    <wsdl:service name="FCUBSTDService">
        <wsdl:port name="FCUBSTDServiceSEI" binding="tns:FCUBSTDService">
            <soap:address xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/" location="http://sdcdl360i306.corp.siebel.com:7777/FCUBSTDService
        </wsdl:port>
    </wsdl:service>
</wsdl:definitions>
```

In this example *actual gateway host* name is sdcdl360i306.corp.siebel.com and Port *Number* is 7777.

Note: Name of *actual bpel host* can be either the name or IP address of the machine where BPEL Server is running.

Name of *actual gateway host* can be either the name or IP address of the machine where gateway components are running.

This step should be followed while deploying any BPEL process.

Please, get the machine name and port number information from the URL of application server's home page.

1. Start the Application Server where BPEL is hosted.

2. Go to the command prompt.

3. Change the directory to <SOA_HOME>\bin. Make sure you are in <SOA_HOME>\bin.

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Note: SOA_HOME can be at a different location. In this document SOA home is referred to this location.

4. Type runstartupconsole.bat start.

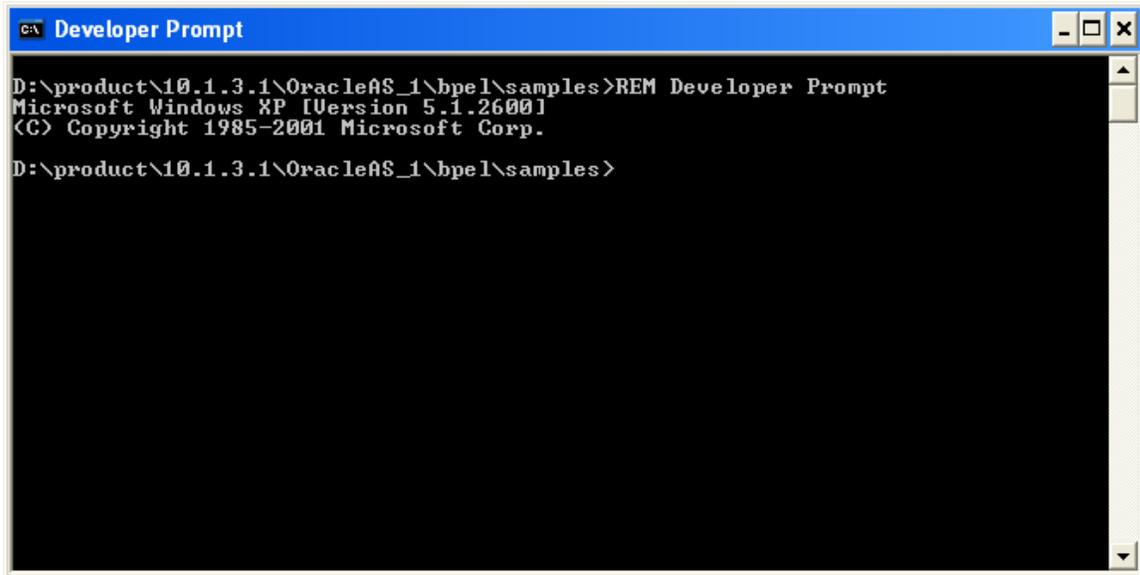5. Once the server is up you will get the following:
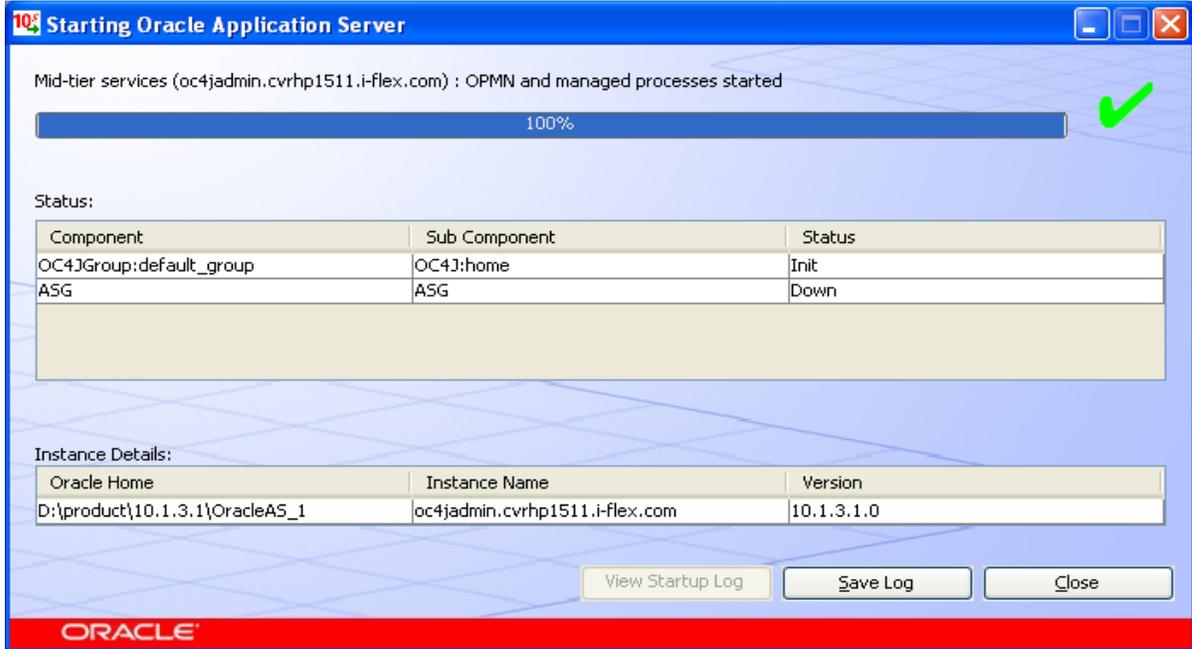
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6. Now, click on the *start* menu and go to All Programs→Oracle-oc4jadmin→Oracle BPEL Process Manager→Developer Prompt as shown below.

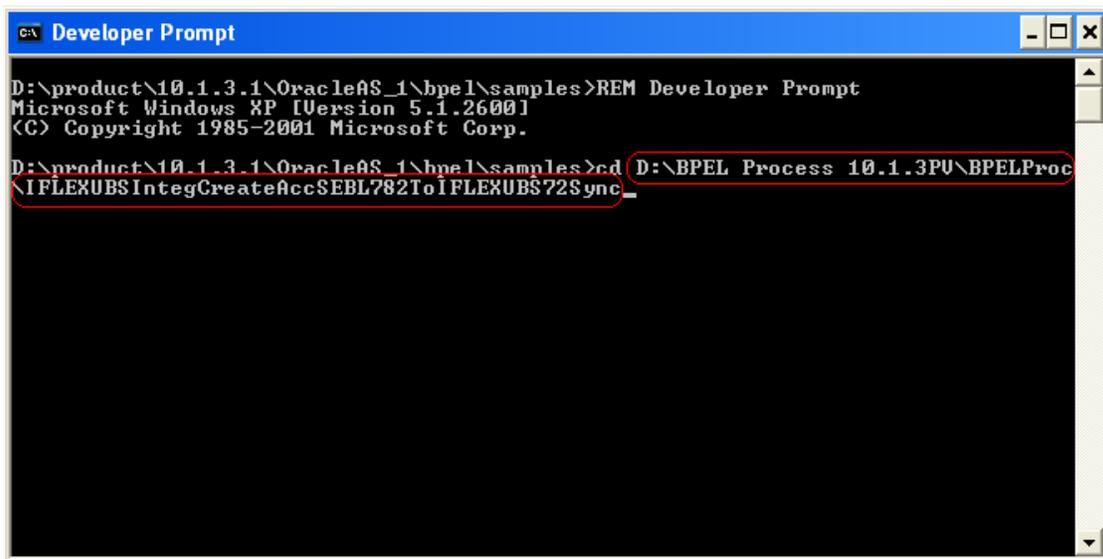**Note:** oc4jadmin is the instance name and this can be of different name.
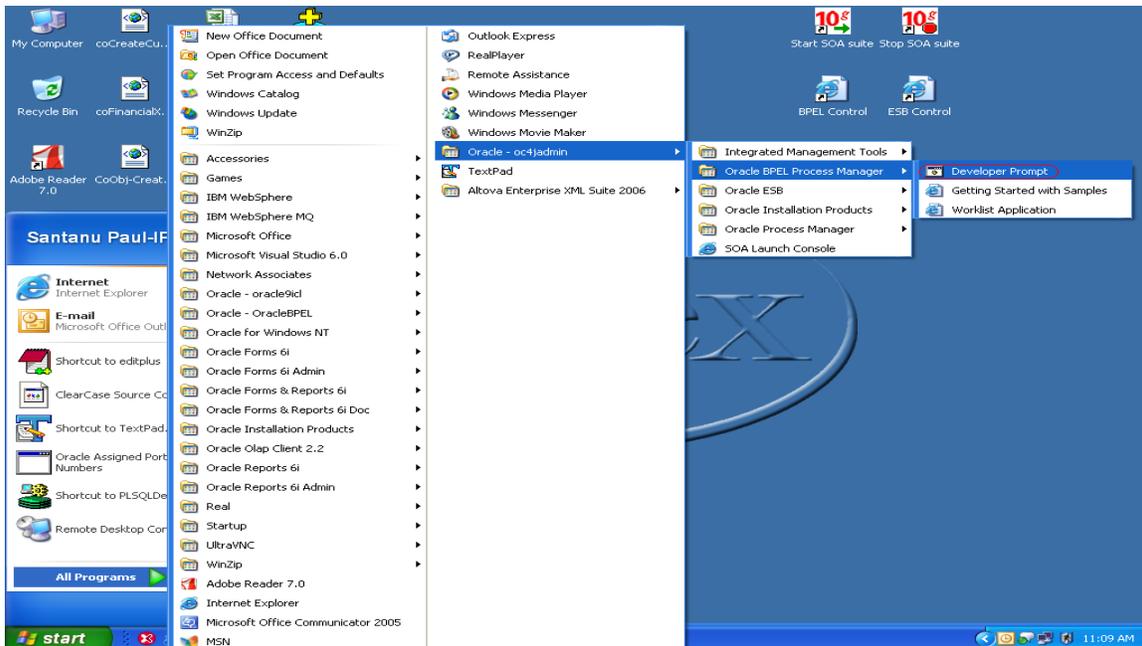
7. Following screen will appear.

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8. Change the directory to the BPEL process directory as shown below.

9. We will be in the BPEL process directory.

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10. Type *ANT command* to compile and deploy the BPEL process. *ANT* uses the *build.xml* file present in the BPEL process directory. *build.xml* does a look-up in build.properties file to find the overridden field property value.

11. On successful completion of *ANT*, we will get a message saying *BUILD Successful*.

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4.1.3 Server Level Setting For Outbound BPEL Process

1. For the outbound BPEL process to work that listens on a remote queue which is configured on OC4J server where Gateway components are installed; we need to modify following two files in the machine where BPEL is hosted.

   - *<SOA_HOME>\ j2ee\<OC4J Instance>\connectors\JmsAdapter\JmsAdapter\META-INF\oc4j-ra.xml*
   - *<SOA_HOME>\j2ee\<OC4J Instance>\application-deployments\default\JmsAdapter\oc4j-ra.xml*

   Copy the contents of *oc4j-ra_connectionFactoryEntry.xml* and paste them at the end of

oc4j-ra_connectionF
actoryEntry.xml

The above two xml files. Contents of *oc4j-ra_connectionFactoryEntry.xml* should go inside the root element

<oc4j-connector-factories><….>

<….>

</oc4j-connector-factories>

Now, care should be taken to update the following with correct information:

- *java.naming.provider.url=ormi://{Machine name where remote queue is hosted}:{ormi Port}*
- *java.naming.security.principal={Admin User name of remote OC4J Application Server}*
- *java.naming.security.credentials={**Admin User Password**}*

```
<connector-factory location="eis/RemoteOC4JJMS/Queue" connector-name="JmsAdapter">
    <config-property name="connectionFactoryLocation" value="jms/QueueConnectionFactory" />
    <config-property name="factoryProperties"
    value="java.naming.factory.initial=com.evermind.server.ApplicationClientInitialContextFactory;
    java.naming.provider.url=ormi://cvrhpl534:23791;
    java.naming.security.principal=oc4jadmin;
    java.naming.security.credentials=oc4jadmin" />
    <config-property name="acknowledgeMode" value="AUTO_ACKNOWLEDGE" />
    <config-property name="isTopic" value="false" />
    <config-property name="isTransacted" value="false" />
    <config-property name="username" value="oc4jadmin" />
    <config-property name="password" value="oc4jadmin" />
</connector-factory>
```

Note: *ormi* Port information is available in this file <SOA_HOME>\opmn\conf*opmn.xml*.

Look for this text '*port id="rmi" range*' in the file opmn.xml. Also, whenever password of

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Remote OC4J Application Server is changed; oc4j-ra.xml files should also be modified. This is   very critical for the functioning of Notification Process.
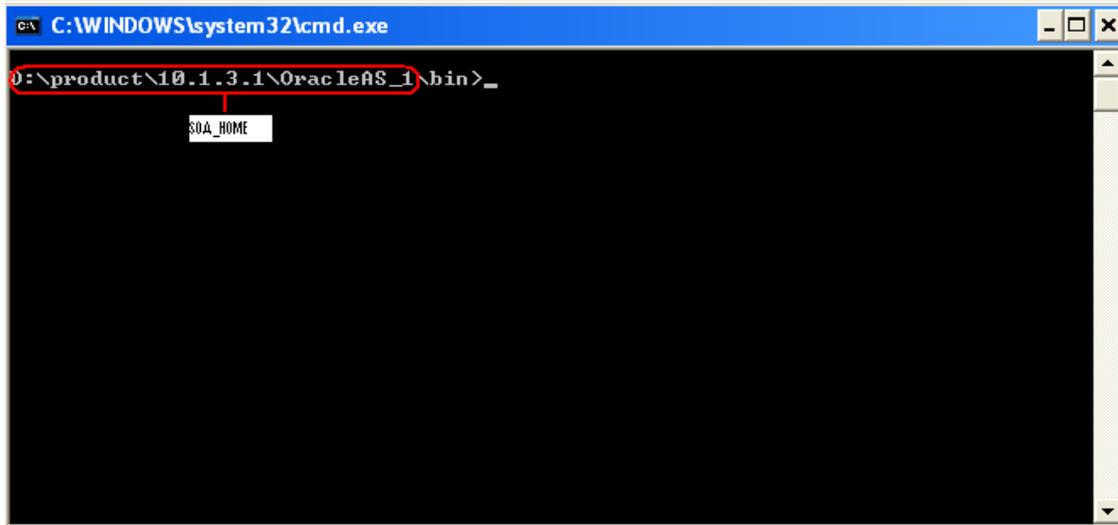
2. Place the following xml file here <SOA_HOME>\bpel\system\classes\META-INF.
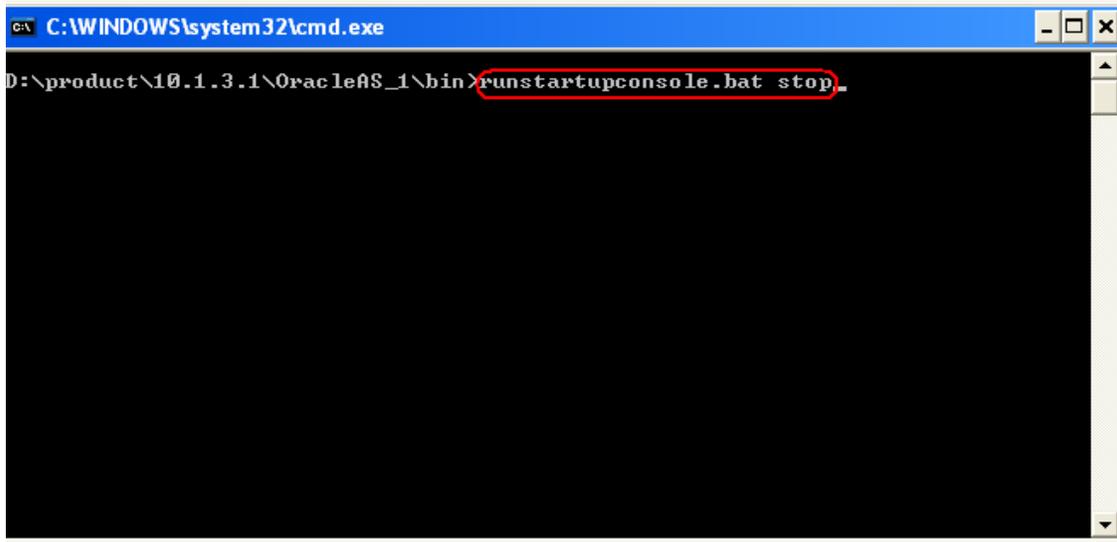
application-client.xml

3.   Stop the server.

- *Go to the command prompt.*
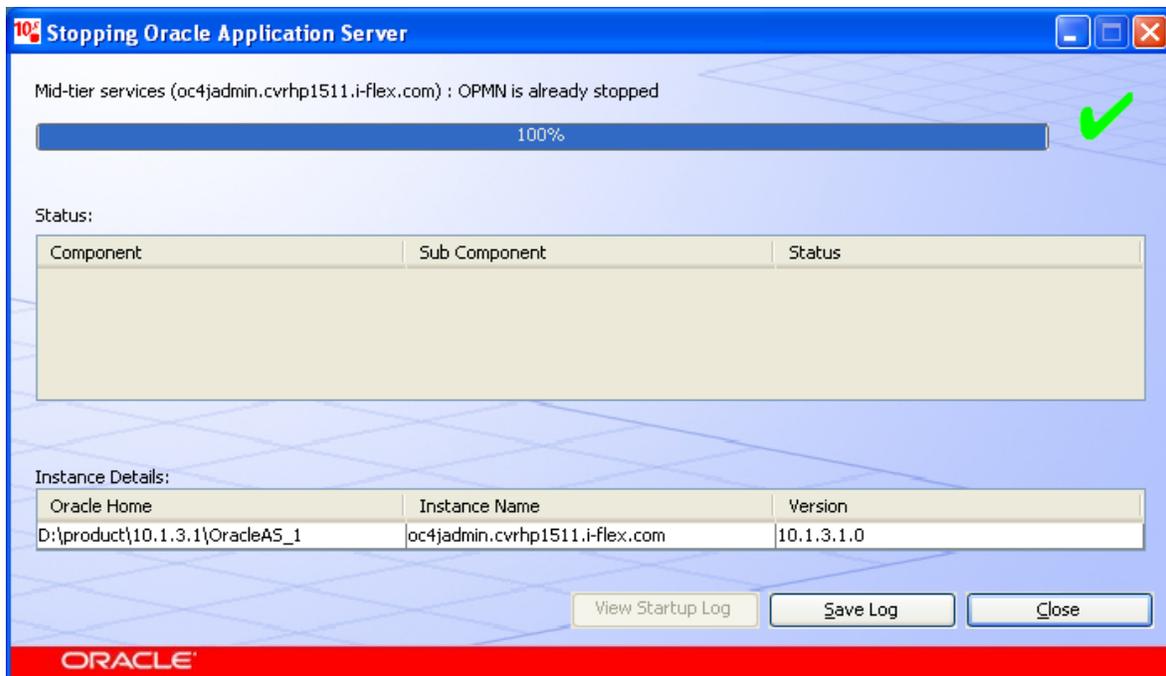- *Change the directory to <SOA_HOME>\bin. Make sure you are in <SOA_HOME>\bin.*

Note: SOA_HOME can be at a different location. In this document SOA home is referred to this location.

- *Type runstartupconsole.bat stop.*

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- *Once the server is stopped, we shall get the following screen.*

4. Re-start the server. Click here for help.

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4.2   <u>Deployment on Unix/Linux</u>

Following are the steps to be followed for installation

All the below mentioned steps need to be done on the BPEL SOA server.

4.2.1 <u>XSD File Maintenance In The SOA Server</u>

- *Create a folder structure SEBLAcctOrigIntegPkIFLEXUBS/FCUBS_XSD under*

<SOA_HOME>/bpel/system/xmlib

Note: *SOA_HOME* is the directory location where Oracle 10.1.3.1 SOA related files and folders are available. In this document we refer to the following directory location as SOA_HOME:

/d1/oracle/product/10.1.3.1/OracleAS_1

- *Copy the XSD files from the <FLEXCUBE_HOME>/GATEWAY/Service-Operations/XSD to the following location:*

<SOA_HOME>/bpel/system/xmlib/SEBLAcctOrigIntegPkIFLEXUBS/FCUBS_XSD

<u>Note:</u> In this document, we refer to $HOME/FLEXCUBE as <FLEXCUBE_HOME>. Here, we consolidate all our source files, executable files and other files released.

$HOME is the directory location which a user finds on logging into a UNIX/Linux server. In this document following is the *HOME* directory:

/d1/oracle
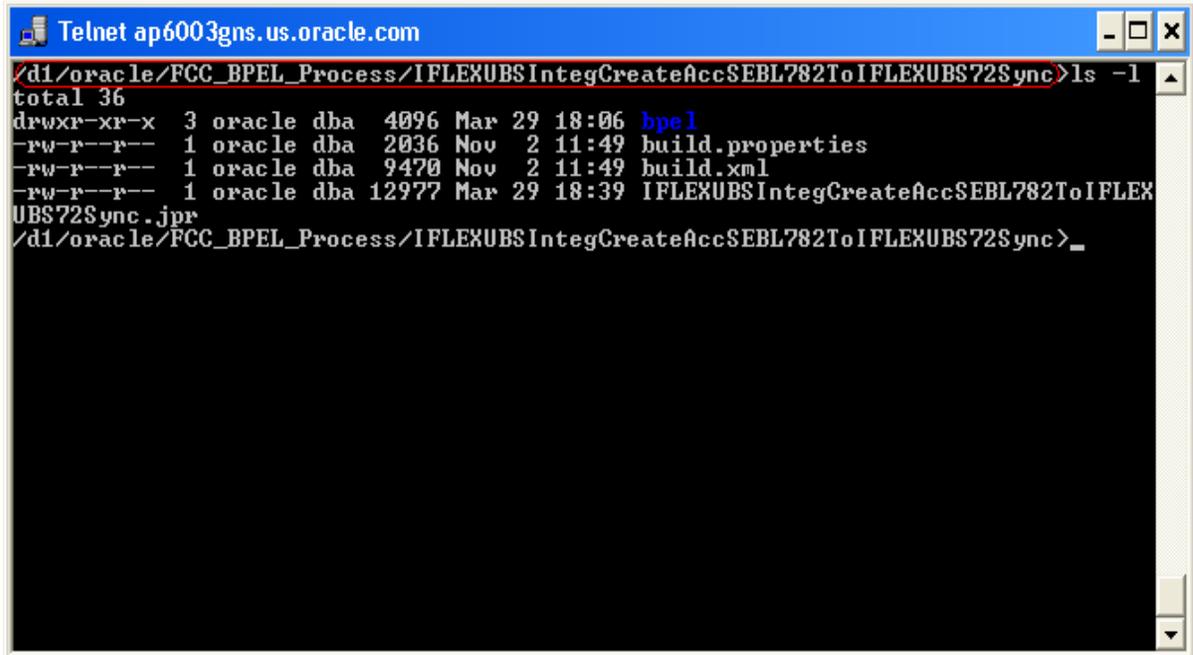
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4.2.2 Steps for compiling and deploying a BPEL process

1. Copy the zipped folder of the respective BPEL process from the
    <FLEXCUBE_HOME>/ADAPTERS/SIEBEL-CRM/BPEL and paste it inside a newly created folder
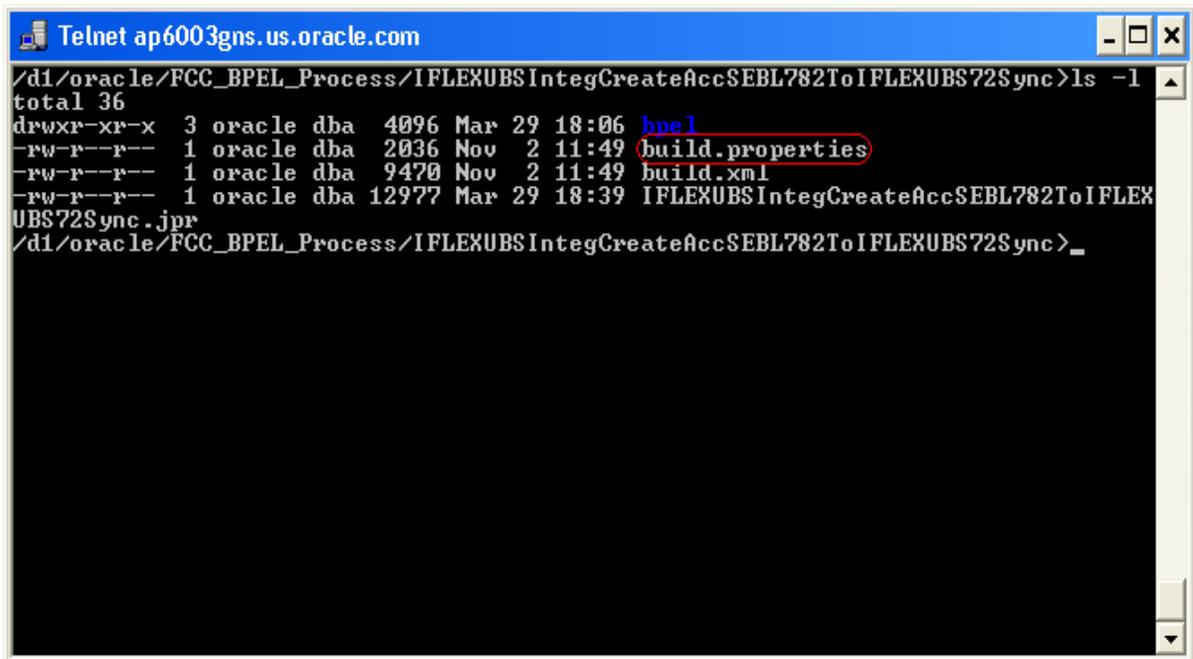   [$HOME/FCC_BPEL_Process in this document] in your server machine. Unzip the folder.

2. Open the BPEL process folder. In this document, BPEL process folder is in the location marked in
    red as shown in the screen-shot below. All further references to this folder will be made by saying
    BPEL process folder.

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3. Open the build.properties file.

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4. Edit this file to override the default property settings. This file contains all the property fields with their default values. All the fields are generally commented. In case, we need to override the default value of a particular field, copy that particular line paste it to the very next line. Uncomment the newly created line and type the new value. Once everything is done save the file.

We will have to override the *admin.password* property value. Care should be taken to provide the correct Admin Password.

```
##############################################################################
# Use this file to OVERRIDE default properties when deploying this project
# using "ant" from Developer Prompt or "ant" on project's build.xml in Jdev
# These properties do not get used when deploying from Jdev project -> Deploy
##############################################################################

# AppServer platform: currently supported values are ias_10g, oc4j_10g
#platform = ias_10g

# Change below if deploying in domain other than "default"
#domain = default

# Change below if deploying with process revision other than 1.0
#rev = 1.0

# Make sure admin.user, admin.password is correct for appserver
#admin.user = oc4jadmin
#admin.password =
admin.password =welcome1

# http.hostname and http.port should point to BPEL Server's host and http port
#http.hostname = localhost
#http.port = 9700

# For BPEL in cluster environemnt, j2ee.hostname may not be same as
# http.hostname, where j2ee.hostname will be local hostname,
# while http.hostname will be virtual hostname
# For deployment of applications in oc4j cluster, set cluster = true
# and oc4jinstancename to opmn cluster group it belongs to such as default_group
#cluster = false
#j2ee.hostname = localhost

# rmi.port or opmn.requestport is used in jndi.url/deployment-url in
# standalone or midtier installation respectively.
# rmi.port value below is default value as in BPEL standalone-developer install.
# If you rely on this value, make sure it's correct for your installation
# as from command "opmnctl status -l" output in midtier/SOA install.
#rmi.port = 23791
#opmn.requestport = 6003

#oc4jinstancename = home
```

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5. Edit the .wsdl files under <BPEL process folder>/bpel to replace each occurrence of *http://bpelhost:8888* with http://<actual bpel host name>:port number. Also, replace each occurrence of *http://gatewayhost:8888* with http://<actual gateway host name>:port number.

E.g.

Before Replacement

```
            </wsdl:operation>
      </wsdl:portType>

      <wsdl:binding name="FCUBSTDService" type="tns:FCUBSTDServiceSEI">
            <wsdlsoap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
            <wsdl:operation name="CreateTDAcc">
                  <wsdlsoap:operation soapAction=""/>
                  <wsdl:input>
                        <wsdlsoap:body use="literal"/>
                  </wsdl:input>
                  <wsdl:output>
                        <wsdlsoap:body use="literal"/>
                  </wsdl:output>
            </wsdl:operation>
            <wsdl:operation name="ModifyTDRollover">
                  <wsdlsoap:operation soapAction=""/>
                  <wsdl:input>
                        <wsdlsoap:body use="literal"/>
                  </wsdl:input>
                  <wsdl:output>
                        <wsdlsoap:body use="literal"/>
                  </wsdl:output>
            </wsdl:operation>
      </wsdl:binding>

      <wsdl:service name="FCUBSTDService">
            <wsdl:port name="FCUBSTDServiceSEI" binding="tns:FCUBSTDService">
                  <soap:address xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/" location="http://gatewayhost:8888/FCUBSTDServi(
            </wsdl:port>
      </wsdl:service>
</wsdl:definitions>
```

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After Replacement

```
        </wsdl:operation>
    </wsdl:portType>

    <wsdl:binding name="FCUBSTDService" type="tns:FCUBSTDServiceSEI">
        <wsdlsoap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
        <wsdl:operation name="CreateTDAcc">
            <wsdlsoap:operation soapAction=""/>
            <wsdl:input>
                <wsdlsoap:body use="literal"/>
            </wsdl:input>
            <wsdl:output>
                <wsdlsoap:body use="literal"/>
            </wsdl:output>
        </wsdl:operation>
        <wsdl:operation name="ModifyTDRollover">
            <wsdlsoap:operation soapAction=""/>
            <wsdl:input>
                <wsdlsoap:body use="literal"/>
            </wsdl:input>
            <wsdl:output>
                <wsdlsoap:body use="literal"/>
            </wsdl:output>
        </wsdl:operation>
    </wsdl:binding>

    <wsdl:service name="FCUBSTDService">
        <wsdl:port name="FCUBSTDServiceSEI" binding="tns:FCUBSTDService">
            <soap:address xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/" location="http://sdcdl360i306.corp.siebel.com:7777/FCUBSTDService
        </wsdl:port>
    </wsdl:service>
</wsdl:definitions>
```

In this example *actual gateway host* name is sdcdl360i306.corp.siebel.com and Port *Number* is 7777.

Note: Name of *actual bpel host* can be either the name or IP address of the machine where BPEL Server is running.

Name of *actual gateway host* can be either the name or IP address of the machine where gateway components are running.

This step should be followed while deploying any BPEL process.

Please, get the machine name and port number information from the URL of application server's home page.

1. Start the Application Server where BPEL is hosted.

2. Go to the *HOME* directory.

3. Change the directory to *<SOA_HOME>*/opmn/bin. Make sure you are in *<SOA_HOME>*/opmn/bin.
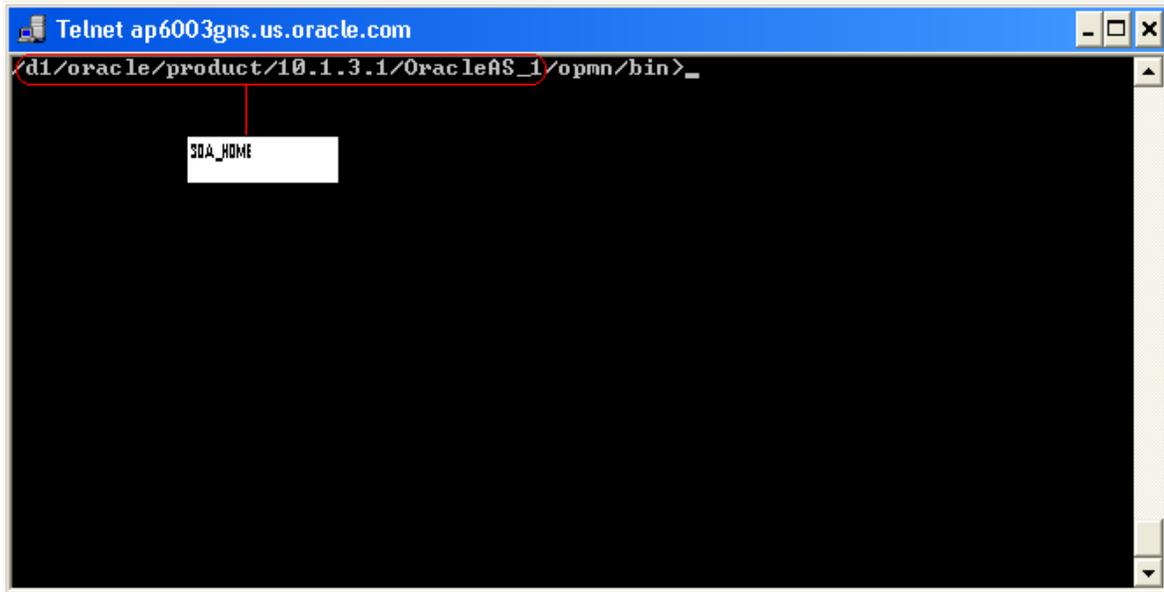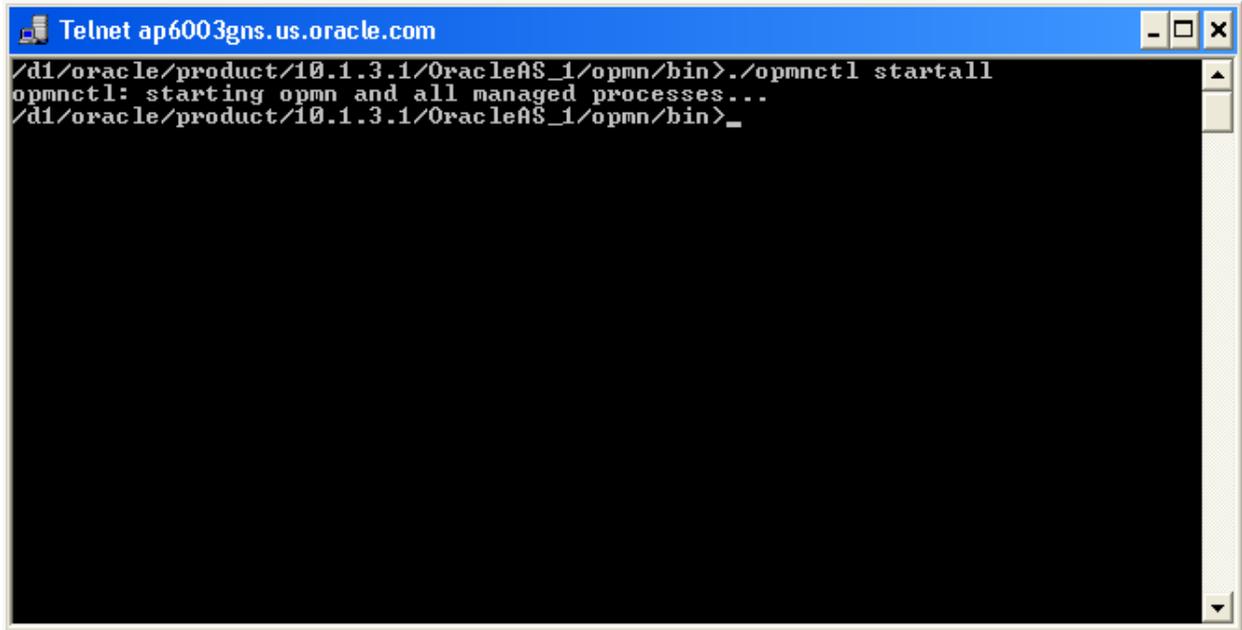
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Note: SOA_HOME can be at a different location. In this document SOA home is   referred to this location.
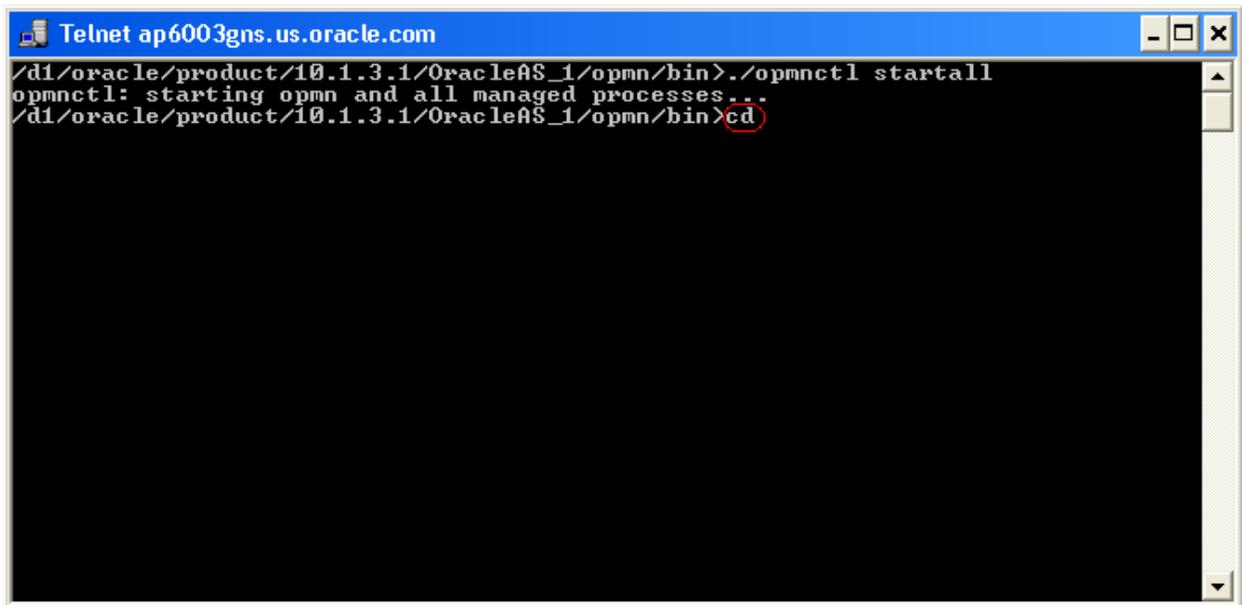
4.   Type ./opmnctl startall.
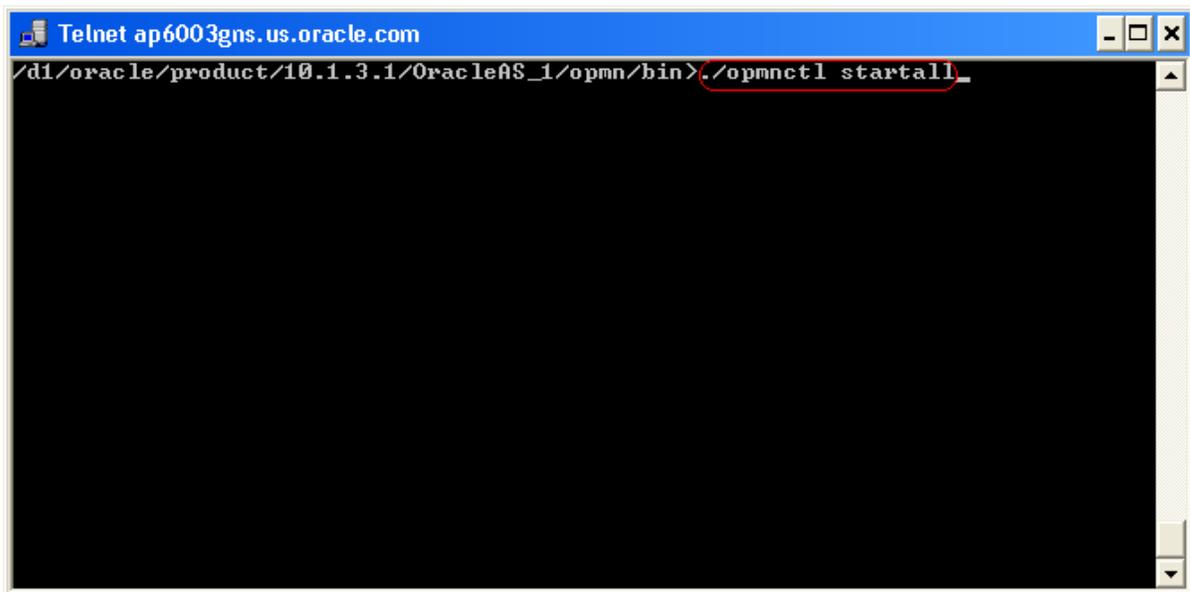
5.   Once the server is up you will get the following

ORACLE

```
Telnet ap6003gns.us.oracle.com                          _ □ ×
/d1/oracle/product/10.1.3.1/OracleAS_1/opmn/bin>./opmnctl startall
opmnctl: starting opmn and all managed processes...
/d1/oracle/product/10.1.3.1/OracleAS_1/opmn/bin>_
```

6. Now, change the directory to the *$HOME* directory.
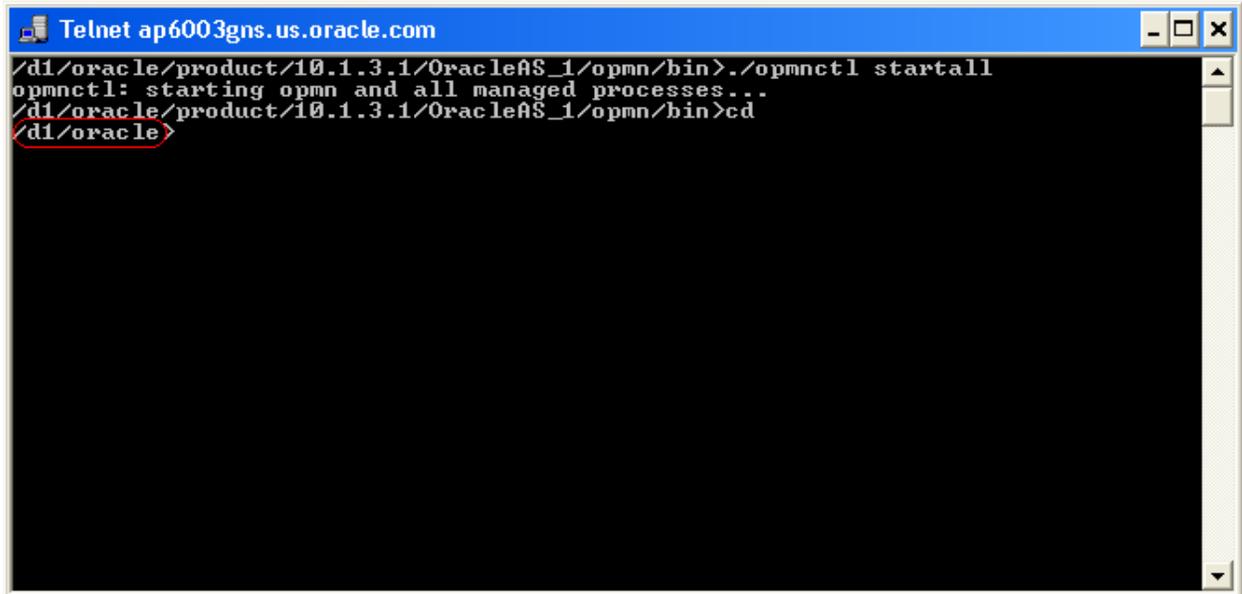


```
Telnet ap6003gns.us.oracle.com                          _ □ ×
/d1/oracle/product/10.1.3.1/OracleAS_1/opmn/bin>./opmnctl startall
opmnctl: starting opmn and all managed processes...
/d1/oracle/product/10.1.3.1/OracleAS_1/opmn/bin>cd
```

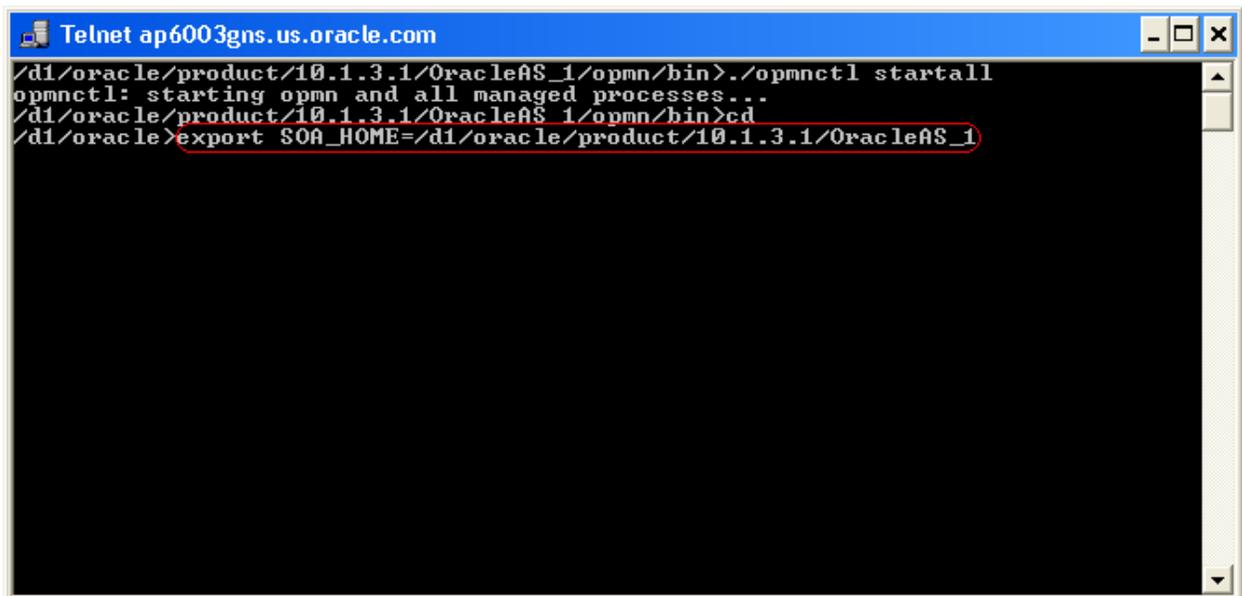7. We shall get the following screen.

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```
Telnet ap6003gns.us.oracle.com
/d1/oracle/product/10.1.3.1/OracleAS_1/opmn/bin>./opmnctl startall
opmnctl: starting opmn and all managed processes...
/d1/oracle/product/10.1.3.1/OracleAS_1/opmn/bin>cd
/d1/oracle>
```

8. Now, set the *SOA_HOME* directory.


```
Telnet ap6003gns.us.oracle.com
/d1/oracle/product/10.1.3.1/OracleAS_1/opmn/bin>./opmnctl startall
opmnctl: starting opmn and all managed processes...
/d1/oracle/product/10.1.3.1/OracleAS_1/opmn/bin>cd
/d1/oracle>export SOA_HOME=/d1/oracle/product/10.1.3.1/OracleAS_1
```

9. Run the following shell script.

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```
Telnet ap6003gns.us.oracle.com                                    - □ ×
/d1/oracle/product/10.1.3.1/OracleAS_1/opmn/bin>./opmnctl startall
opmnctl: starting opmn and all managed processes...
/d1/oracle/product/10.1.3.1/OracleAS_1/opmn/bin>cd
/d1/oracle>export SOA_HOME=/d1/oracle/product/10.1.3.1/OracleAS_1
/d1/oracle>$SOA_HOME/bpel/bin/devprompt.sh
```

10. If you get a different directory prompt as shown in the screen-shot below then, set the **PS1** environment variable to **$PWD** value i.e. present working directory.
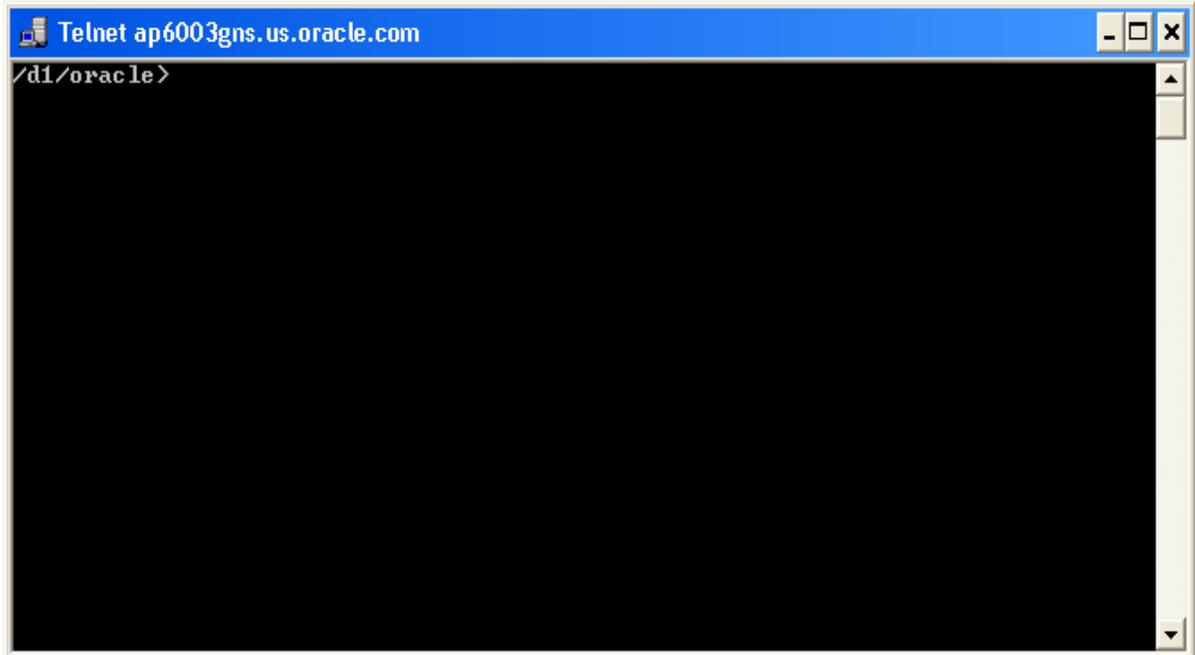


```
Telnet ap6003gns.us.oracle.com                                    - □ ×
/d1/oracle/product/10.1.3.1/OracleAS_1/opmn/bin>./opmnctl startall
opmnctl: starting opmn and all managed processes...
/d1/oracle/product/10.1.3.1/OracleAS_1/opmn/bin>cd
/d1/oracle>export SOA_HOME=/d1/oracle/product/10.1.3.1/OracleAS_1
/d1/oracle>$SOA_HOME/bpel/bin/devprompt.sh
[oracle@ap6003gns ~]$ _
```

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11. Run the following command to set the *PS1* value.
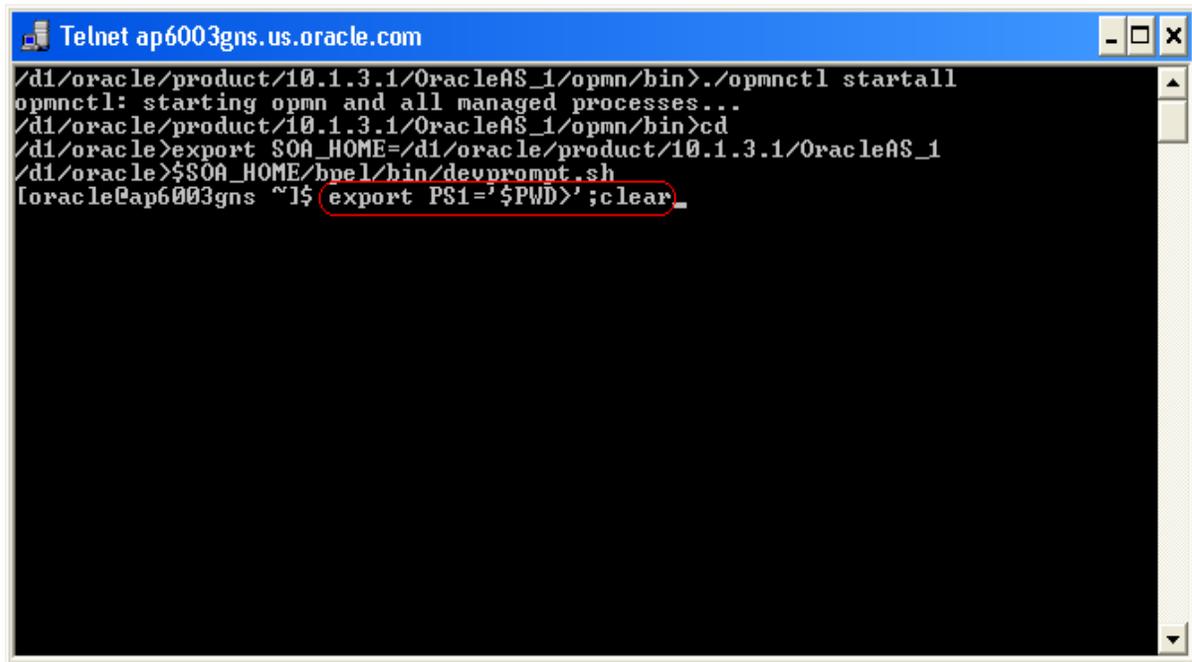

```
Telnet ap6003gns.us.oracle.com

/d1/oracle/product/10.1.3.1/OracleAS_1/opmn/bin>./opmnctl startall
opmnctl: starting opmn and all managed processes...
/d1/oracle/product/10.1.3.1/OracleAS_1/opmn/bin>cd
/d1/oracle>export SOA_HOME=/d1/oracle/product/10.1.3.1/OracleAS_1
/d1/oracle>$SOA_HOME/bpel/bin/devprompt.sh
[oracle@ap6003gns ~]$ export PS1='$PWD>';clear
```
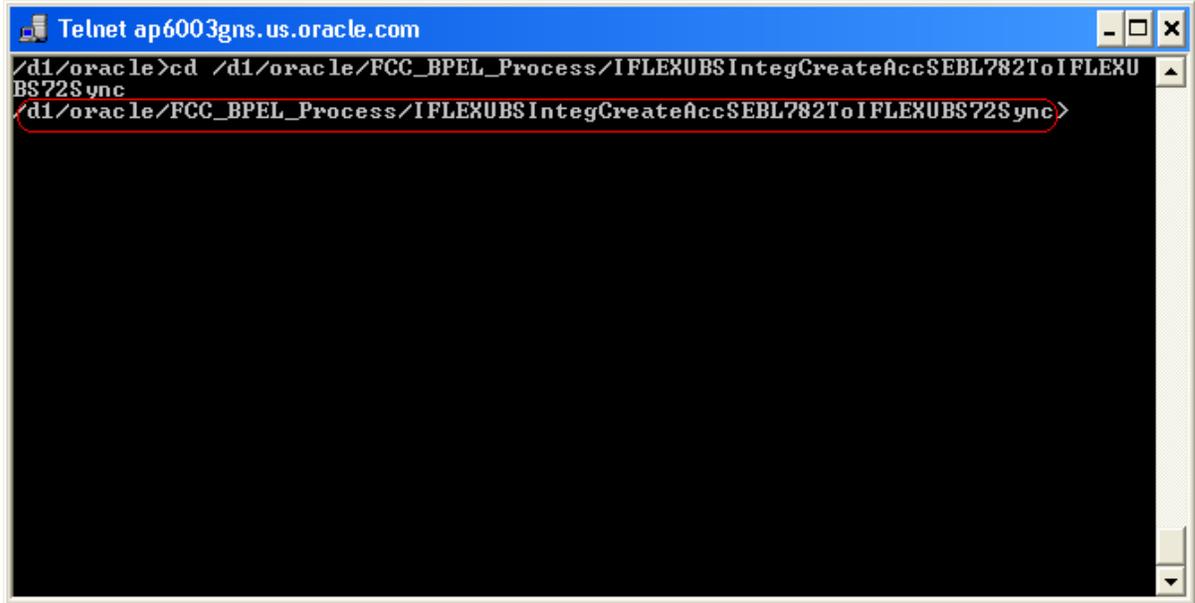
12. We shall get the following screen.

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13. Change the directory to the BPEL process directory as shown below.

14. We will be in the BPEL process directory.

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15. Type *ant* command to compile and deploy the BPEL process. *ant* uses the *build.xml* file present in the BPEL process directory. *build.xml* does a look-up in build.properties file to find the overridden field property value.

16. On successful completion of *ant*, we will get a message saying *BUILD Successful*.

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4.2.3 Server Level Setting For Outbound BPEL Process

1. For the outbound BPEL process to work that listens on a remote queue which is configured on OC4J server where Gateway components are installed; we need to modify following two files in the machine where BPEL is hosted.

    - *<SOA_HOME>/j2ee/<OC4JInstanceName >/connectors/JmsAdapter/JmsAdapter/JmsAdapter/META-INF/oc4j-ra.xml*
    - *<SOA_HOME>/j2ee/<OC4JInstance Name>/application-deployments/default/JmsAdapter/oc4j-ra.xml*

    Copy the contents of **oc4j-ra_connectionFactoryEntry.xml** and paste them at the end of

oc4j-ra_connectionF
actoryEntry.xml

the above two xml files. Contents of **oc4j-ra_connectionFactoryEntry.xml** should go inside the root element <oc4j-connector-factories>

<….>

<….>

</oc4j-connector-factories>

Now, care should be taken to update the following with correct information

    - *java.naming.provider.url=ormi://{ Machine name in which Gateway infrastructure is hosted}:{ormi Port}*
    - *java.naming.security.principal={Admin User name of remote OC4J Application Server}*
    - *java.naming.security.credentials={Admin User Password}*

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```
<connector-factory location="eis/RemoteOC4JJMS/Queue" connector-name="JmsAdapter">
    <config-property name="connectionFactoryLocation" value="jms/QueueConnectionFactory" />
    <config-property name="factoryProperties"
    value="java.naming.factory.initial=com.evermind.server.ApplicationClientInitialContextFactory;
    java.naming.provider.url=ormi://cvrhpl534:23791;
    java.naming.security.principal=oc4jadmin;
    java.naming.security.credentials=oc4jadmin" />
    <config-property name="acknowledgeMode" value="AUTO_ACKNOWLEDGE" />
    <config-property name="isTopic" value="false" />
    <config-property name="isTransacted" value="false" />
    <config-property name="username" value="oc4jadmin" />
    <config-property name="password" value="oc4jadmin" />
</connector-factory>
```

Note: *ormi* Port information is available in this file <SOA_HOME>/opmn/conf/*opmn.xml*.

Look for this text '*port id="rmi" range*' in the file opmn.xml. Also, whenever password of
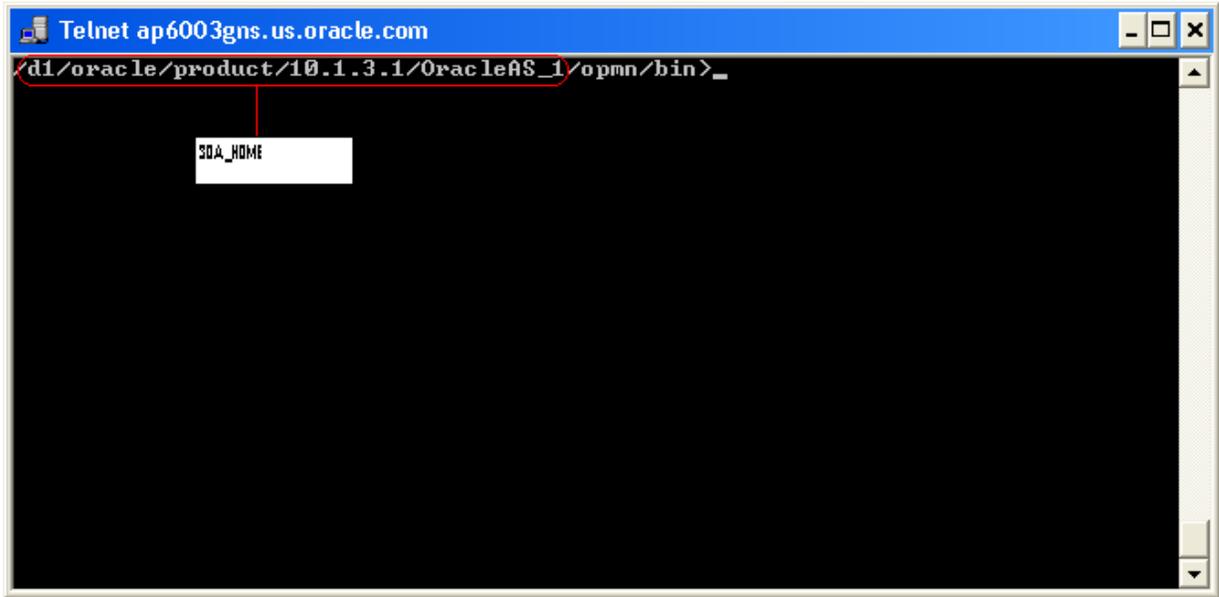
Remote OC4J Application Server is changed; oc4j-ra.xml files should also be modified. This is very critical for the functioning of Notification Process.

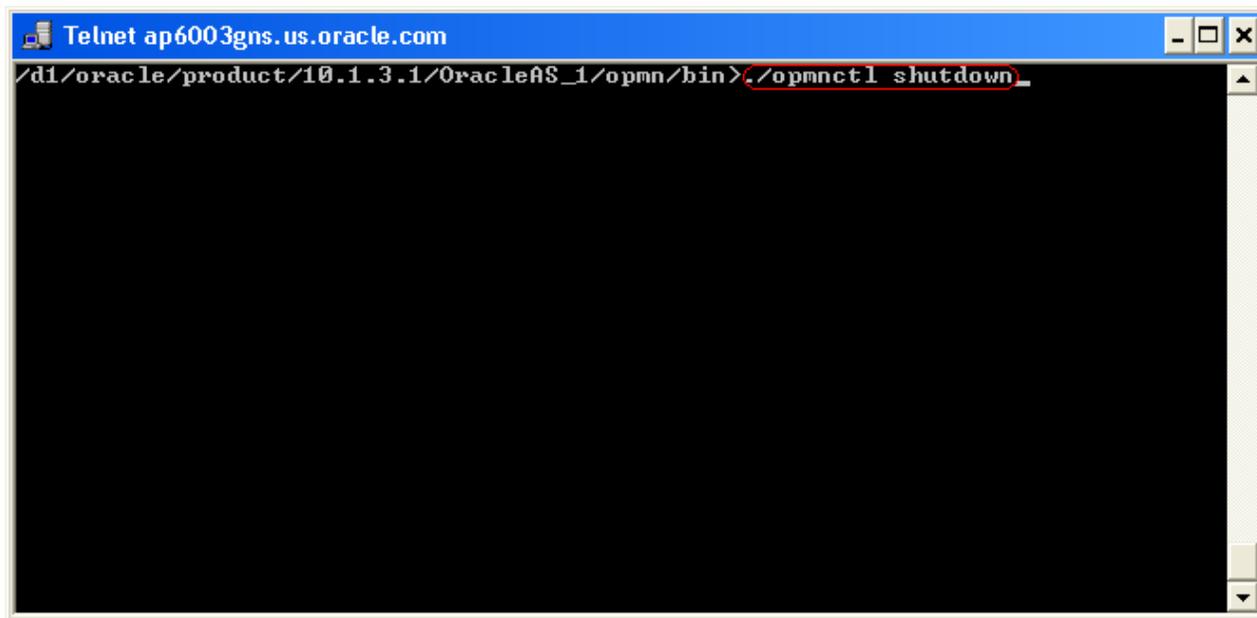2. Place the following xml file here <SOA_HOME>/bpel/system/classes/META-INF.

application-client.xml

3. Stop the server.

4. Go to the command prompt.

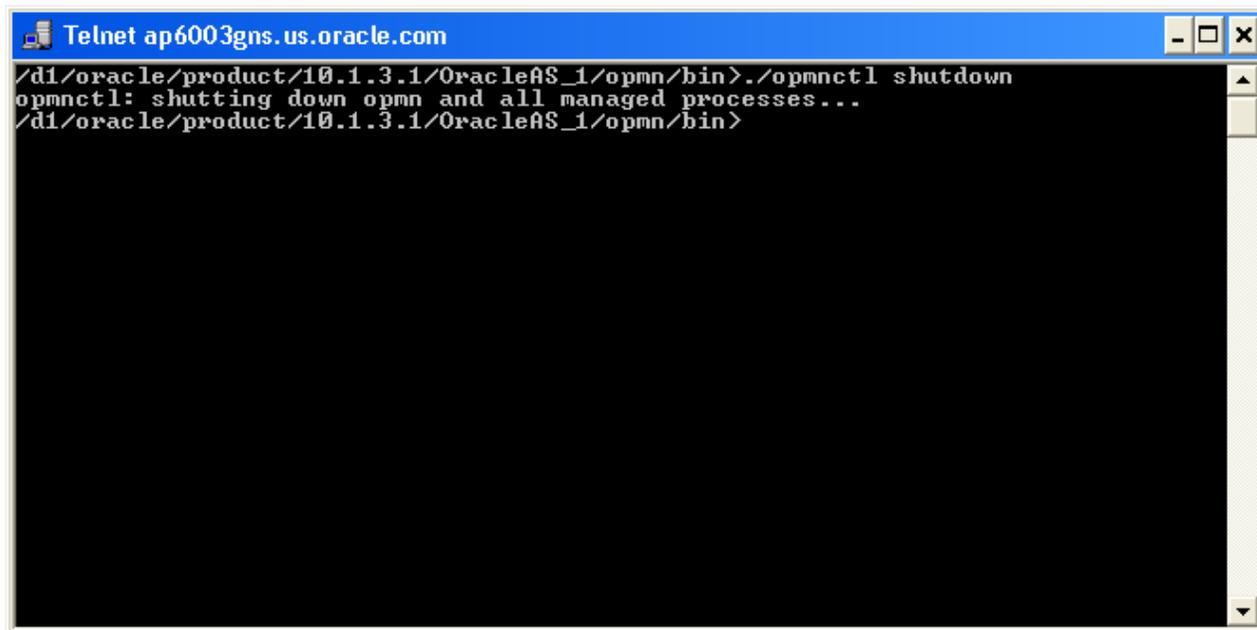5. Change the directory to <SOA_HOME>/opmn/bin. Make sure you are in <SOA_HOME>/opmn/bin.

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Note: SOA_HOME can be at a different location. In this document SOA home is referred to this location.

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6. Type ./opmnctl shutdown.

7. Once the server is stopped, we shall get the following screen.

8. Re-start the server. Click **here** for help.

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5. Updation of DVM

FLEXCUBE and Siebel CRM applications use different values to represent the same information. For example, FLEXCUBE may have a field with a value as "**P**" while Siebel may represent it as "**Primary**". A Domain value map enables you to associate values from one application with values from another.

As part of this integration, DVMs are created for maintaining the value translation of several fields. Of these DVMs, there are certain mapping files in which the values of both the systems are fixed and they are factory shipped with these values. There are certain DVMs in which value for one or both the application can be determined only at the time of installation. These DVMs will be shipped as part of the installable but will have to updated by the implementation team.
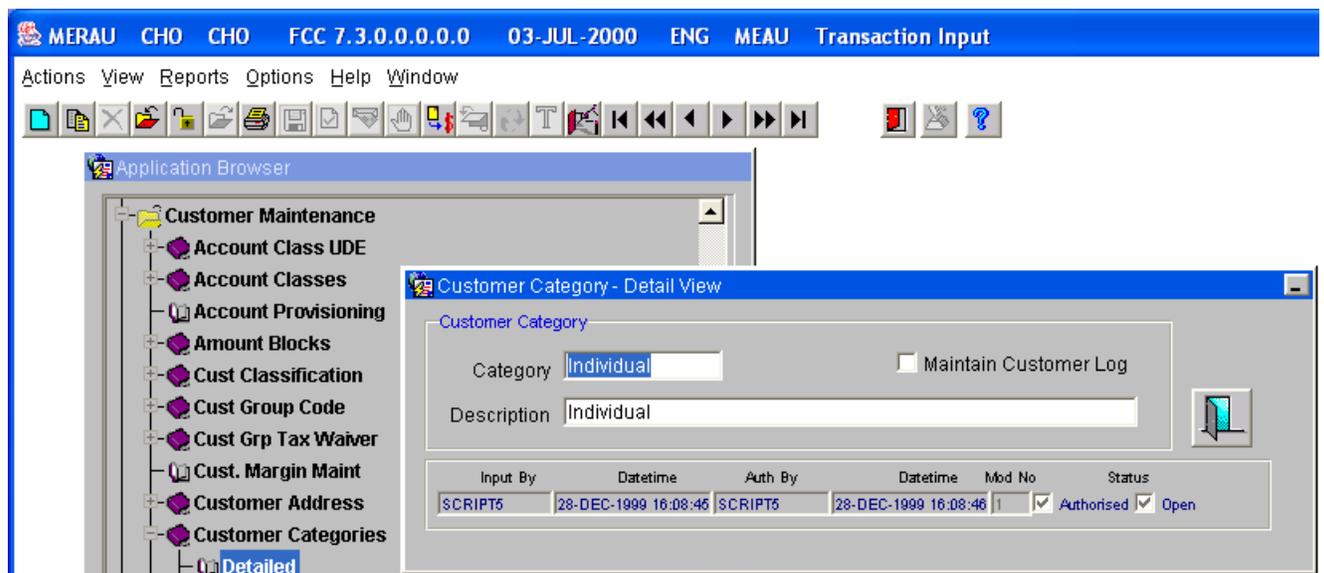
Following are the DVMs that need to be updated

- FINANCIAL ACCOUNT CUSTOMER TYPE

- FINANCIAL ACCOUNT ADDRESS TYPE

Customer Category Maintenance

Customer Category is one of the mandatory fields in Customer creation. This is maintainable by the bank and is generally done at the time of installation.

The below screen shot shows the Customer Category maintenance

As part of the Siebel CRM installation, the bank needs to decide on the category code that will be used for creating the Customers from Siebel CRM.

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Since the FLEXCUBE value of this field is maintainable by the bank, "IFlexUBS" values in DVM are not shipped. "IFlexUBS" values of corresponding "Siebel" values are required to be updated during implementation and should be decided by the bank.

Ex: Siebel CRM is used for creating normal individual Customers. In the above example, the category is shown as "Individual".

Steps for updating the DVM- FINANCIAL ACCOUNT CUSTOMER TYPE

1. In the browser, open the URL of Oracle ESB Control.

2. In the Maps view of Oracle ESB Control, click the Create down-arrow on the left side of the window. Two choices are presented: Create a new map and Import a new map.

3. Click Import a new map to open the Import a New Map dialog.

4. In the Import a New Map dialog box, follow these steps:

   - In the Import field, enter the complete specification for the file on the local file system that you want to import or use Browse to locate the file.

   - The imported domain-value map will be displayed.

5. Corresponding to the row having the "Siebel" value as "Individual", enter the value maintained in FLEXCUBE under the column "IFlexUBS".

Account Address Location Type Maintenance

Account address location type is one of the mandatory fields in Account creation. This is maintainable by the bank and is generally done at the time of installation.

The below screen shot shows the Account Address Location Type maintenance

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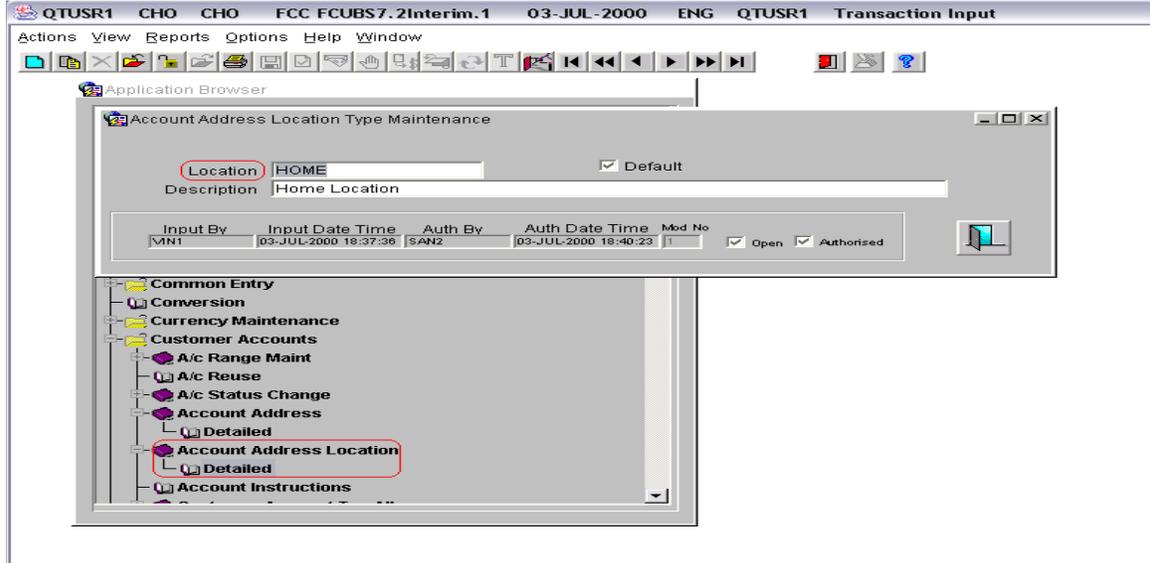
As part of the Siebel CRM installation, the bank needs to decide on the location code that will be used for creating the Accounts from Siebel CRM.

Since the FLEXCUBE value of this field is maintainable by the bank, "IFlexUBS" values in DVM are not shipped. "IFlexUBS" values of corresponding "Siebel" values are required to be updated during implementation and should be decided by the bank.

As a part of this integration, Siebel's CRM application maintains three different Address Location Types. Following are the Siebel-CRM's Address Location Types:

1. Home

2. Business

3. Alternate

In FLEXCUBE, it is required to maintain the corresponding "IFlexUBS" value for all the above three Address Location Types and same should be updated in DVM also.

Ex: Siebel CRM is used for creating Accounts which include Saving Account, Checking Account, and Term Deposit Account. For all these types of account, we can have multiple address details attached to an account. However, these address details should be of different location type. In the above example, the location type is shown as "HOME".

Steps for updating the DVM- FINANCIAL ACCOUNT ADDRESS TYPE

1. In the browser, open the URL of Oracle ESB Control

2. In the Maps view of Oracle ESB Control, click the Create down-arrow on the left side of the window. Two choices are presented: Create a new map and Import a new map.

3. Click Import a new map to open the Import a New Map dialog.

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4. In the Import a New Map dialog box, follow these steps:

- In the Import field, enter the complete specification for the file on the local file system that you want to import or use Browse to locate the file.

- The imported domain-value map will be displayed.

5. Corresponding to the row having the "Siebel" value as "Home", enter the value maintained in FLEXCUBE under the column "IFlexUBS".

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6. Siebel CRM Adapter – Database Configuration

Once the base *FLEXCUBE* installation is complete (Host and Gateway) the following instructions is be followed to install/maintain database related components that are specific to the Siebel integration.

6.1 <u>Installation</u>

1. Open the Oracle Client (SQLPLUSW).

2. Login into the FLEXCUBE schema.

3. Run the following command at the command prompt:

   @<<FCCROOT>>\Adapters\SIEBEL-CRM\Utilities\DB-install\UBS_SIEBEL-CRM_INSTALL

   Where: <<FCCROOT>> refers to the folder in which all the relevant FLEXCUBE releases are consolidated.

   Ex: If all the sources are consolidated in D:\FLEXCUBE directory then

4. Installation script will request for providing following information at the command prompt.

   - Adapter Path: Provide 'ADAPTERS' folder location under FLEXCUBE UBS source directory. Ex : <<FCCROOT>>\ADAPTERS

   - FLEXCUBE Schema Name: Provide name of the schema where FLEXCUBE UBS is installed.

   - FLEXCUBE Schema Password: Provide password for FLEXCUBE Schema.

   - Schema connect string Name: Provides database name for connecting to FLEXCUBE UBS database.

   - SIEBEL CRM Schema Name: Ignore this request and just type Enter.

   - SIEBEL CRM Schema Password: Ignore this request and just type Enter.

   - Schema connect string Name: Ignore this request and just type Enter.

5. On providing above details, installation will start and required Siebel CRM Adapter components will be deployed.

   Successful installation will be prompted on the screen at SQL command prompt.

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7. FLEXCUBE Settings for Siebel CRM Integration

7.1 Introduction

For the integration of FLEXCUBE with Siebel CRM, there are a few specific settings that need to be done. These are specific maintenances which are required for this integration only. They are:

1. Enabling Auto Generation of Customer number

2. Enabling Auto Generation of Customer Account number

7.2 Auto-Generation of Customer Number

Customer Number in FLEXCUBE needs to be auto generated as part of any customer creation request. For setting this follow the below steps:

1. Login to FLEXCUBE.

2. Change the branch to the headoffice.

3. Go to the node Bank Parameters → Bank Parameters → Detailed. This will open up a screen titled "Bank-Wide parameters – Detailed".

4. Click the "Unlock" button in the top menu bar.

5. Set the value of mask that will be used for the generation of customer number in the field corresponding to "CIF Mask".

6. Click the "Preferences" button.

7. In the Preferences screen, enable the option "Auto-Generate CIF numbers". Once this is done, click the "Ok" button.

8. In the main screen, click the "Save" button in the top menu bar.

9. Login to FLEXCUE with another id which has authorization rights. Repeat step(2)

10. Authorize the record.

7.3 Auto-Generation of Customer Account Number

Customer Account Number in FLEXCUBE needs to be auto generated as part of any customer account creation request. For setting this follow the below steps:

1. Login to FLEXCUBE.

2. Change the branch to the headoffice.

3. Go to the node Branch Parameters → Branch Parameters → Detailed. This will open up a screen titled "Bank parameters – Detailed View"

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4. Navigate the to the Branch code in which this change has to be done.

5. Click the 'Unlock' button in the top menu bar.

6. Set the value of mask that will be used for the generation of customer number in the field corresponding to "CIF Mask"

7. Click the 'AcMask' button. This will open up a screen titled "Account parameters"

8. Populate the details necessary in the screen. Once this is done, click the 'Ok' button.

9. In the main screen, click the "Save" button in the top menu bar.

10. Login to FLEXCUE with another id which has authorization rights. Repeat step (2) and authorize the record.

11. Repeat the steps 3 to 10 for all the branches in which this Auto account generation needs to be set.

7.4 <u>Customer Details Data Rectification</u>

Important Note

- This section needs to be referred only in an implementation scenario in which FLEXCUBE has already been installed and Siebel CRM is being installed at a later point of time.

- This step needs to be done prior to the extraction of ASCII files that are to given to Siebel for loading the existing customers.

Details

As per the design of FLEXCUBE, the first and last names of a customer of type "Individual" which appear under the Personal Details tab are optional. The below screen shot shows the Personal Details screen in FLEXCUBE. The First name and Last name are highlighted by rounded rectangle.

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The implementation team needs to check if any customers exist who do not need to First name and Last name. As these two fields are mandatory in Siebel, the Bank needs to populate these two fields before extraction of Customer data is done.

7.5   ASCII Data handoff - Extraction Criteria

Important Note

This section needs to be referred only in an implementation scenario in which FLEXCUBE has already been installed and Siebel CRM is being installed at a later point of time.

Details

The first step in the integration is the extraction of existing data from FLEXCUBE and sending them to Siebel. This is done for the following entities

- Customer

- Savings / Current Account

- Term Deposit

As part of the software shipped for this integration, scripts are provided for extracting these into ASCII files in a pre-determined format.Nevertheless, at the time of implementation the Bank may decide to migrate only a certain type of customer and accounts to Siebel. Hence the extraction criteria may be vary depending upon the Banks requirement.

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In the factory shipped scripts, following is the criteria:

Type	Condition
Customer Extract	All customers records which are Individual type Open Authorized are considered
Savings / Current Account	All savings / current accounts which are Underlying customer is Individual type Open Authorized are considered
Term Deposit	All term deposit accounts which are Underlying customer is Individual type Open Authorized are considered

If any change is required in the extraction condition, then the implementation team needs to modify the scripts accordingly.

The scripts are located in Adapters\SIEBEL-CRM\SQL folder in the consolidated FLEXCUBE installation folder.

7.6 <u>Retail Teller Product Maintenance for Savings/Current Account Creation</u>

7.6.1 <u>Introduction</u>

In the request for creating a new savings/current account, Siebel can provide funding details if funding needs to be done as part of the account creation. If funding is provided, then once the new account is created, it is funded. This is accomplished though a Retail teller contract.

7.6.2 <u>Details</u>

The Retail teller product that will be used for this is **SBLF.** This name is used internally in the account creation BPEL process.

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- *For creating the product, the maintenance is done under Teller → Retail Teller → Product Maintenance in the FLEXCUBE Application Browser*

- *When creating this product, the product type has to be AT (Account to Account Transfer).*

- *Arc Maintenance under Retail Teller Maint → Maintenance → Detail*

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