

Web Service Development
Oracle FLEXCUBE Investor Servicing
Release 12.1.0.0.0
[October] [2015]



Table of Contents

1. PREFACE	1-1
1.1 AUDIENCE	1-1
1.2 RELATED DOCUMENTS.....	1-1
1.3 CONVENTIONS	1-1
1.4 HYPOTHETICAL EXAMPLE USED IN THE DOCUMENT	1-2
2. INTRODUCTION	2-1
2.1 HOW TO USE THIS GUIDE	2-1
3. WEB SERVICE - INTRODUCTION	3-1
3.1 COMPONENTS OF WEB SERVICE	3-1
3.2 FLEXCUBE SOAP FORMAT.....	3-2
3.3 FLEXCUBE WSDL FORMAT.....	3-5
3.3.1 <i>WSDL parts</i>	3-5
3.3.2 <i>FCUBS WSDL example</i>	3-6
3.4 FLEXCUBE WEB SERVICE DATA FLOW	3-9
4. PRE REQUISITES FOR WEB SERVICE DEVELOPMENT	4-1
5. WEB SERVICE DEVELOPMENT	5-1
5.1 WEB SERVICE SPECIFICATION.....	5-1
5.2 GENERATE / DEVELOP XSDs.....	5-2
5.2.1 <i>Open Development generated</i>	5-2
5.2.2 <i>Hand coded</i>	5-2
5.3 GENERATE/DEVELOP WSDL.....	5-6
5.3.1 <i>Generate WSDL using TrAX</i>	5-7
5.4 BUILD EAR	5-12
5.4.1 <i>Directory Creation</i>	5-12
5.4.2 <i>File Copy</i>	5-13
5.4.3 <i>Creation of Gateway EJB property file</i>	5-13
5.4.4 <i>Creation of Gateway EJB EAR file</i>	5-16
5.4.5 <i>Creation of Web Service property file</i>	5-20
5.4.6 <i>Creation of Web Service EAR file</i>	5-23
5.4.7 <i>Adding New Service to the List</i>	5-25
5.5 DEPLOYING OF EAR FILE	5-27
5.5.1 <i>Deploying of Gateway EJB EAR file</i>	5-27
5.5.2 <i>Deploying of Web Service EAR file</i>	5-33
5.6 TESTING THE WEB SERVICE	5-36
6. ANNEXURE A – FCMOBILESERVICE – SAMPLE FILES	6-1
6.1 XSD FILES	6-1
6.1.1 <i>CS-Mobil-Types.xsd</i>	6-1
6.1.2 <i>CS-CreateMobil-Req-Full-MSG.xsd</i>	6-12
6.1.3 <i>CS-CreateMobil-Req-IO-MSG.xsd</i>	6-13
6.1.4 <i>CS-CreateMobil-Res-Full-MSG.xsd</i>	6-14
6.1.5 <i>CS-CreateMobil-Res-PK-MSG.xsd</i>	6-15
6.2 WSDL FILE	6-16
6.2.1 <i>FCMobileService.wsdl</i>	6-16
6.3 IMPLEMENTATION JAVA FILES	6-19
6.3.1 <i>FCMobileServiceImpl.java</i>	6-19
6.4 GATEWAY STATIC DATA FROM OPEN DEVELOPMENT.....	6-29

6.4.1	<i>GWTB_AMEND_FIELDS__JKDMOBIL.INC</i>	6-29
6.4.2	<i>GWTB_AMEND_NODES__JKDMOBIL.INC</i>	6-29
6.4.3	<i>GWTM_AMEND_FIELDS__JKDMOBIL.INC</i>	6-30
6.4.4	<i>GWTM_AMEND_MASTER__JKDMOBIL.INC</i>	6-30
6.4.5	<i>GWTM_AMEND_NODES__JKDMOBIL.INC</i>	6-31

1. Preface

This document describes the concepts and helps reader to develop Web service for FLEXCUBE IS function IDs. Web Services developed for FLEXCUBE IS are deployed on Gateway framework.

1.1 Audience

This Web service Development book is intended for FLEXCUBE Application Developers/Users who perform the following tasks:

- Develop the new web service for existing FLEXCUBE Function IDs
- Modify the existing web service to add/remove fields

1.2 Related documents

For more information on FLEXCUBE framework, refer the below documents:

- Development Overview Guide
- Getting Started
- FCUBS-FD05-04-01-TrAX-Reference

To Use this manual, you need conceptual and working knowledge of the below:

Proficiency	Resources
FLEXCUBE IS Development overview	Development Overview Guide
OPEN DEVELOPMENT function ID development getting started	Getting Started
Open Development screen development	Function ID Development

1.3 Conventions

The following text conventions are used in this document:

Convention Meaning

boldface	Boldface type indicates graphical user interface elements (for example, menus and menu items, buttons, tabs, dialog controls), including options that you select.
<i>italic</i>	italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates language and syntax elements, directory

	and File name, URLs, text that appears on the screen, or text that you enter.
	Indicates important information

1.4 Hypothetical Example used in the document

FLEXCUBE IS has the function ID JKDMOBILE. This is a maintenance function ID. This function ID is used map the customer number with mobile number. This document covers the web service development for this function ID.

2. Introduction

2.1 How to use this Guide

The information in this guide includes:

- [Chapter 2, “Introduction”](#)
This is an introduction section.
- [Chapter 3, “Web Service - Introduction”](#)
This section discuss the Web service introduction and FLEXCUBE IS web service concepts
- [Chapter 4, “Pre requisites for Web service development”](#)
This section discuss the pre-request check list for web service development
- [Chapter 5, “Web services Development”](#)
This section discusses steps for web service development and testing.
- [Chapter 6, “Annexure A – FCMobileService sample files”](#)
This section discuss the sample files

3. Web Service - Introduction

Web Services are self-contained, self-describing, modular applications that can be published, located and invoked across the web. A Web Service is an interface that describes a collection of operations that are network accessible through standardized XML messaging. The technology is called "Web service" because it integrates services(applications) using web technologies(the internet and its standards). Web service plays vital role in creating Service Oriented Architecture based software applications.

Web services use the following technologies

- XML
XML is used to describe the web service specifications
- SOAP
Simple Object Access Protocol is a network, transport, and programming language, platform independent protocol that allows client to call a remote service. The message format is XML
- WSDL
Web Service Description Language is an XML based interface and implementation description language. The service provider uses WSDL document in order to specify the operations of web service and parameters and data types of these operations

3.1 Components of web service

Following are the components of FLEXCUBE IS Web service:

- XSD files
 - Message XSDs
This represents the "Message" portion on WSDL file that used to define the message communicated in web service. A message can have one or more data types.
 - Type XSDs
This represents the "Types" portion on WSDL file that used to define the data types that are part of messages.
- WSDL file
- Implementation Java files
- Gateway static data

Example:

JKDMOBILE function ID – web service development results in following files. Refer the annexure A for these file contents

- XSD files
 - CS-Mobil-Types.xsd
 - CS-CreateMobil-Req-Full-MSG.xsd
 - CS-CreateMobil-Req-IO-MSG.xsd
 - CS-CreateMobil-Res-Full-MSG.xsd
 - CS-CreateMobil-Res-PK-MSG.xsd
- WSDL file
 - FCMobileService.wsdl
- Implementation Java files
 - FCMobileServiceImpl.java
- Gateway static data
 - GWTB_AMEND_FIELDS_JKDMOBIL.INC
 - GWTB_AMEND_NODES_JKDMOBIL.INC
 - GWTM_AMEND_FIELDS_JKDMOBIL.INC
 - GWTM_AMEND_MASTER_JKDMOBIL.INC
 - GWTM_AMEND_NODES_JKDMOBIL.INC

3.2 FLEXCUBE SOAP format

FLEXCUBE IS uses the following SOAP format

SOAP component	FCUBS component	Example
SOAP Envelope	OPERATION.FUNCTIONID_PATTER N_REQ/RESP	CREATEMOBILE_FSFS_R EQ
SOAP Header	<FCUBS_HEADER>	<FCUBS_HEADER>
SOAP Body	<FCUBS_BODY>	<FCUBS_BODY>

Example:

```

<CREATEMOBILE_FSFS_REQ xmlns="http://fcubs.ofss.com/service/FCMobileService">

<FCUBS_HEADER>

  <SOURCE>FLEXCUBE </SOURCE>

  <UBSCOMP>FCUBS</UBSCOMP>

  <MSGID></MSGID>

  <CORRELIID></CORRELIID>

  <USERID>PIYUSHB</USERID>

  <BRANCH>000</BRANCH>

  <MODULEID>CS</MODULEID>

  <SERVICE>FCMobileService</SERVICE>

```

```

<OPERATION>CreateMobile</OPERATION>

<SOURCE_OPERATION></SOURCE_OPERATION>

<SOURCE_USERID></SOURCE_USERID>

<!--Optional:-->

<DESTINATION></DESTINATION>

<!--Optional:-->

<MULTITRIPID></MULTITRIPID>

<!--Optional:-->

<FUNCTIONID></FUNCTIONID>

<!--Optional:-->

<ACTION></ACTION>

<!--Optional:-->

<MSGSTAT>SUCCESS</MSGSTAT>

<!--Optional:-->

<ADDL>

  <!--Zero or more repetitions:-->

  <PARAM>

    <NAME>abc</NAME>

    <VALUE>123</VALUE>

  </PARAM>

</ADDL>

</FCUBS_HEADER>

<FCUBS_BODY>

  <Jktm-Junk-Mobile-Full>

    <CUSTOMER_NO>00000001</CUSTOMER_NO>

    <CELL_NO>1234567890</CELL_NO>

    <!--Optional:-->

    <MAKER></MAKER>

    <!--Optional:-->

    <MAKERSTAMP></MAKERSTAMP>

```

```

<!--Optional:-->

<CHECKER></CHECKER>

<!--Optional:-->

<CHECKERSTAMP></CHECKERSTAMP>

<!--Optional:-->

<MODNO></MODNO>

<!--Optional:-->

<TXNSTAT></TXNSTAT>

<!--Optional:-->

<AUTHSTAT></AUTHSTAT>

<!--Zero or more repetitions:-->

<Jktm-Junk-Mobil-Dtl>

    <CUSTOMER_NO>010101</CUSTOMER_NO>

    <!--Optional:-->

    <ACCOUNT_NO></ACCOUNT_NO>

    <!--Optional:-->

    <NAME></NAME>

    <!--Optional:-->

    <TXNDETL></TXNDETL>

    <!--Optional:-->

    <STATUS></STATUS>

    <!--Optional:-->

    <CELL_NO></CELL_NO>

</Jktm-Junk-Mobil-Dtl>

<!--Optional:-->

<Jktm-Junk-Mobile-Dtl2>

    <CUSTOMER_NO></CUSTOMER_NO>

    <!--Optional:-->

    <CUSTOMER_NAME></CUSTOMER_NAME>

    <!--Optional:-->

```

```

<CUSTOMER_CATEGORY></CUSTOMER_CATEGORY>
<!--Optional:-->
<ADDRESS></ADDRESS>
<!--Optional:-->
<CITY></CITY>
<!--Optional:-->
<COUNTRY></COUNTRY>
</Jktm-Junk-Mobile-Dtl2>
</Jktm-Junk-Mobile-Full>
</FCUBS_BODY>
</CREATEMOBILE_FSFS_REQ>

```

 In FCUBS BODY, the data blocks are referred as nodes. Example, *Jktm-Junk-Mobile-Full* in above XML represents the data block that sources from *JKT_M_JUNK_MOBILE_FULL* table. Replace “-”(hyphen) with “_”(underscore) to get the table name and data block.

3.3 FLEXCUBE WSDL format

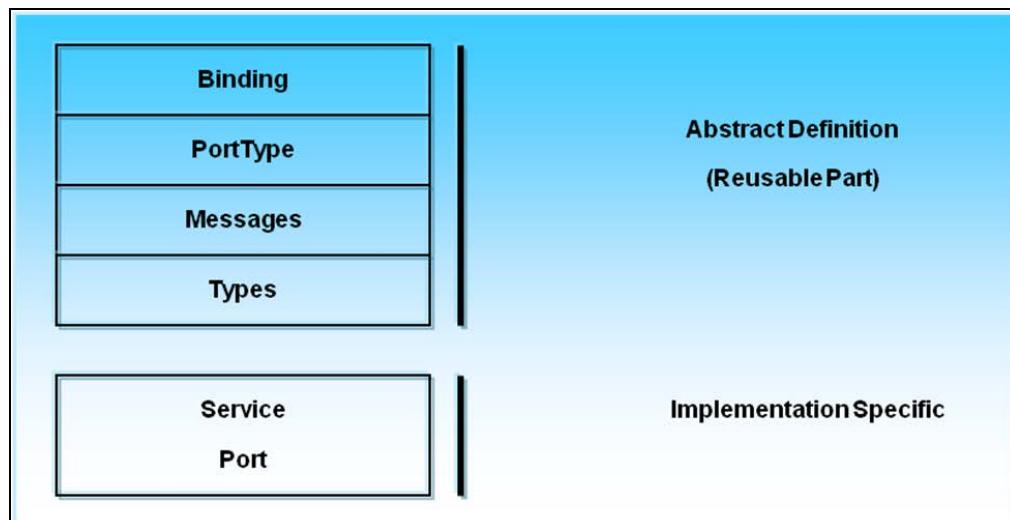
FLEXCUBE has the concept of Function ID that has multiple actions. This is translated to Web service pattern as below:

FUNCTION ID + ACTIONS = WEB SERVICE + OPERATIONS

Example

JKDMOBILE + NEW = FCMobileService + CreateMobile

3.3.1 WSDL parts



3.3.2 FCUBS WSDL example

```
<?xml version= "1.0" encoding="UTF-8"?>

<wsdl:definitions name="FCMobileService"

targetNamespace = "http://types.ws.gw.fcubs.ofss.com"

xmlns:tns = "http://types.ws.gw.fcubs.ofss.com"

xmlns:wsdlsoap = "http://schemas.xmlsoap.org/wsdl/soap/"

xmlns:wsdl = "http://schemas.xmlsoap.org/wsdl/"

xmlns:xs = "http://www.w3.org/2001/XMLSchema"

xmlns="http://schemas.xmlsoap.org/wsdl/"

xmlns:ns="http://fcubs.ofss.com/service/FCMobileService">

</wsdl:definitions>

<wsdl:types>

<xs:schema>

<xs:import namespace="http://fcubs.ofss.com/service/FCMobileService"

schemaLocation="../XSD/CS-CreateMobil-Req-Full-MSG.xsd"/>

</xs:schema>

<xs:schema>

<xs:import namespace="http://fcubs.ofss.com/service/FCMobileService"

schemaLocation="../XSD/CS-CreateMobil-Res-Full-MSG.xsd"/>

</xs:schema>

<xs:schema>

<xs:import namespace="http://fcubs.ofss.com/service/FCMobileService"

schemaLocation="../XSD/CS-CreateMobil-Req-IO-MSG.xsd"/>

</xs:schema>

<xs:schema>

<xs:import namespace="http://fcubs.ofss.com/service/FCMobileService"

schemaLocation="../XSD/CS-CreateMobil-Res-PK-MSG.xsd"/>

</xs:schema>

</wsdl:types>
```

```

<wsdl:message name="CreateMobileFSReq">

    <wsdl:part name="RequestMsg" element="ns:CREATEMOBILE_FSFS_REQ" />

</wsdl:message>

<wsdl:message name="CreateMobileFSRes">

    <wsdl:part name="ResponseMsg" element="ns:CREATEMOBILE_FSFS_RES" />

</wsdl:message>

<wsdl:message name="CreateMobileIOReq">

    <wsdl:part name="RequestMsg" element="ns:CREATEMOBILE_IOPK_REQ" />

</wsdl:message>

<wsdl:message name="CreateMobilePKRes">

    <wsdl:part name="ResponseMsg" element="ns:CREATEMOBILE_IOPK_RES" />

</wsdl:message>

<wsdl:portType name="FCMobileServiceSEI" >

    <wsdl:operation name="CreateMobileIO">

        <wsdl:input message="tns:CreateMobileIOReq" />

        <wsdl:output message="tns:CreateMobilePKRes" />

    </wsdl:operation>

    <wsdl:operation name="CreateMobileFS">

        <wsdl:input message="tns:CreateMobileFSReq" />

        <wsdl:output message="tns:CreateMobileFSRes" />

    </wsdl:operation>

</wsdl:portType>

```

```

<wsdl:binding name="FCMobileService" type="tns:FCMobileServiceSEI">

    <wsdlsoap:binding style="document"
        transport="http://schemas.xmlsoap.org/soap/http"/>

    <wsdl:operation name="CreateMobileFS">

        <wsdlsoap:operation soapAction="" />

        <wsdl:input>
            <wsdlsoap:body use="literal" />
        </wsdl:input>

        <wsdl:output>
            <wsdlsoap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>

    <wsdl:operation name="CreateMobileIO">

        <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="FCMobileService">

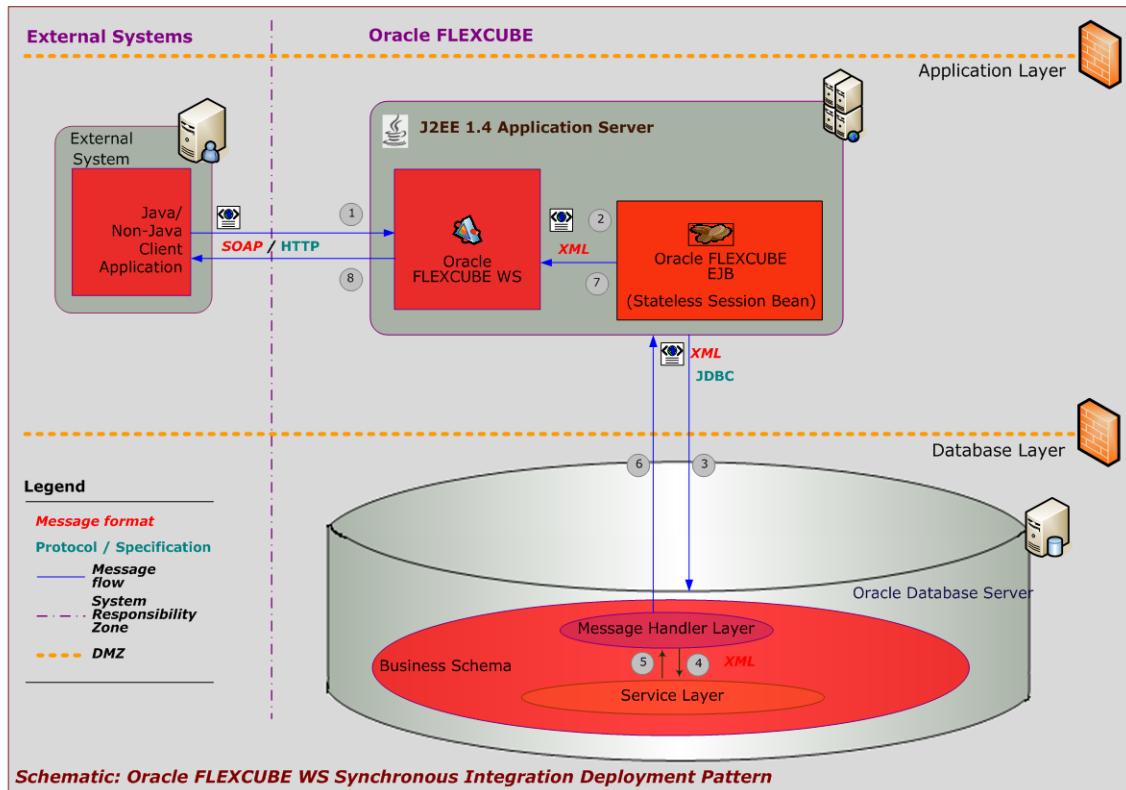
    <wsdl:port name="FCMobileServiceSEI" binding="tns:FCMobileService">

        <wsdlsoap:address
            location="http://localhost:9080/FCMobileService/services/FCMobileService" />

    </wsdl:port>
</wsdl:service></wsdl:definitions>
```

3.4 FLEXCUBE Web Service data flow

The below diagram explains the web service message flow in FLEXCUBE IS.



1. Consumer sends web service request as per the WSDL definition implemented.
2. FLEXCUBE IS Gateway(that deploys the FLEXCUBE IS Web service) received the request and forwards the request to FLEXCUBE IS EJB
3. FLEXCUBE EJB forwards the request to Database Message handler using JDBC protocol
4. Message handler identifies the Service and calls corresponding operation handler for processing
5. The response message is sent back to Message handler
6. Message handler forward the response message back to FCUBS EJB
7. FCUBS EJB sends the response back to FLEXCUBE Gateway web service
8. FLEXCUBE Gateway web service responds to the Consumer.

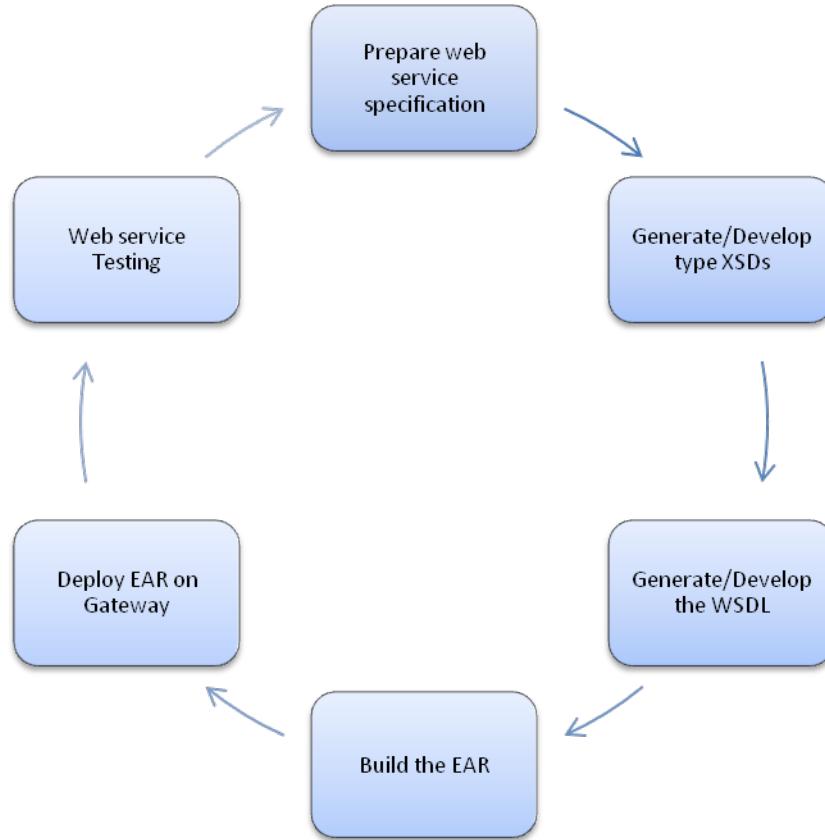
Every FLEXCUBE IS Web service developed; need to be deployed on FLEXCUBE IS Gateway framework. Refer the FLEXCUBE Gateway deployment patterns for more information.

4. Pre requisites for Web service development

- Web service development Specification (explained in further sections)
- OPEN DEVELOPMENT tool -to generate the type XSDs and Gateway static data
- Target FLEXCUBE IS environment with Gateway framework implemented.
- TrAX tool (to generate the WSDL and Java Implementation files)

5. Web service Development

The below diagram represents the web service development cycle



5.1 Web Service specification

Specification	Example Data
What is the function ID web service required?	JKDMOBILE
What is the action of the function ID web service required?	NEW
What is the Web service name?	FCMobileService
What is the operation name?	CreateMobile
Open Development generated XSD available in the xsd folder, specified at Open Development?(Yes/No) <i>XSD files generated for the screen should be available for maintenance function IDs. For online function IDs, these type XSDs may be hand coded</i>	Yes
Created a Web Service and operation using TrAX tool?	Yes

Specification	Example Data
<i>Specify the name of the service and operation created for a function id, to be used in FLEXCUBE</i>	
WSDL, Config file created using TrAX tool? (Yes/No) <i>WSDL files are needed to create a service, this contains the information for the service being created for a function id (using the XSD's)</i>	Yes
Property and EAR file generated from the installer? (Yes/No) <i>The property and EAR file are created using installer. Location for these files is specified during creation.</i>	Yes

5.2 Generate / Develop XSDs

There are two ways to develop XSDs

- Use Open Development Tool
- Manually create XSD and maintain Gateway static data

5.2.1 Open Development generated

As a part of Function ID development, Open Development is used to generate the following web service artifacts:

- XSD folder with type XSDs
- INC folder that has following Gateway static data needed at runtime for web service.
 - GWTB_AMEND_FIELDS__JKDMOBIL.INC
 - GWTB_AMEND_NODES__JKDMOBIL.INC
 - GWTM_AMEND_FIELDS__JKDMOBIL.INC
 - GWTM_AMEND_MASTER__JKDMOBIL.INC
 - GWTM_AMEND_NODES__JKDMOBIL.INC

Refer Open Development documents for steps to get type XSDs and following INC files to populate Gateway maintenance tables.

5.2.2 Hand coded

If Open Development is not used for XSDs generation, these XSDs need to be created manually using existing samples available.

Developer expected to have proficiency in understanding complete FLEXCUBE IS web service framework and patterns to hand code the XSDs. Refer Section 6 for sample files. User can also refer existing contract online web service files for reference/samples.

If Open Development is not used, the Gateway static data need to maintain manually as follows:

1. Make the entry in GWTM_OPERATIONS_MASTER for every operation code for a given web service.

Example:

SERVICE_NAME	FCUBSCustomerService
OPERATION_CODE	ModifyMobile
SERVICE_DESC	Customer Service
OPERATION_DESCRIPTION	Modification of Mobile Number
MODULE_CODE	ST
REPLY_REQD	N
FC_FUNCTION_ID	STDCIF
FC_ACTION	MODIFY
DEFAULT_FUNCTION	Y
SMS_FUNCTION_ID	STGCIF
SMS_ACTION	UNLOCK
FS_REQ_XSD	ST- ModifyMobile -Req-Full-MSG.xsd
PK_RES_XSD	ST- ModifyMobile -Res-PK-MSG.xsd
FS_RES_XSD	ST- ModifyMobile -Res-Full-MSG.xsd
IO_REQ_XSD	ST- ModifyMobile -Req-IO-MSG.xsd

2. Make the entry in GWTM_GATEWAY_FUNCTIONS

SERVICE_NAME	OPERATION_CODE	FUNCTION_ID	ACTION
FCUBSCustomerService	ModifyMobile	STGCIF	UNLOCK

3. Maintain external system details using function id GWDEXSYS

Example: STMOB

The screenshot shows the 'External System - Detailed' configuration window. It includes sections for 'External System' (with 'External System' set to *STMOB and 'Description' as 'External system for Mobile Update'), 'Correlation Pattern' (Request: Message ID), 'Message Exchange Pattern' (Request Message: Input Only, Response Message: Full Screen), 'Queue' (Default Response Queue and Dead Letter Queue), and 'Fields' (Input By: SAN1, Date Time: 2007-12-31 18:27:48, Modification Number: 1, Authorized: checked, Open: checked). A 'Fields' tab is also visible.

4. Maintain external system function using function id GWDEXFUN

The screenshot shows the 'External System Functions - Detailed' configuration window. It includes fields for 'External System' (*STMOB), 'Function' (*STGCF), 'Action' (*UNLOCK), 'Service Name' (FCUBSCustomerService), and 'Operation Code' (ModifyCustomer). The 'Fields' tab is visible at the bottom.

5. Make the entry in GTWB_AMEND_NODES for new operation code

NODE_NAME	STTMS_CUST_PERSONAL
NEW_ALLOWED	N
DELETE_ALLOWED	N

NODE_NAME	STTMS_CUST_PERSONAL
ALL_RECORDS	Y
SERVICE_NAME	FCUBSCustomerService
OPERATION_CODE	ModifyMobile

6. Make the entry in GWTB_AMEND_FIELDS for new operation code

NODE_NAME	STTMS_CUST_PERSONAL
FIELD_NAME	MOBILE_NUMBER
SERVICE_NAME	FCUBSCustomerService
OPERATION_CODE	ModifyMobile

7. Make Mobile number fields as Amendable for External system using function id STDAMDMT

The screenshot shows the 'Amendment Maintenance - Detailed' window. At the top, it displays the external system as 'STMOB', operation as 'ModifyMobile', service name as 'FCUBSCustomerService', and operation code as 'ModifyMobile'. Below this, there are two main sections: 'Amend Nodes' and 'Amend Fields'. The 'Amend Nodes' section contains a table with one row for 'STTMS_CUST_PERSONAL', where 'New Allowed' and 'Deleted Allowed' are checked, and 'All Records' is also checked. The 'Amend Fields' section contains a table with one row for 'MOBILE_NUMBER', which is marked as a 'Field Name *'. At the bottom of the window, there is a 'Fields' tab, input fields for 'Input By' (ABH1), 'Date Time' (2007-12-31 15:16:09), 'Modification Number' (1), 'Authorized' (checked), 'Open' (checked), and an 'Exit' button.

8. Maintain external Source using function id CODSORCE

Upload Source Maintenance

Source Code * STM0B	Description External Source for Mobile
<input type="checkbox"/> Base Data From Flexcube	
Fields Input By ABH2 Date Time 2007-12-31 19:41:11 Modification Number 1 <input checked="" type="checkbox"/> Authorized Authorized By ABH1 Date Time 2008-03-31 19:42:09 <input checked="" type="checkbox"/> Open	

9. Maintain external Source parameters preference using function id CODUPLDM

Upload Source Preferences Maintenance

Source Code * STM0B	Module Code * ST
- Error Handling On Override * Ignore <input type="button" value="▼"/> On Exception * Reject <input type="button" value="▼"/>	
- Post Upload Status * Authorized <input type="button" value="▼"/> Purge Days(Calendar)	
<input type="checkbox"/> Allow Deferred Processing <input type="checkbox"/> Allow EOD with Deferred <input checked="" type="checkbox"/> Allow Delete	
Fields Input By OFSSPAYMAK6 Date Time 2008-03-31 14:59:36 Modification Number 1 <input checked="" type="checkbox"/> Authorized Authorized By OFSSPAYMAK6 Date Time 2007-12-31 15:12:43 <input checked="" type="checkbox"/> Open	

5.3 Generate/Develop WSDL

Having type and Message XSDs, WSDL file development can be done in two ways:

- Using TrAX tool

Refer the document FCUBS-FD05-04-01-TrAX-Reference for more information

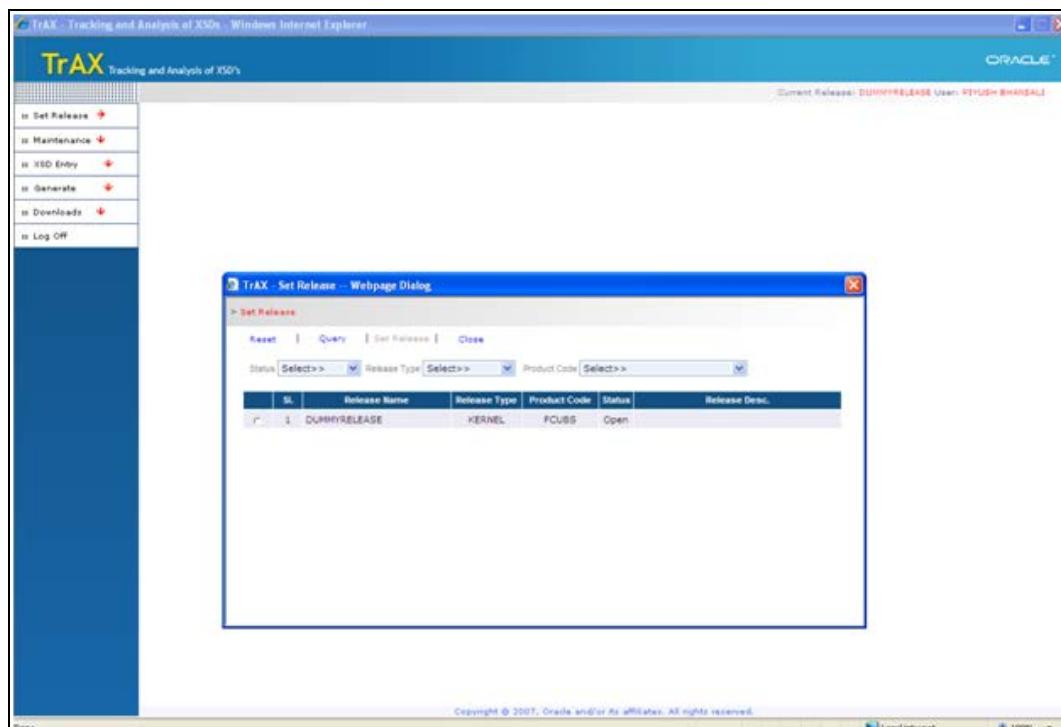
- Hand coding

Developer expected to have proficiency in understanding complete FLEXCUBE IS web service framework and patterns to hand code the WSDL file. Refer annexure A for sample files. User can also refer existing contract online web service files for reference/samples.

5.3.1 Generate WSDL using TrAX

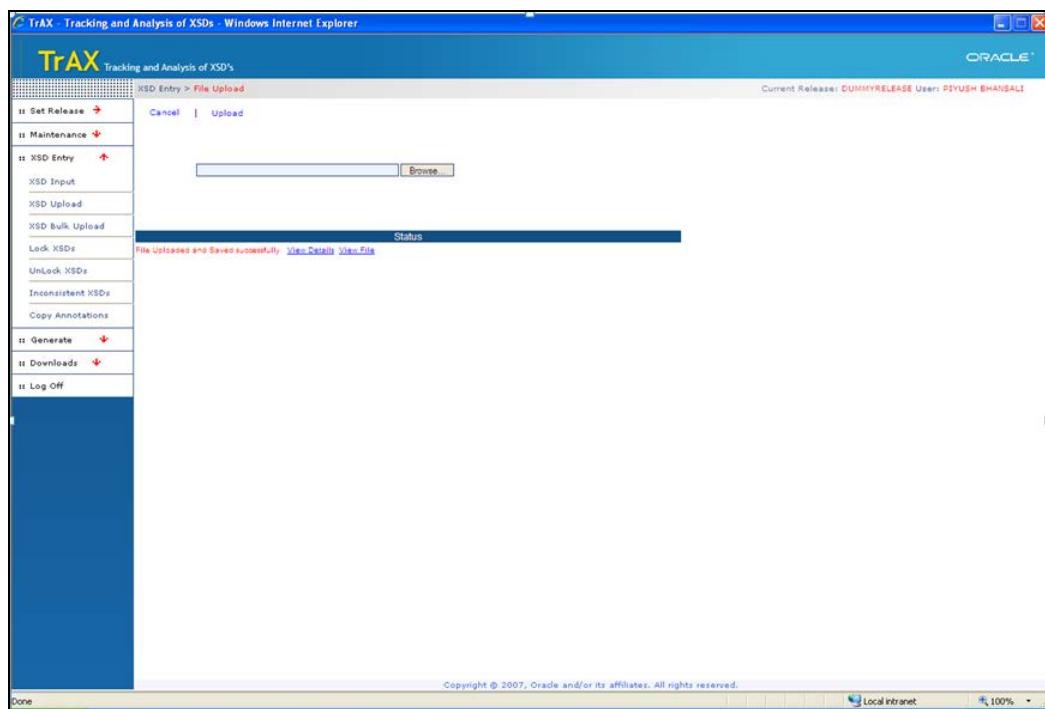
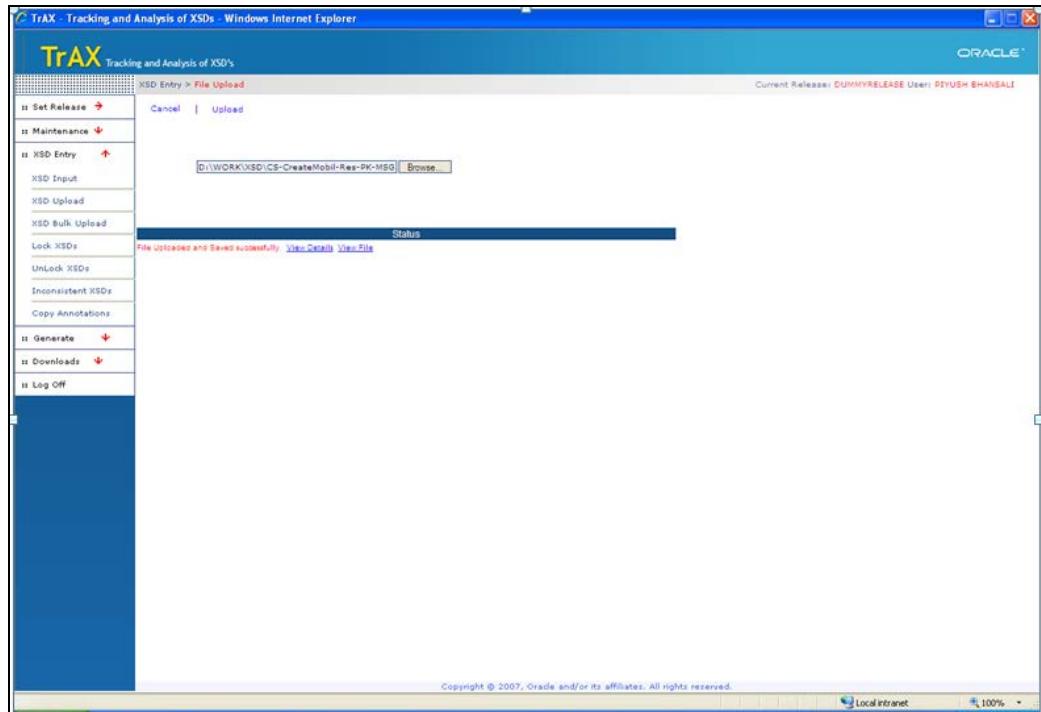
TrAX tool used for the creation of new module,service,operation and generation of WSDL files, which is used in deployment for WebServices

- Step – 1 - Set Release



- Step 2 - Upload XSD's:

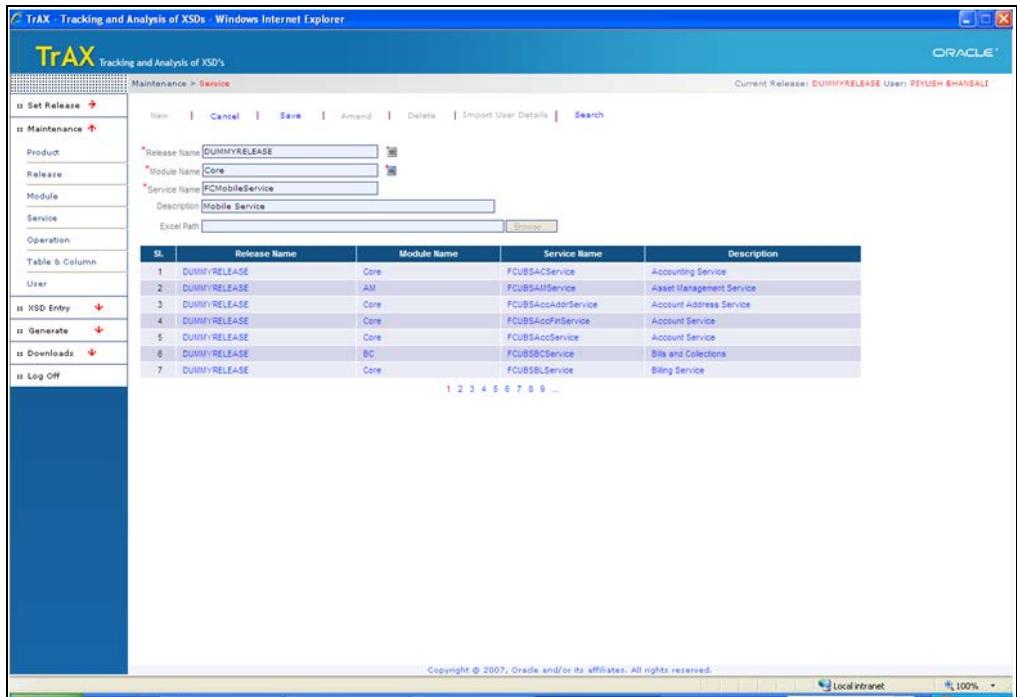
The XSD's generated from the Open Development are uploaded in the TrAX tool so that it can be used to develop a new service.



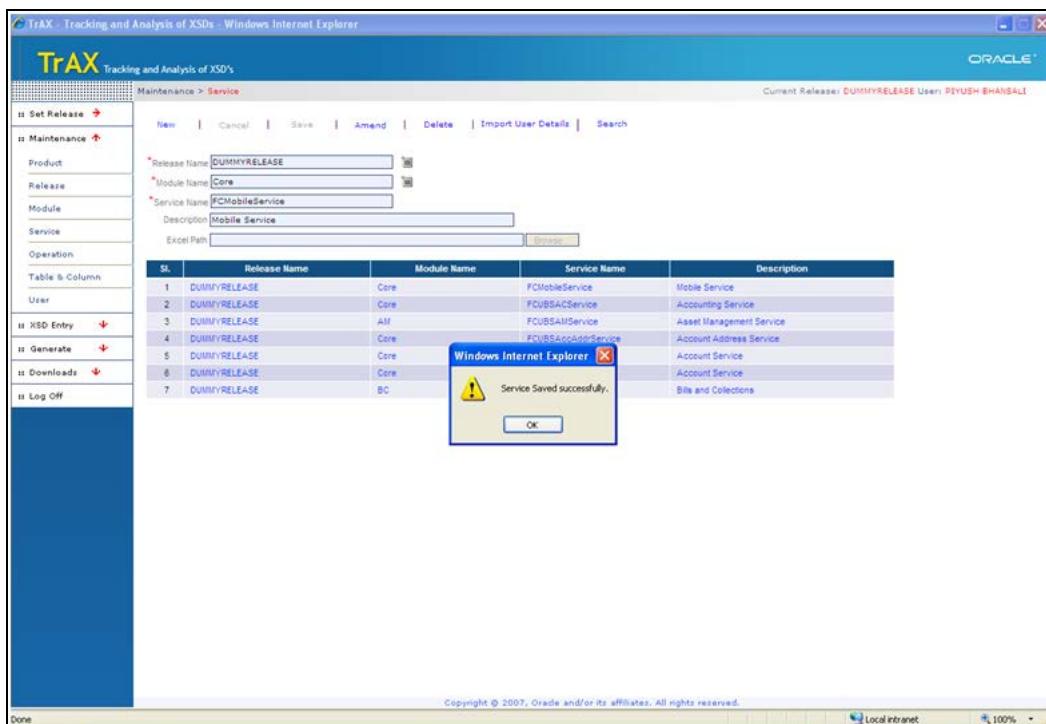
- Step 3 - Creation of Service

For creation of new services, under Maintenance → Service → New

- Release name will be the release of FLEXCUBE for which the Service is created.
- Module name will contain the module for which the service is enabled.
- Service name is the WSDL name given to the web service created.
- Description has the details for which the service is created.



After successful creation of Service, it displays the message “Service Saved Successfully”.

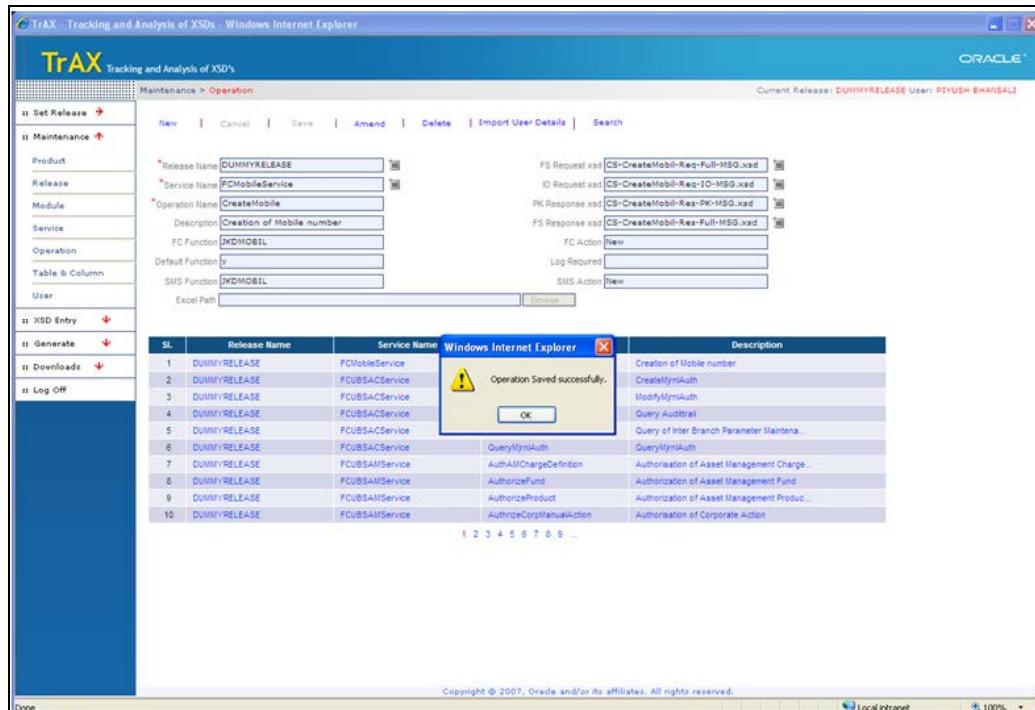


The new service name can be checked in the list after successful creation.

- Step 4 -Creation of Operation

To create a new operation, under Maintenance → Operation. Click New.

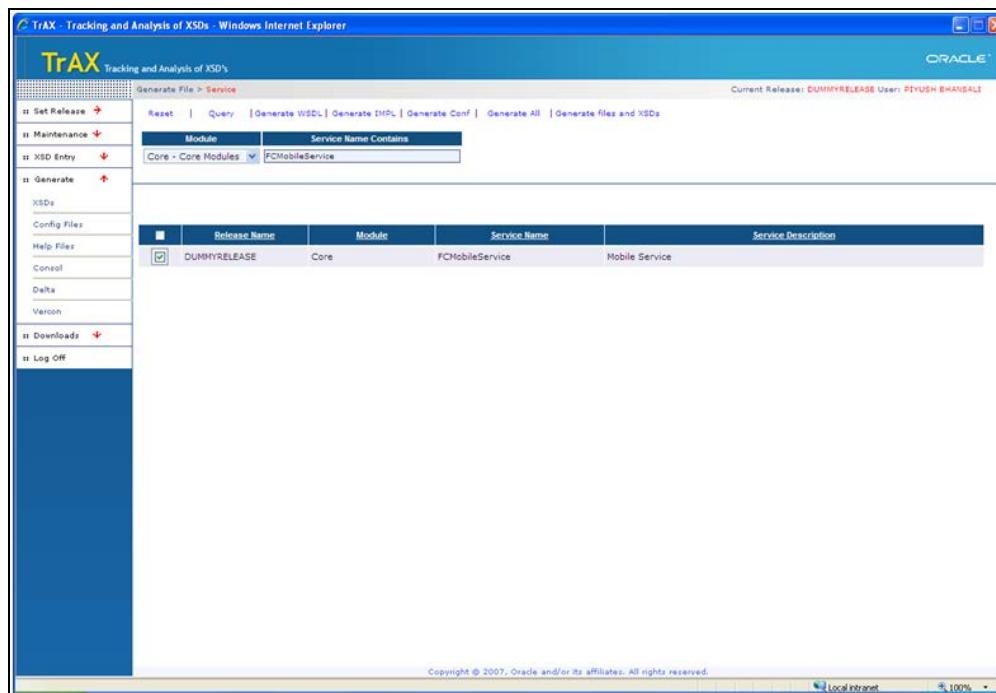
- Operation name is the name given to the Operation created.
- Description has the details for which the Operation is created.
- FS request XSD is the full request message XSD file generated from Open Development tool for a function id.
- IO request XSD is the Input/output request message XSD file generated from Open Development tool for a function id.
- PK response XSD is the Primary Key response message XSD file generated from Open Development tool for a function id.
- FS response XSD is the full response message XSD file generated from Open Development tool for a function id.
- FC Action refers to the FLEXCUBE action available for the Operation. Here it is New.



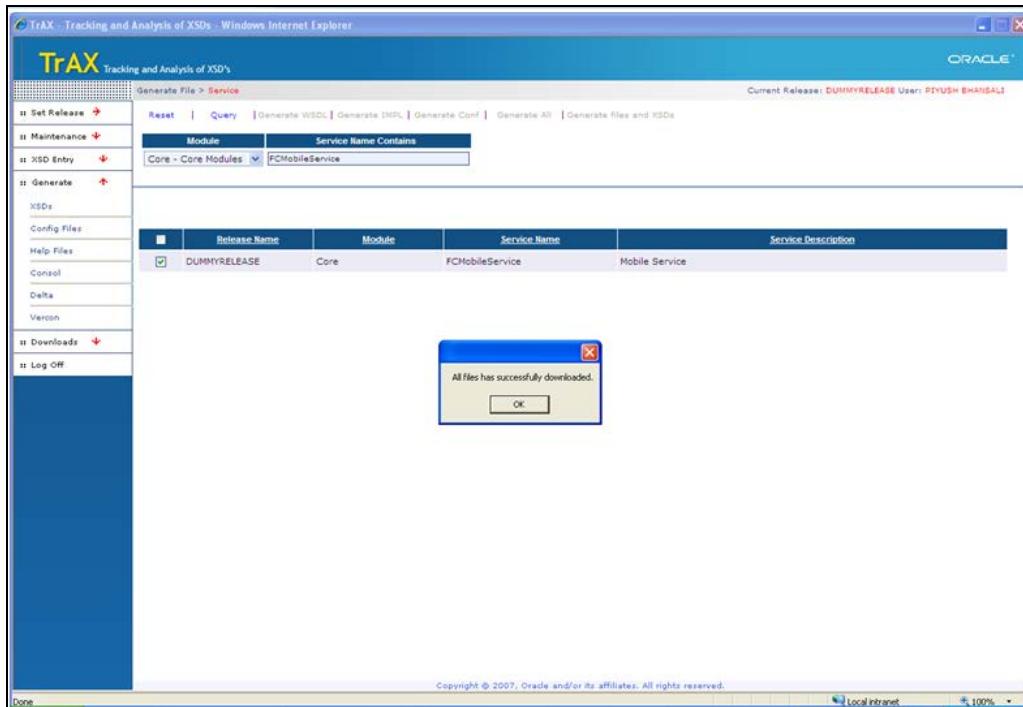
- Step 5 - Generation of WSDL files

Select Generate →Config files

- Click on Query, Enter the Module Name and Service name for which the WSDL is to be generated.
- After checking the Release, module and service name, Options are enabled.
- Click on Generate All to get WSDL, IMPL, CONF files. It will ask for the location where all these files will be generated



- Ensure the message “All Files has successfully downloaded”
- Go to the location mentioned and check the WSDL file generation. In this example, the file name is “FCMobileService.wsdl”

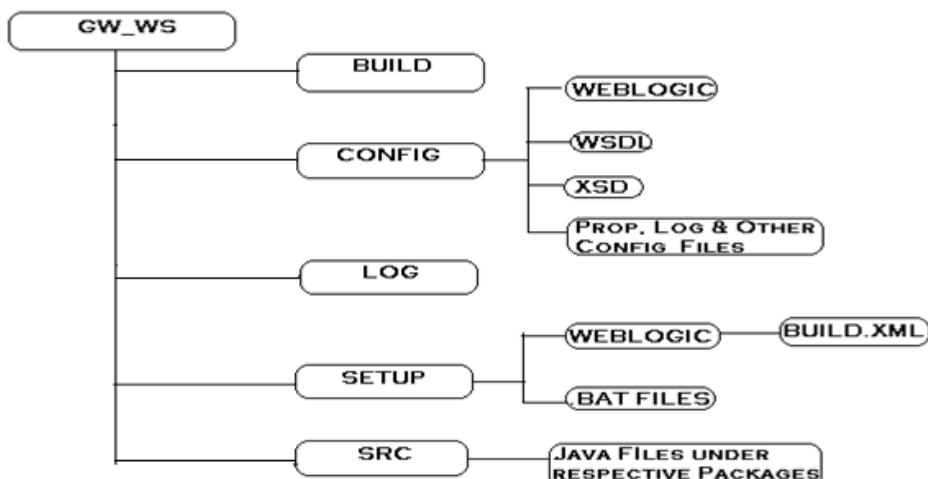


5.4 Build EAR

This section explains how to build EAR file using XSDs and WSDL created

5.4.1 Directory Creation

- Identify & Copy **GW_WS.zip** into your local machine. Unzip the file
This file contains factory shipped directory structure and pre-configured properties file for Gateway framework.
- The following folder structure can be seen after unzip.



5.4.2 File Copy

- Copy the WSDL generated into **GW_WS\CONFIG\WSDL** folder.
- Copy all the relevant XSD's into **GW_WS\CONFIG\XSD** folder.
- Copy the Java Implementation file into **GW_WS\src\com\ofss\fcubs\gw\ws** folder

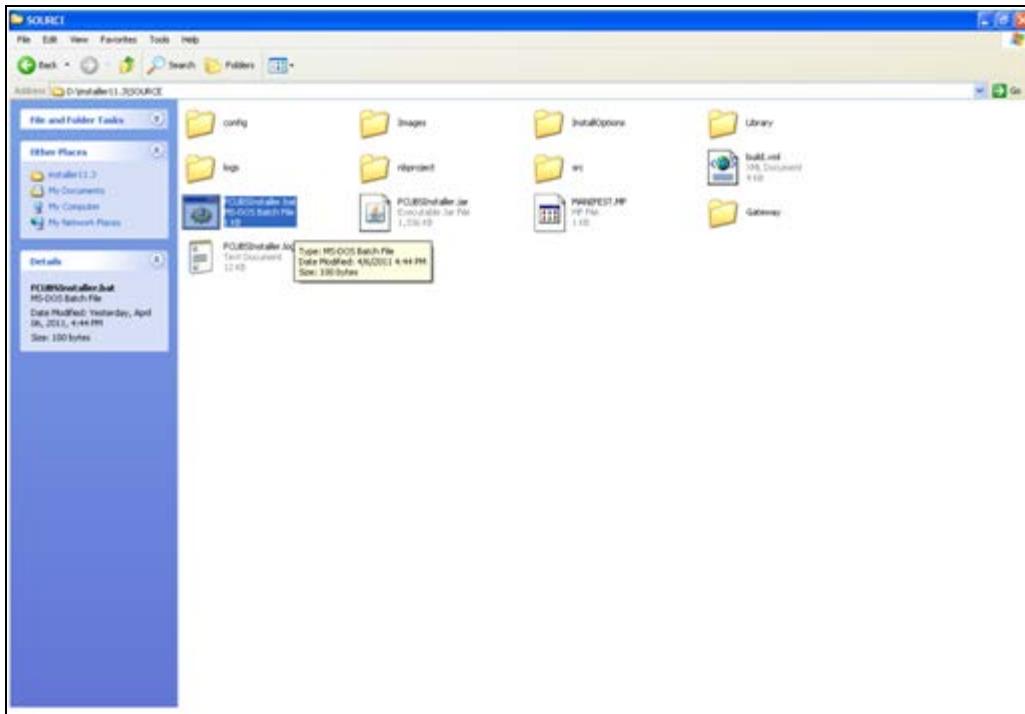
5.4.3 Creation of Gateway EJB property file

This section describes the steps to create Gateway EJB property file.

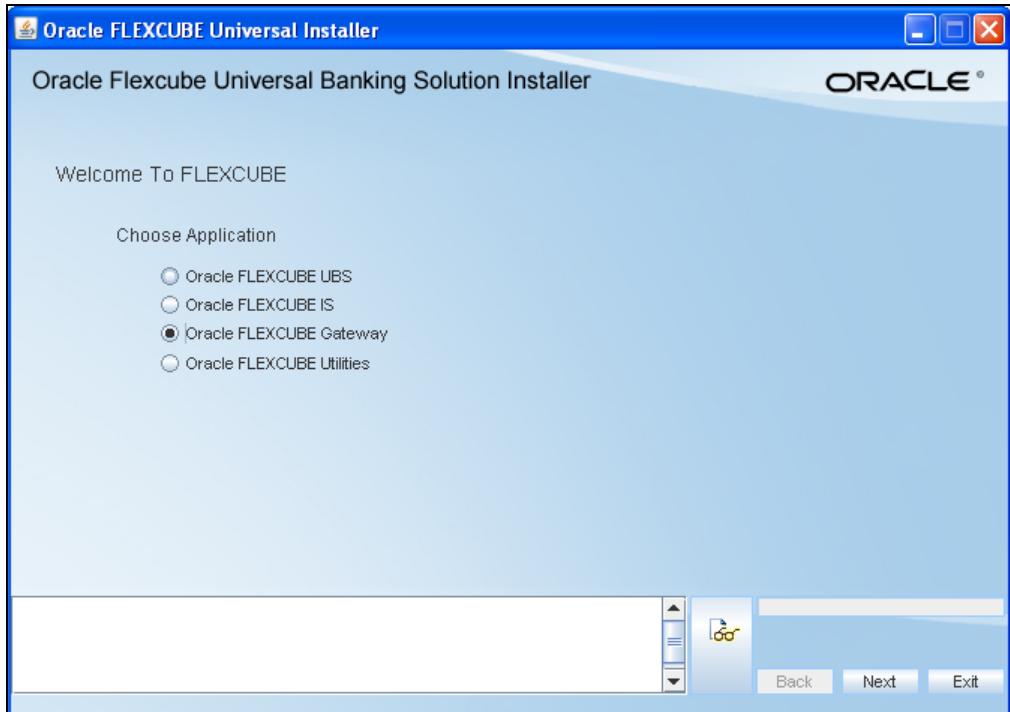


Skip this section(steps 1 to 4) if Gateway EJB is already deployed in Target FLEXCUBE IS environment.

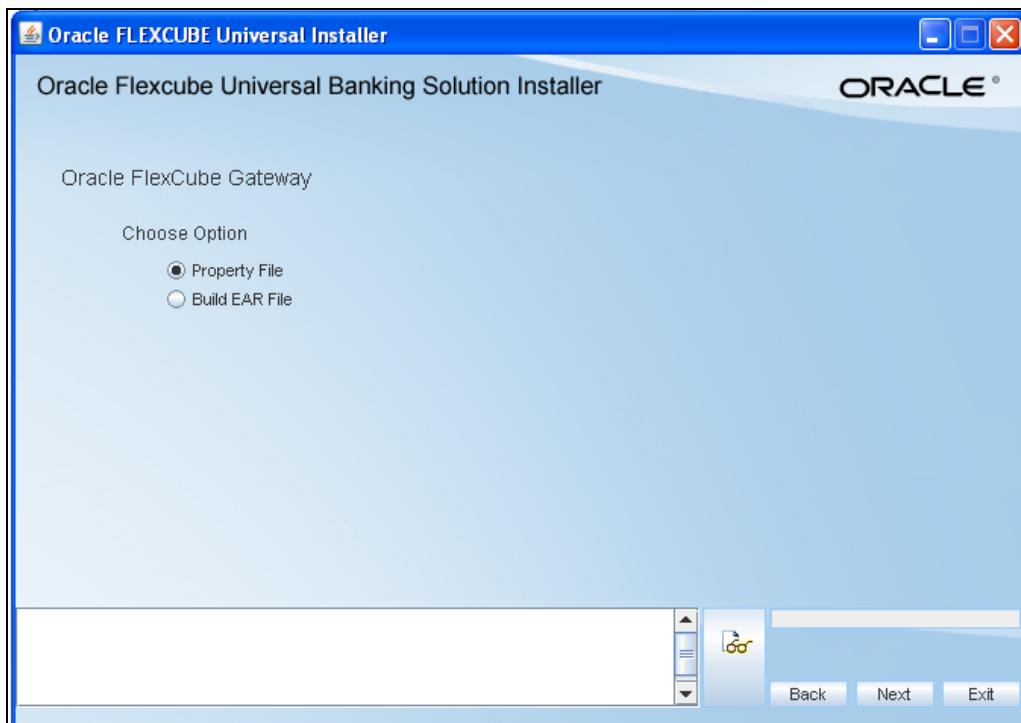
- Step 1 – Copy installer source to your local windows machine and run the FCUBSInstaller



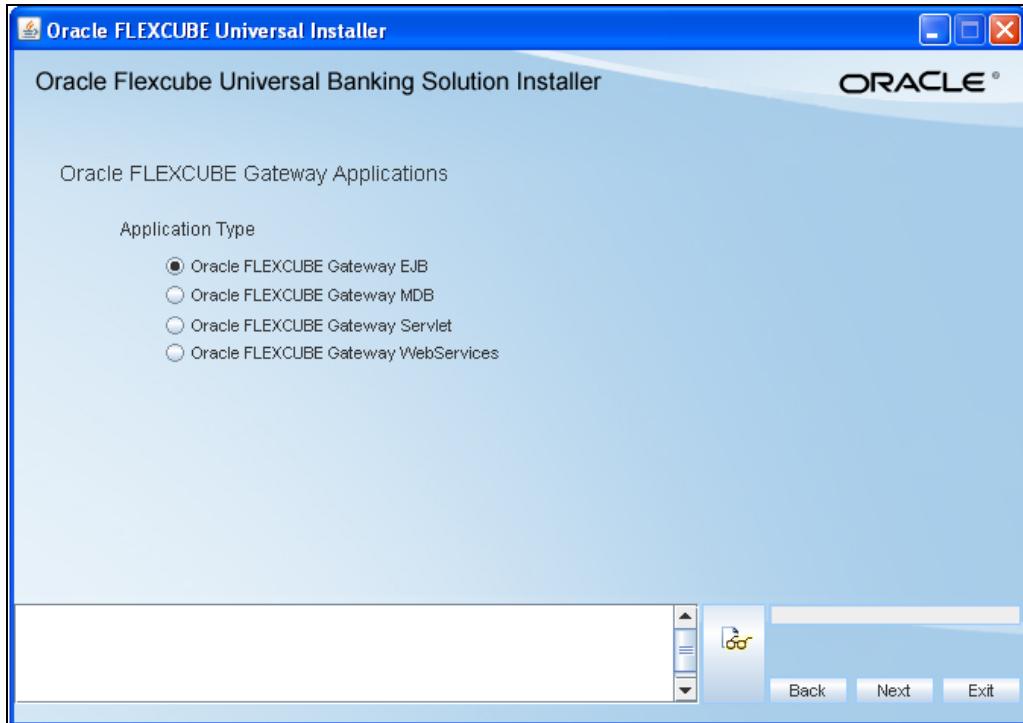
- Step 2 – Select Oracle FLEXCUBE Gateway



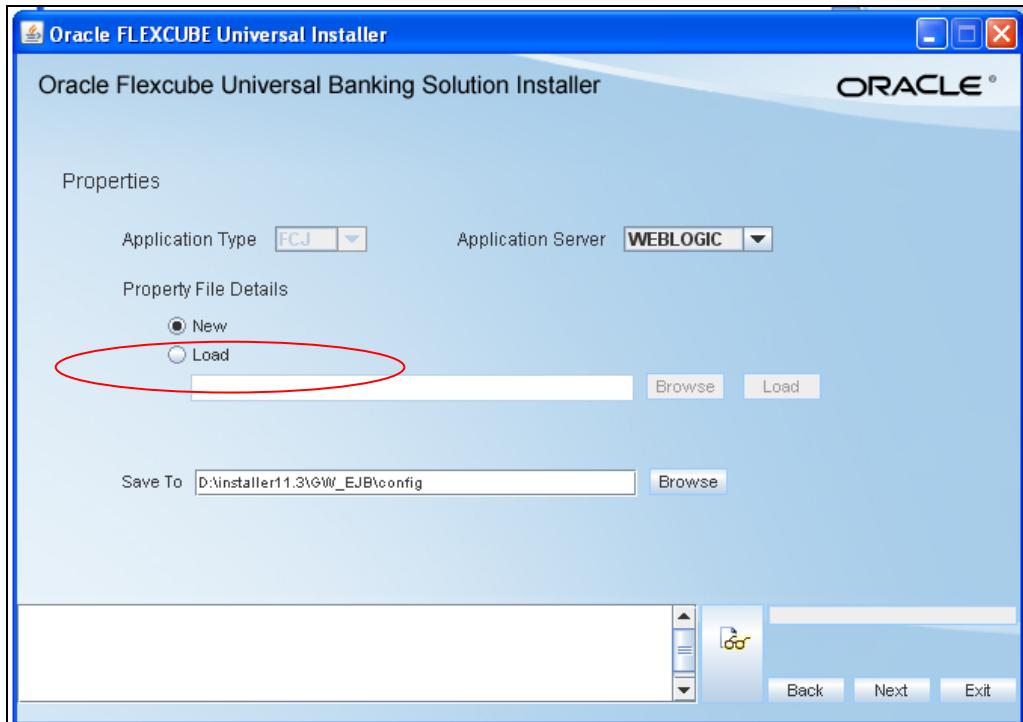
- Step-3 – Select Property File



- Step-4.a – Select Oracle FLEXCUBE Gateway EJB



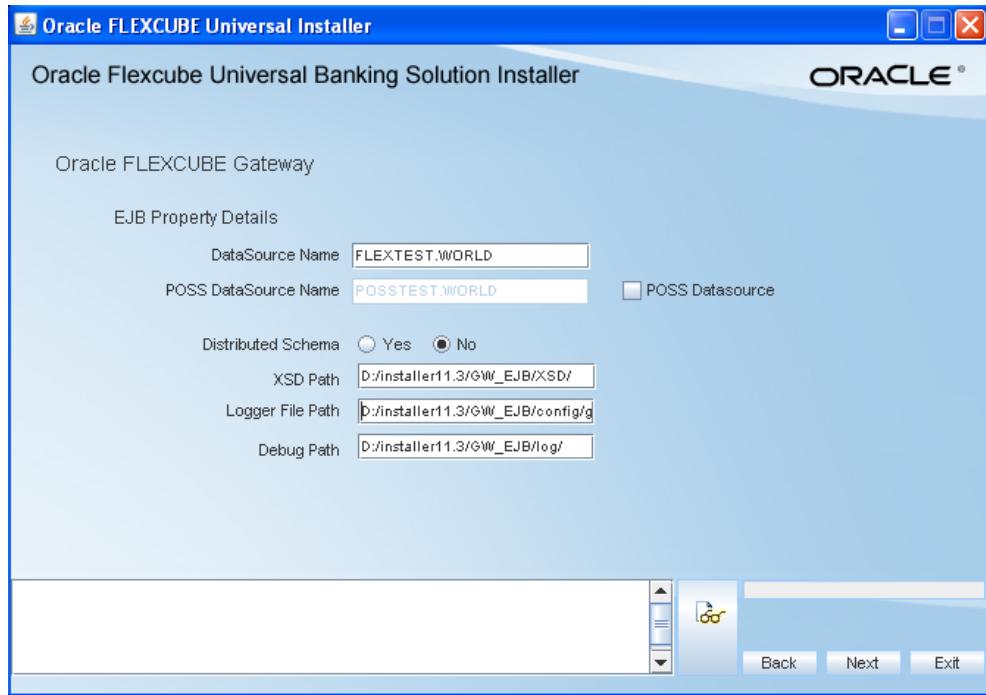
- Step-4.b – Select New



Specify the location in which new Property file for EJB application will be created.

Click Next

- Step-4.c – provide details



Details of the Property file for EJB.

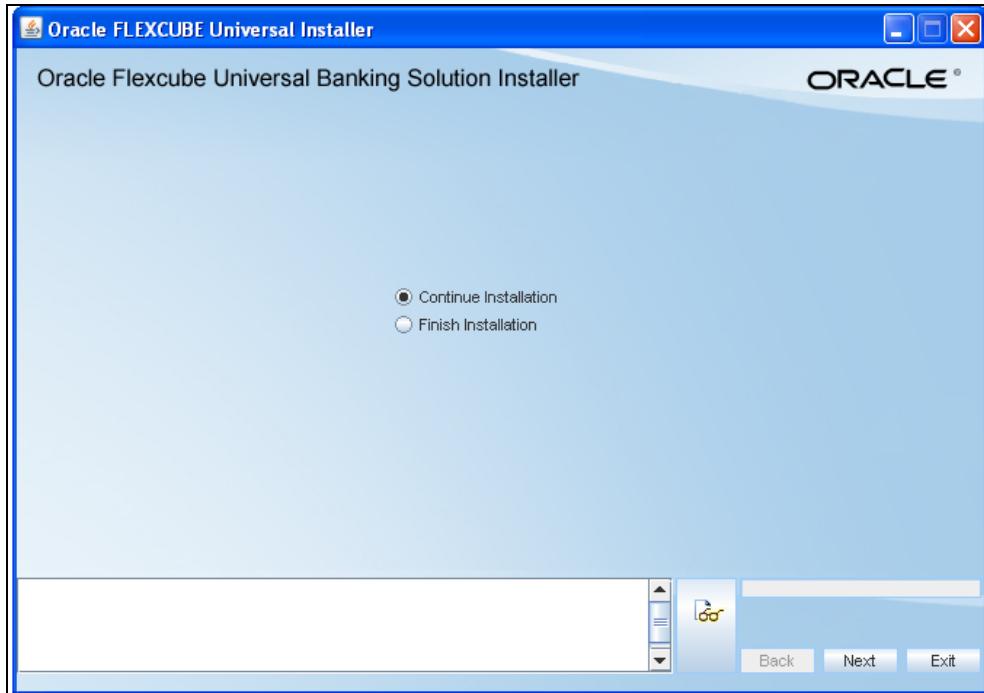
Path location is mentioned where the specific files will be available. Here it is in local machine.

5.4.4 Creation of Gateway EJB EAR file

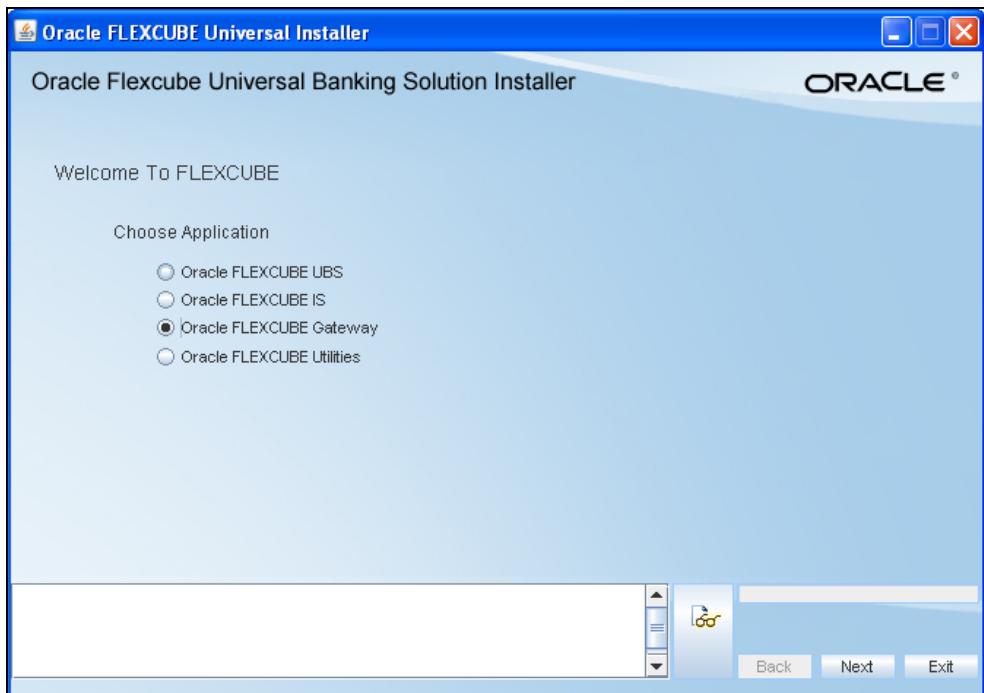
This section describes the steps to create the Gateway EJB EAR file

 **Skip this section(steps 5 to 10) if Gateway EJB is already deployed in Target FLEXCUBE IS environment.**

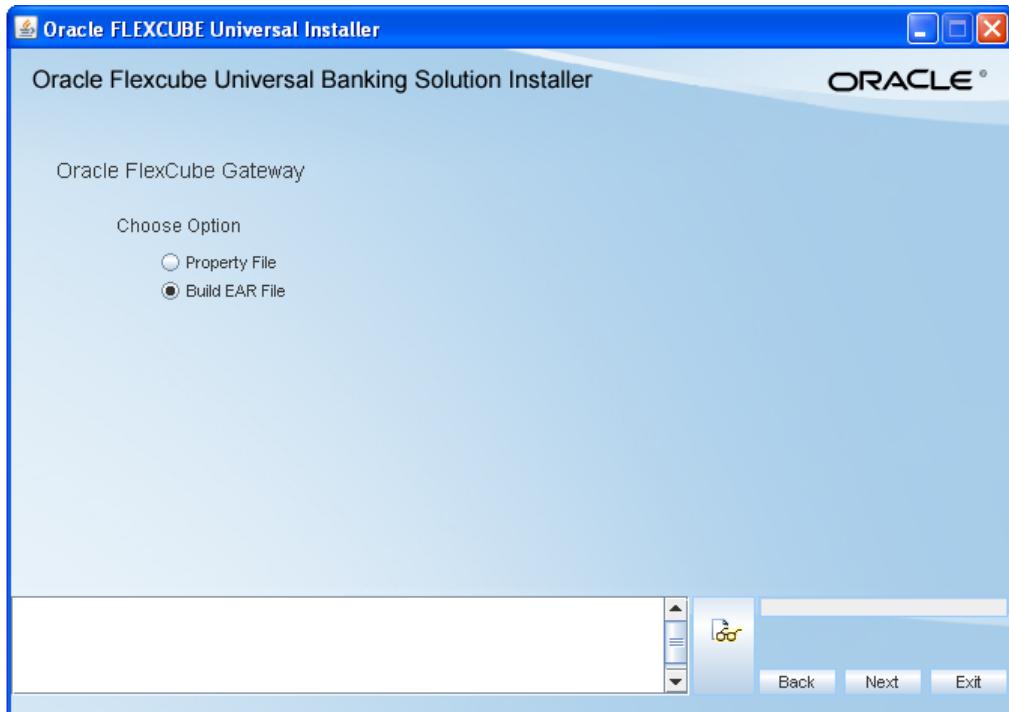
- Step-5- Click on Continue to generate Gateway EJB EAR file



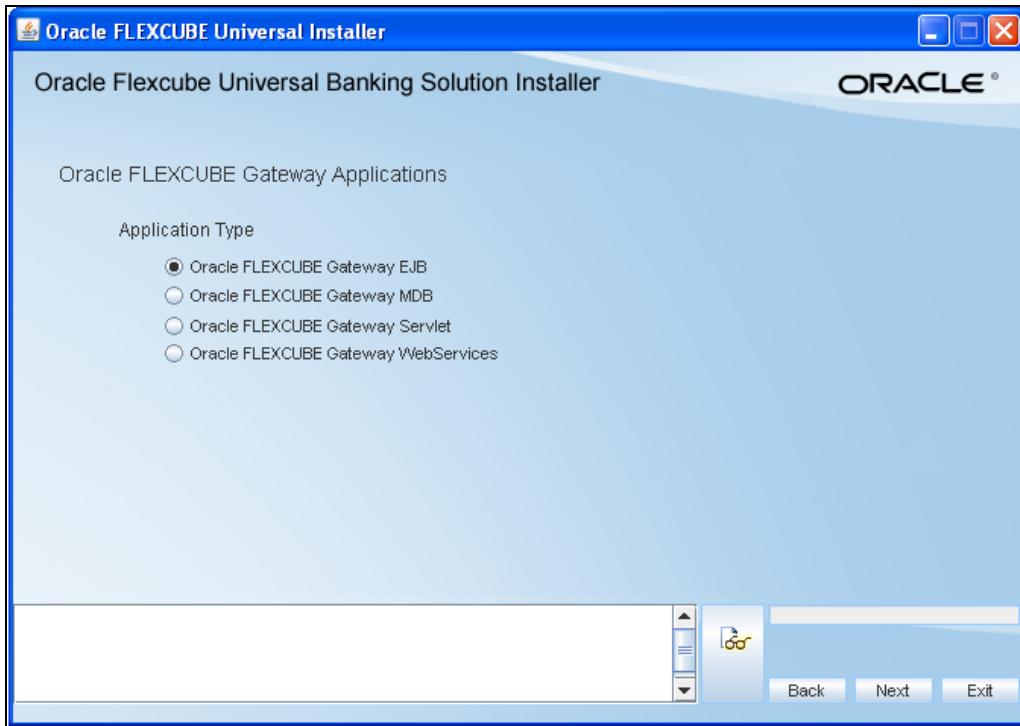
- Step-6.a –Select Oracle FLEXCUBE Gateway



- Step-6.b –Select Build EAR file

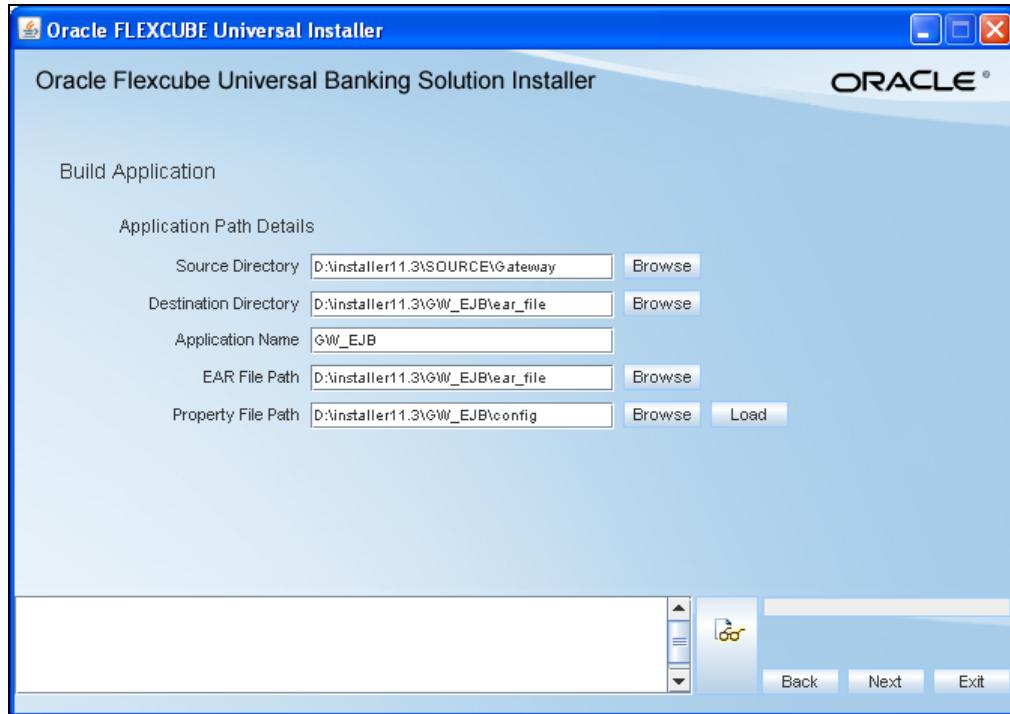


- Step-7 –Select Oracle FLEXCUBE Gateway EJB

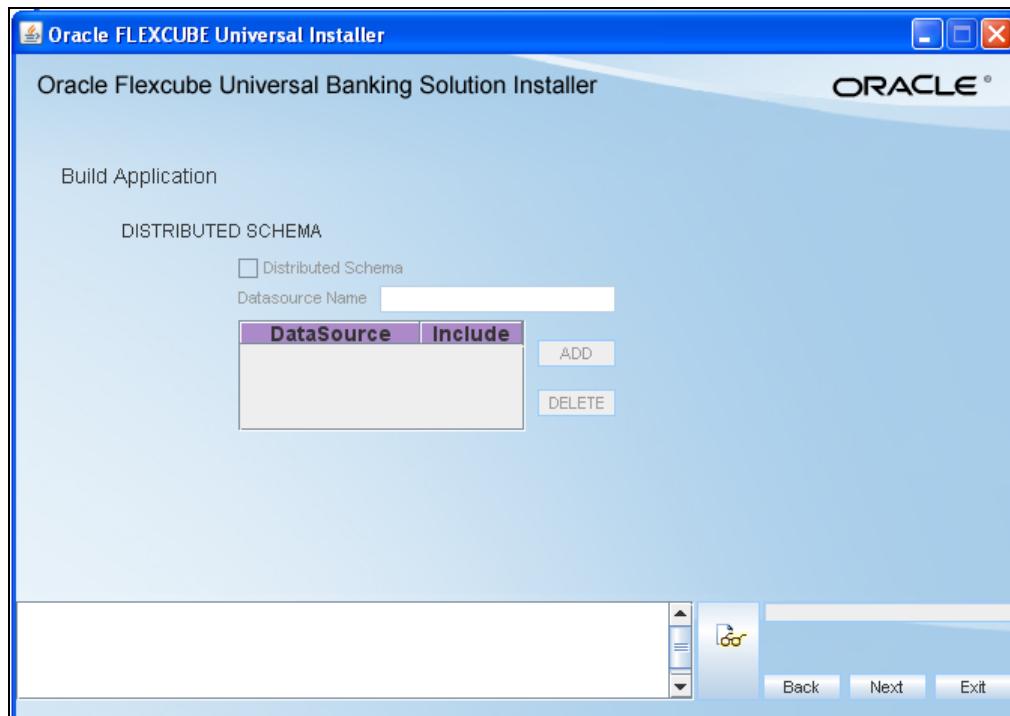


- Step-8 Provide Application build details

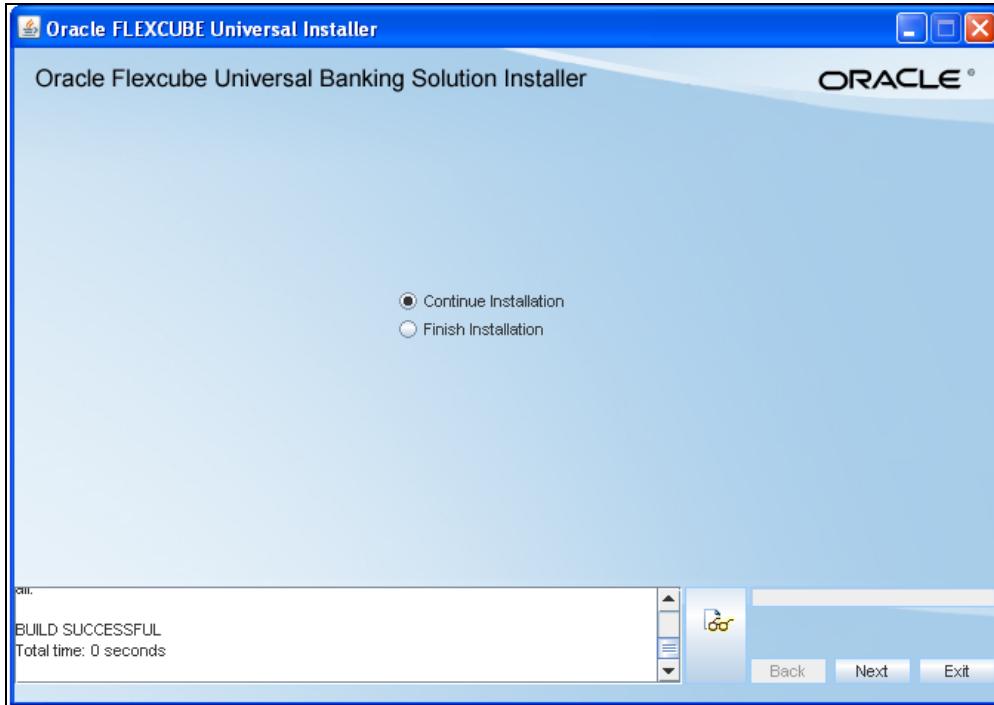
- Source directory: Source from which it will generate files.
- Destination directory: Location where the files will be generated.
- Application name: Name for the EJB application that is created.
- EAR file path: Location where the EAR file will be generated.
- Property file path: Location of Property file generated for EJB application.



- Step-9 – Select Next

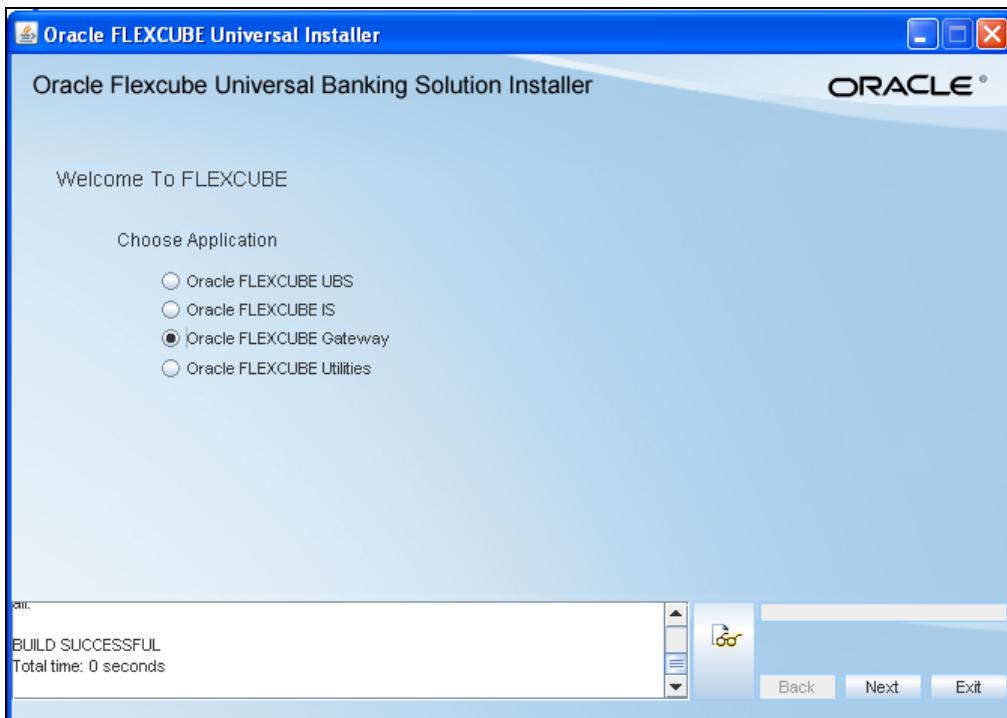


- Step-10 – Ensure message. BUILD SUCCESSFUL

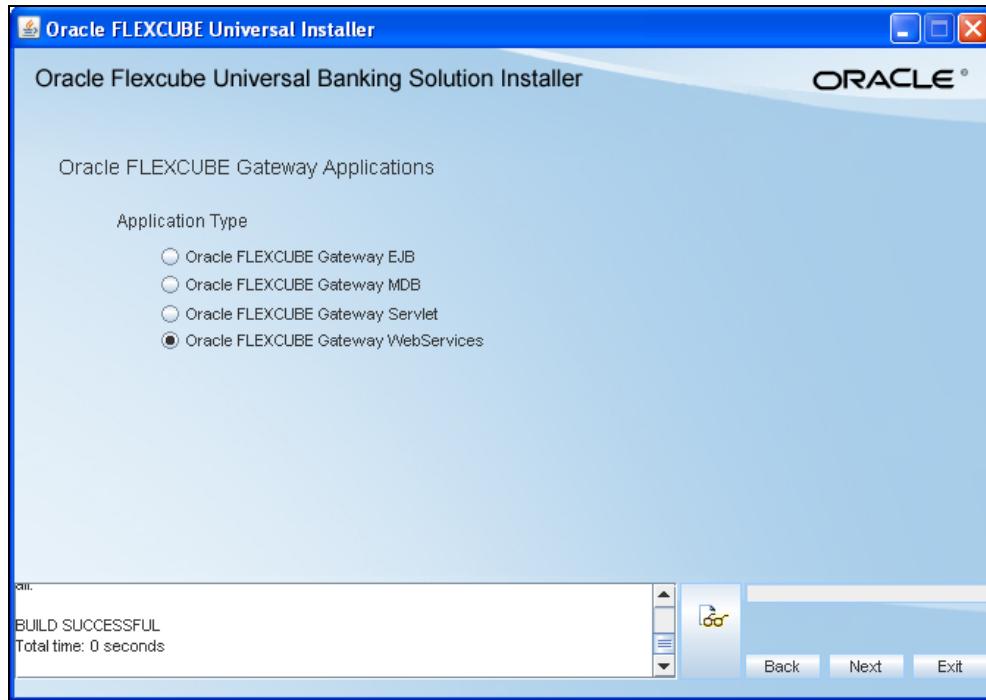


5.4.5 Creation of Web Service property file

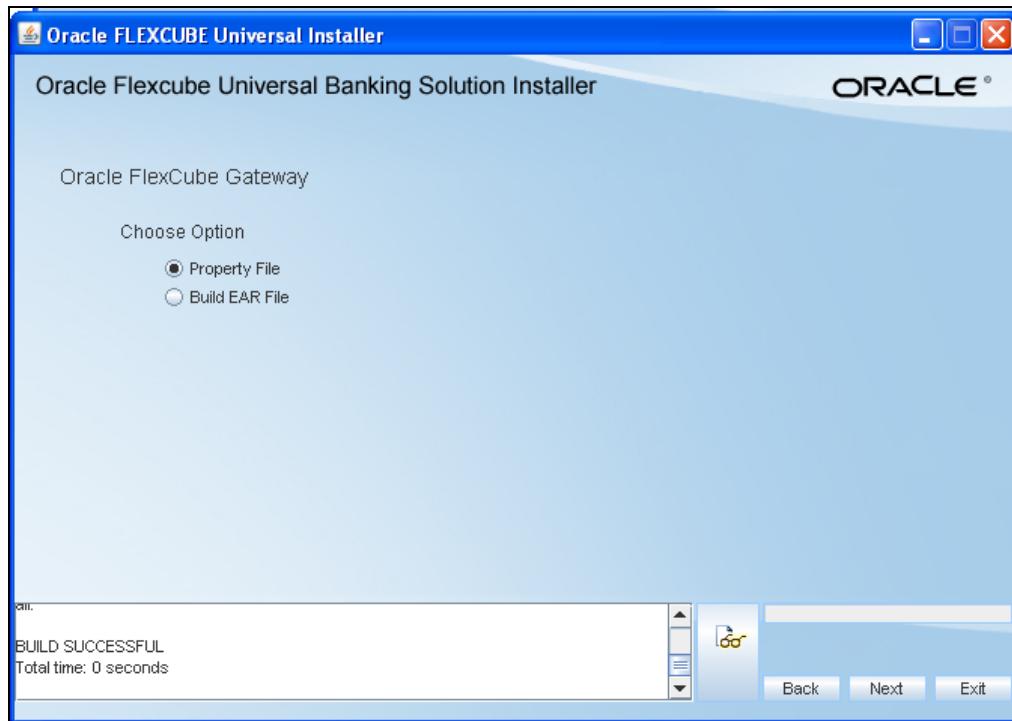
Step-a.1) Select Oracle FLEXCUBE Gateway



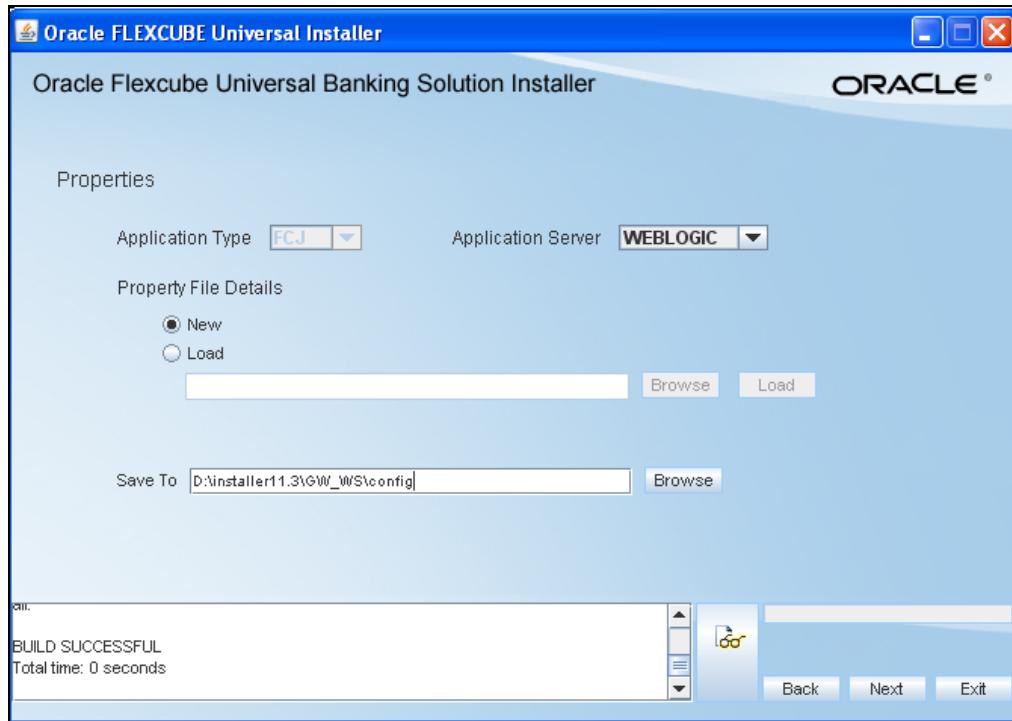
Step-a.2) Select Oracle FLEXCUBE Gateway Web Services



Step-b - Select Property file

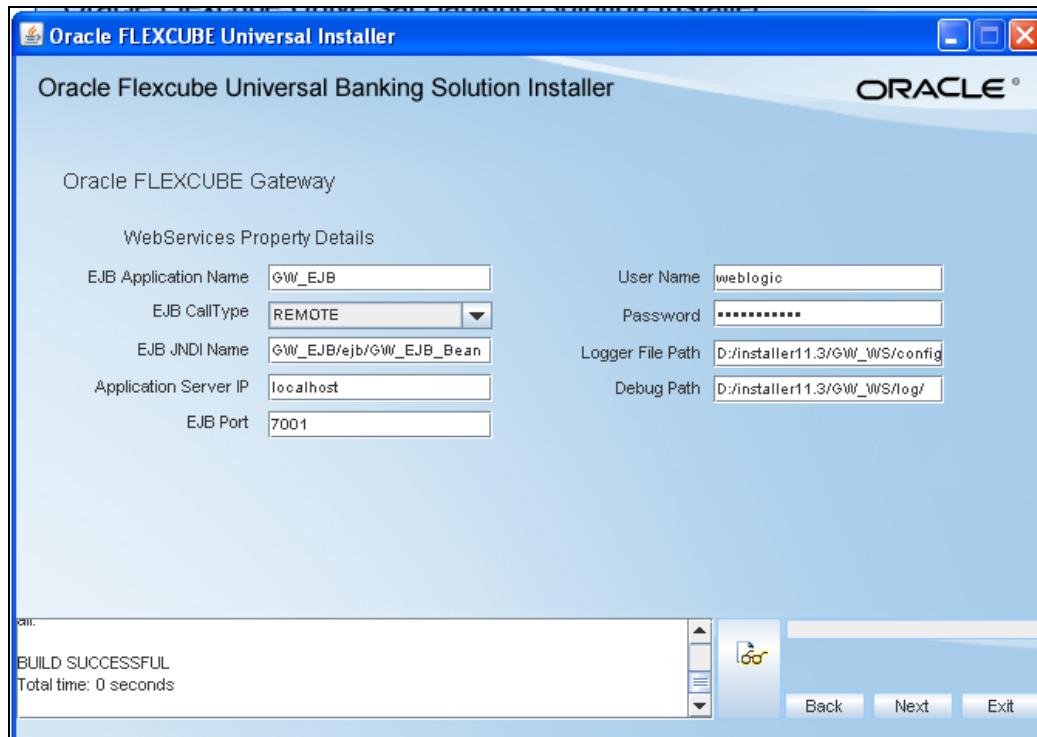


Step-c - Specify the location for property file generation

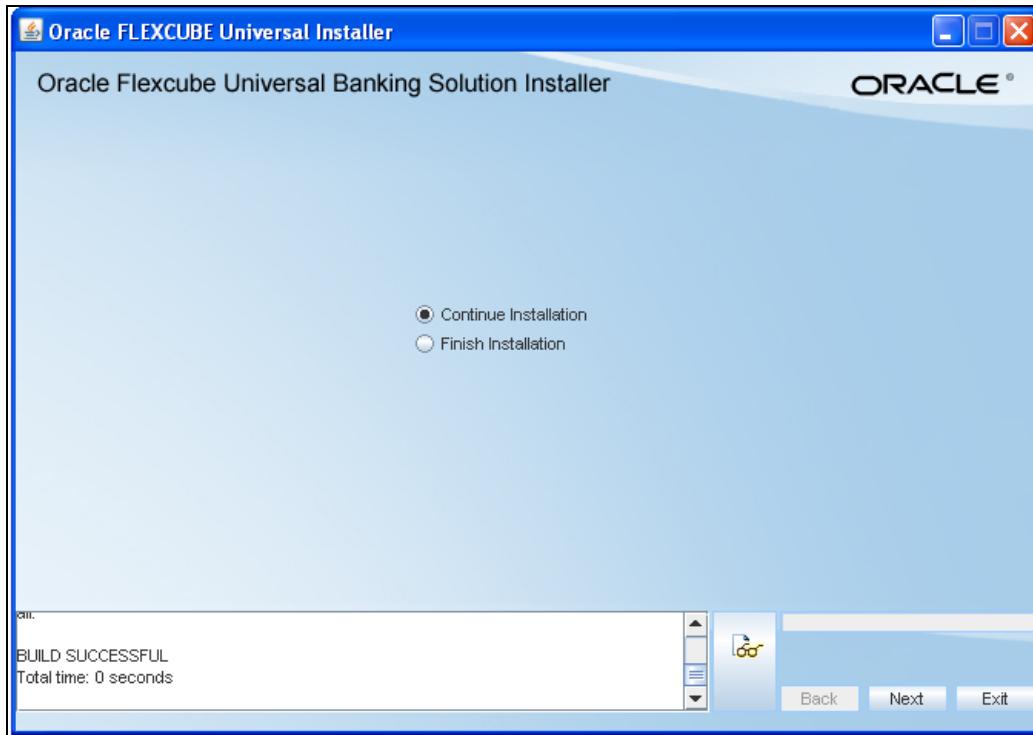


Step-d - Mention Gateway EJB Name and details

Application sever name needs to be mentioned along with the path where the log and debug file for the WebServices needs to be stored

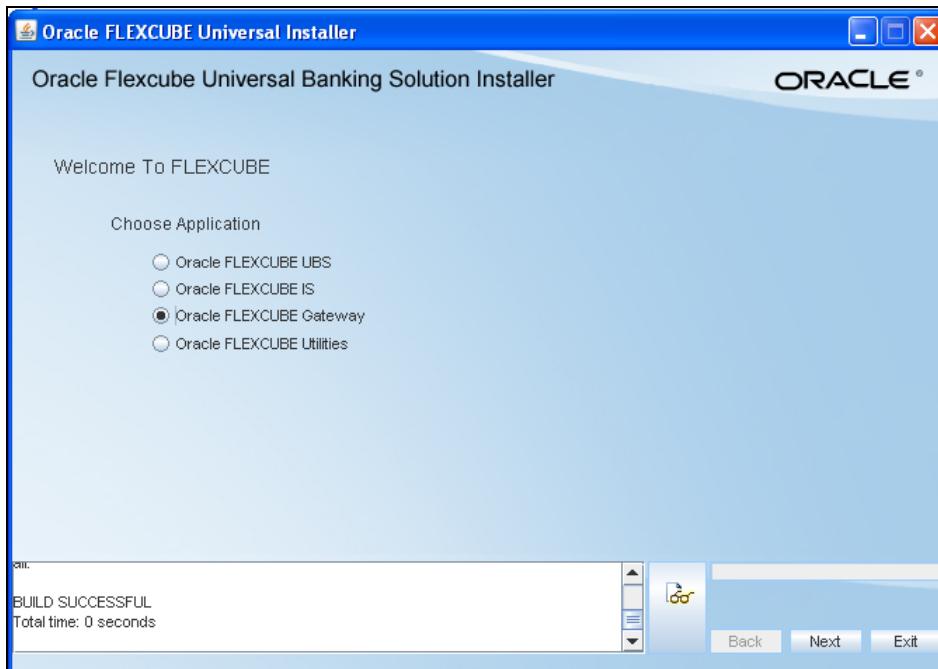


Step-e – select continue to build EAR file for web service

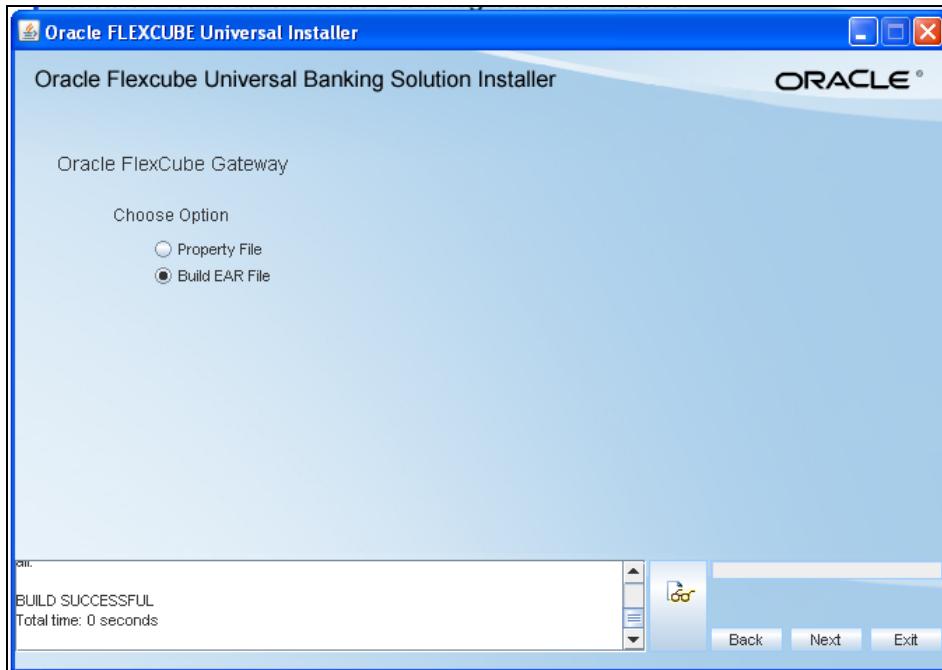


5.4.6 Creation of Web Service EAR file

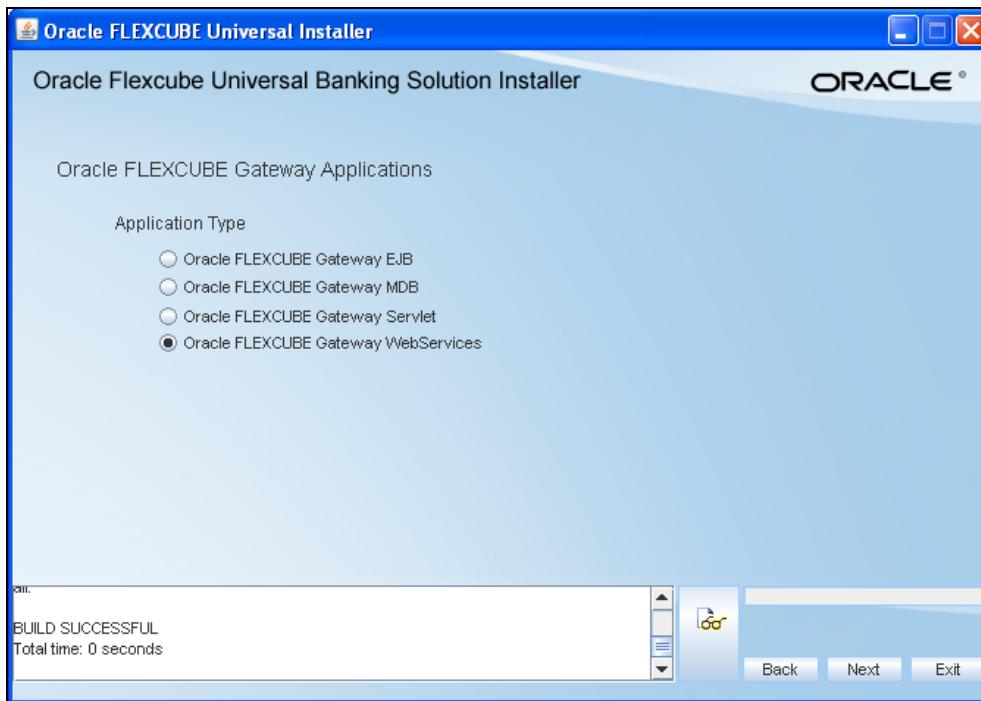
Step-f -Select Oracle FLEXCUBE Gateway



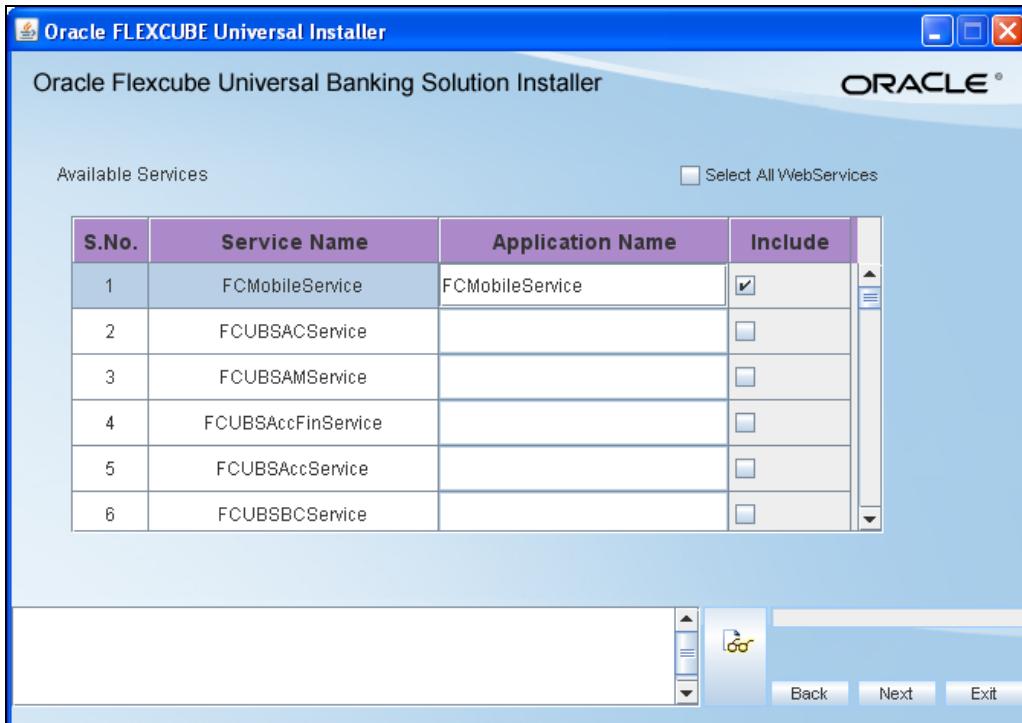
Step-g – Select Build EAR file.



Step-h –Select Gateway WebServices



Step-I – Select the Web service name.



5.4.7 Adding New Service to the List

To add a new service to the pick list, change the Services.xml which present in the installer sources. This file can be found at "<Installer Source Area>\InstallOptions\GateWay\Services\Services.xml"

Add your new service to the existing list by using <**Service-Name**> tag.

Example:

<SERVICE-NAME

path="/MAIN/CORE/GATEWAY/SERVICES/">FCMobileService</SERVICE-NAME>

```

1 <?xml version="1.0" encoding="UTF-8"?>
2 <SERVICES>
3   <SERVICE-NAME path="/MAIN/Core/Gateway/Services/">FCUBSAccService</SERVICE-NAME>
4   <SERVICE-NAME path="/MAIN/Core/Gateway/Services/">FCUBSCustomerService</SERVICE-NAME>
5   <SERVICE-NAME path="/MAIN/Core/Gateway/Services/">FCUBSMessagingService</SERVICE-NAME>
6   <SERVICE-NAME path="/MAIN/Core/Gateway/Services/">FCUBSMSService</SERVICE-NAME>
7   <SERVICE-NAME path="/MAIN/Core/Gateway/Services/">FCUBSSTService</SERVICE-NAME>
8   <SERVICE-NAME path="/MAIN/Core/Gateway/Services/">FCUBSTDService</SERVICE-NAME>
9   <SERVICE-NAME path="/MAIN/SE/Gateway/Services/">FCUBSSecuritiesService</SERVICE-NAME>
10  <SERVICE-NAME path="/MAIN/AC/Gateway/Services/">FCUBSTxnService</SERVICE-NAME>
11 </SERVICES>

```

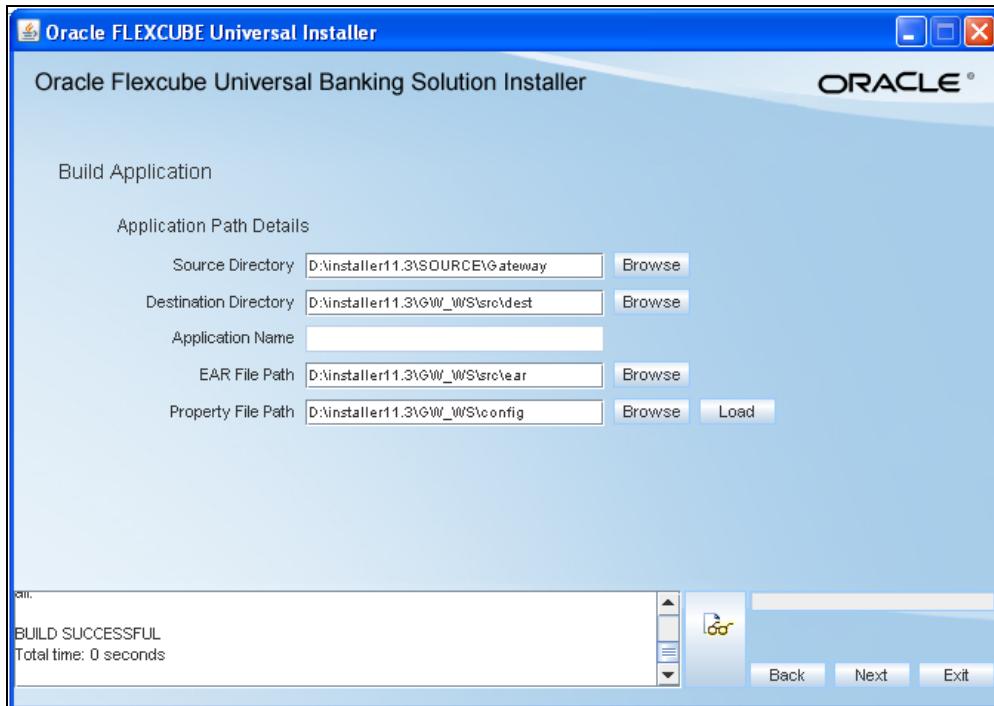
Location for sources for the new service.

Service Name

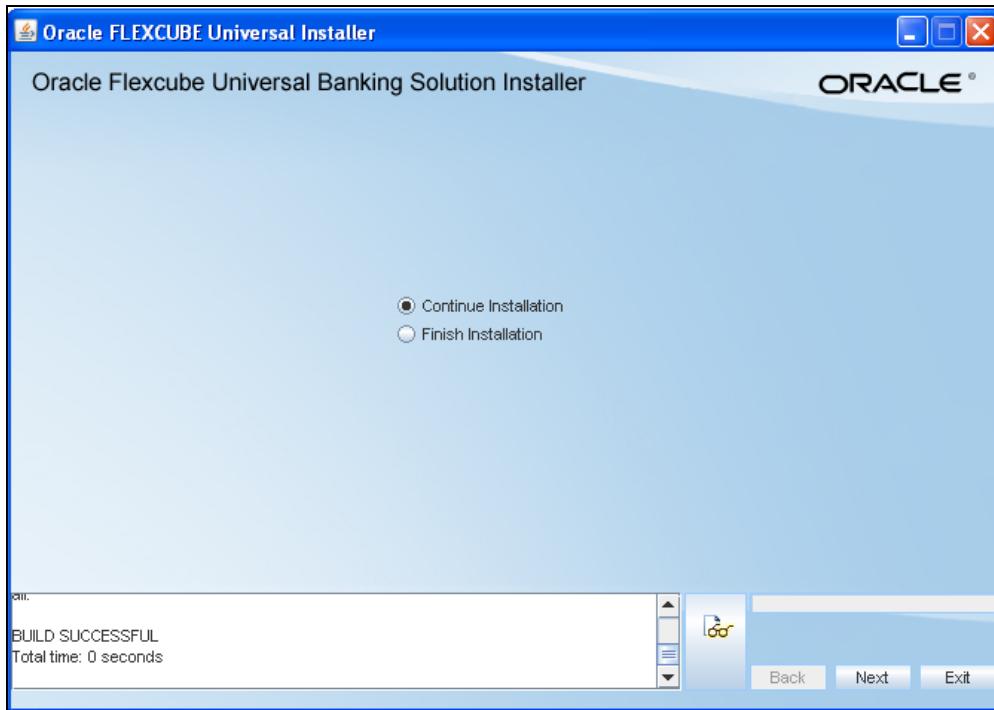
Step-j – Provide path details

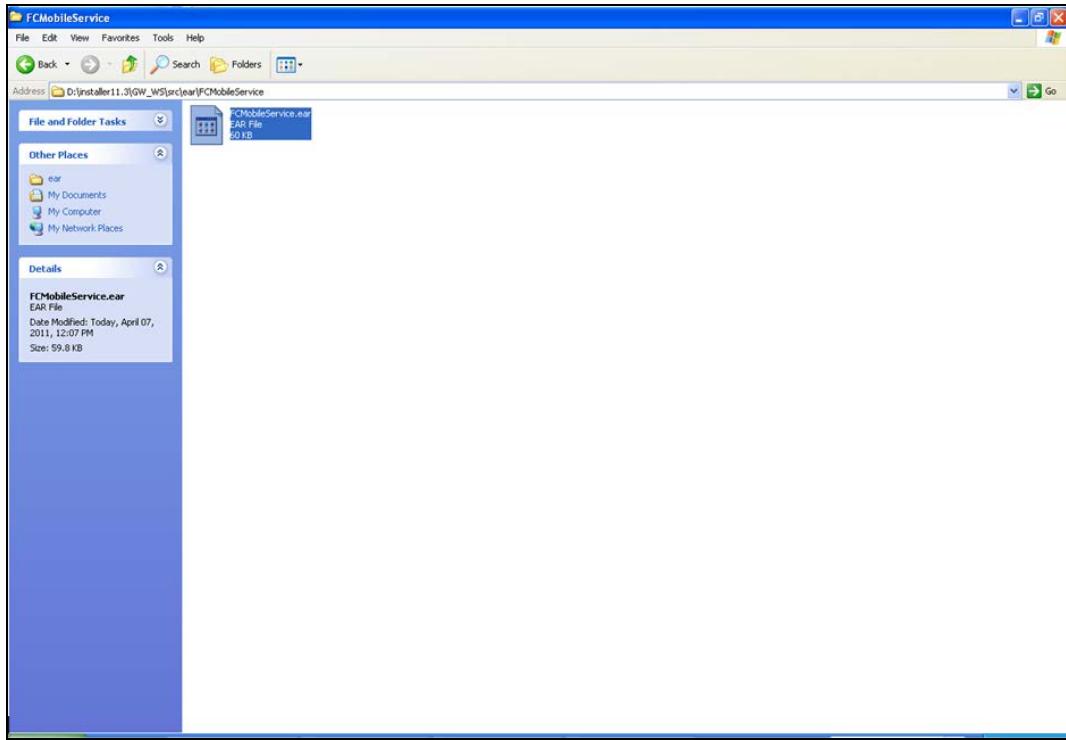
- Source directory: Source from which it will generate files.

- Destination directory: Location where the files will be generated.
- EAR file path: Location where the EAR file will be generated.
- Property file path: Location of Property file that available



Step-k – Ensure build successful and EAR file generated





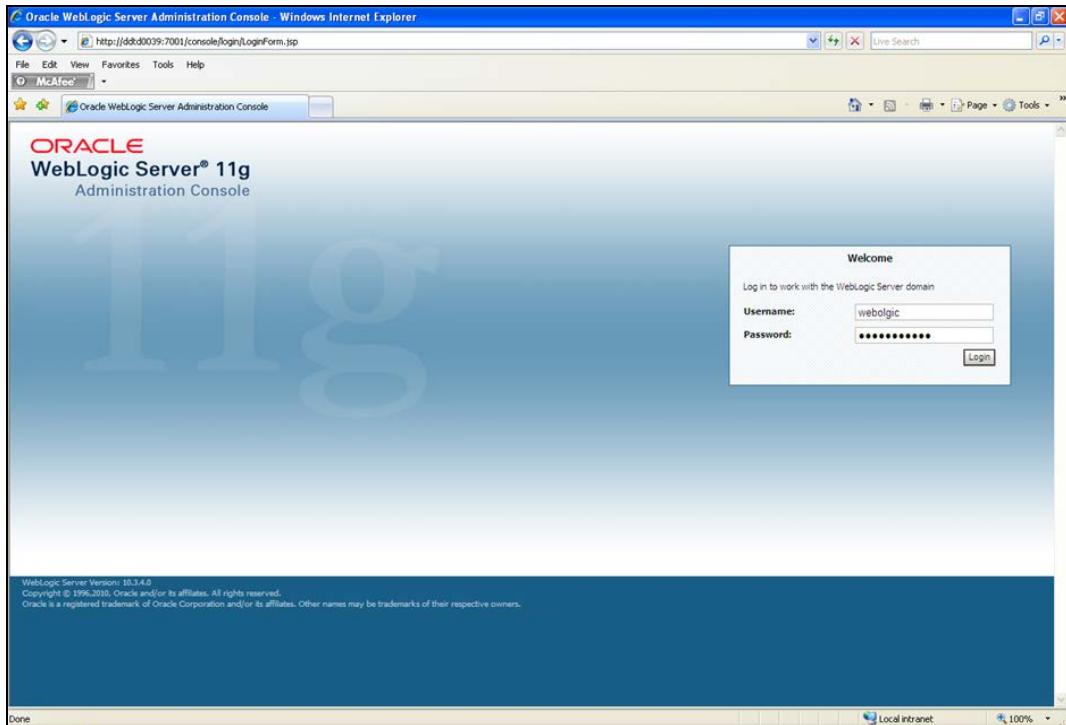
5.5 Deploying of EAR file

This section explains the steps to deploy the Web service EAR files on Oracle Weblogic Application server 11g

5.5.1 Deploying of Gateway EJB EAR file

This section discusses the deployment steps of Gateway EJB file. Skip this section if the Gateway EJB is already deployed in Target FLEXCUBE environment.

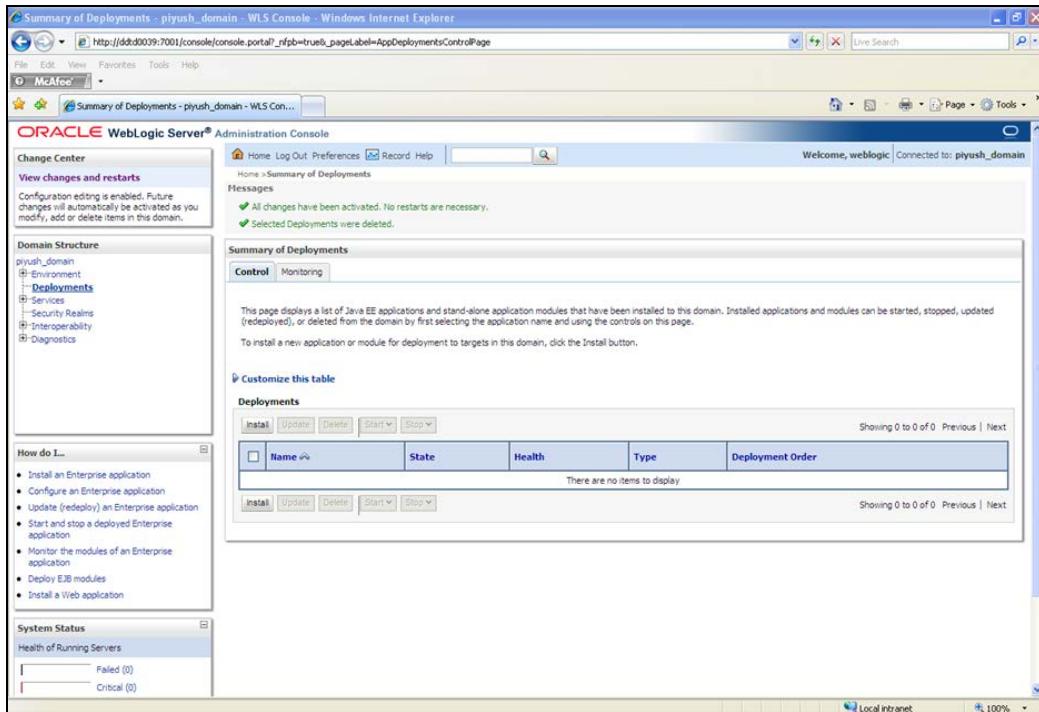
Step-1 – Login to Web logic application server



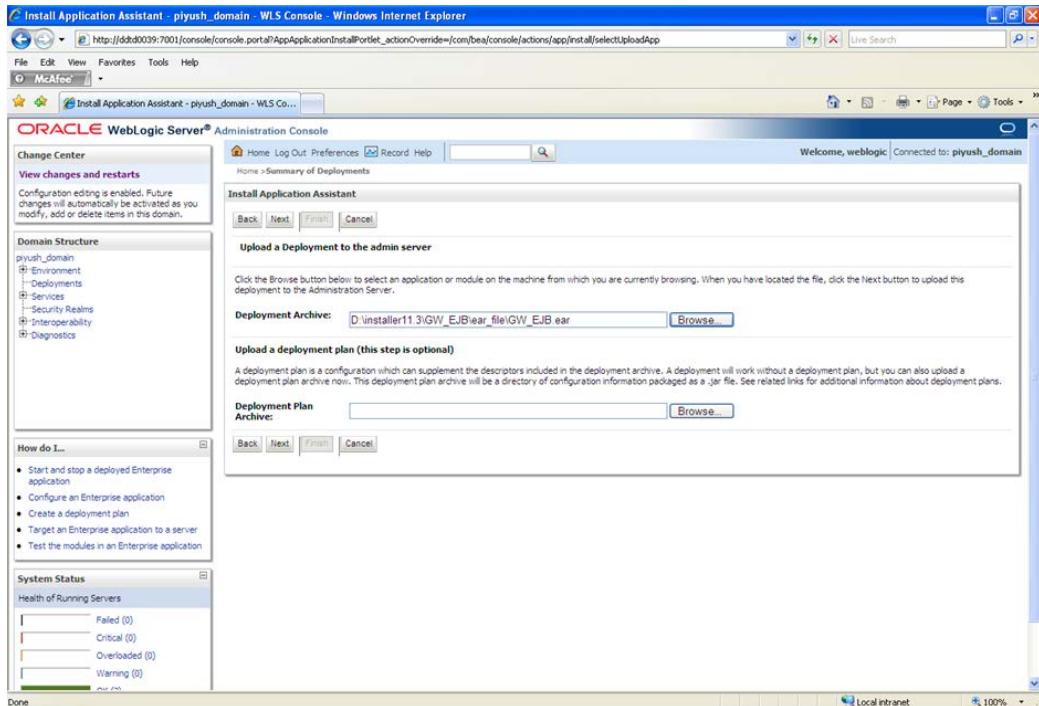
Step-2 – Select Deployments and Install

A screenshot of the Oracle WebLogic Server Administration Console showing the "Summary of Deployments" page for the "piyush_domain". The title bar reads "Summary of Deployments - piyush_domain - WLS Console - Windows Internet Explorer". The URL is "http://dd0d0039:7001/console/console.portal?_nfpb=true&_pageLabel=AppDeploymentsControlPage". The left sidebar includes a "Change Center" section with "View changes and restarts" and a "Domain Structure" tree showing "piyush_domain" with nodes like "Environment", "Deployments" (selected), "Services", "Security Realms", "Interoperability", and "Diagnostics". Below these are sections for "How do..." (with options like "Install an Enterprise application", "Configure an Enterprise application", etc.) and "System Status" (Health of Running Servers: Failed (0), Critical (0)). The main content area shows a "Messages" section with two green checkmarks: "All changes have been activated. No restarts are necessary." and "Selected Deployments were deleted.". Below this is a "Summary of Deployments" table with columns: Name, State, Health, Type, and Deployment Order. The table is currently empty, displaying the message "There are no items to display." There are also "Install", "Update", "Delete", "Start", and "Stop" buttons for the table rows.

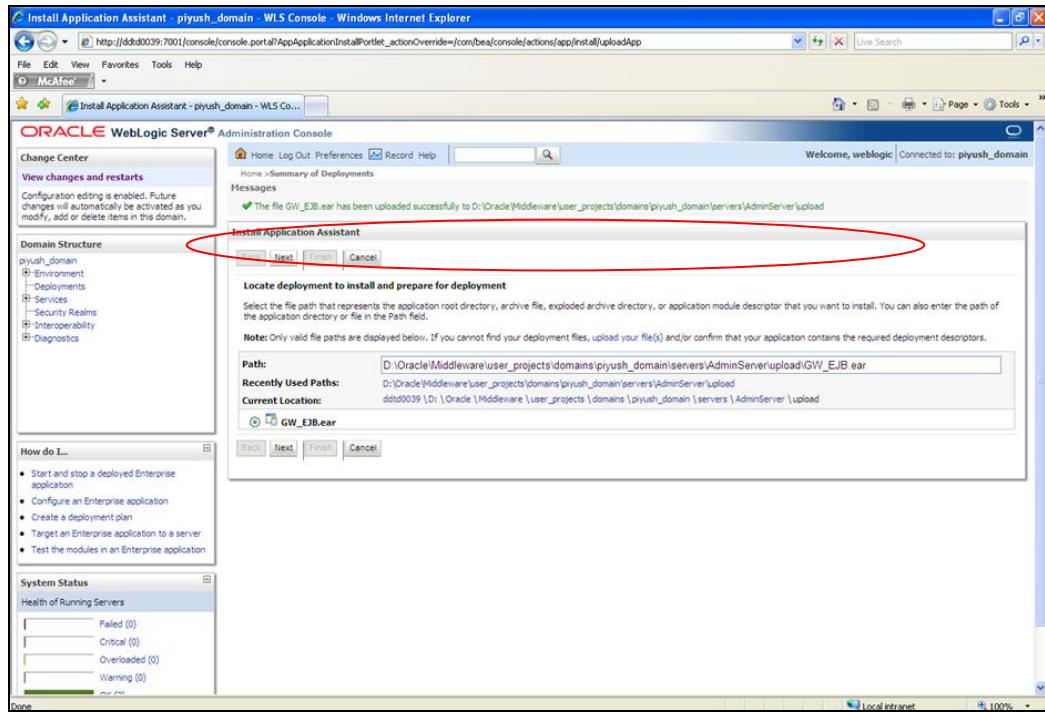
Step-3 –Select Upload your file



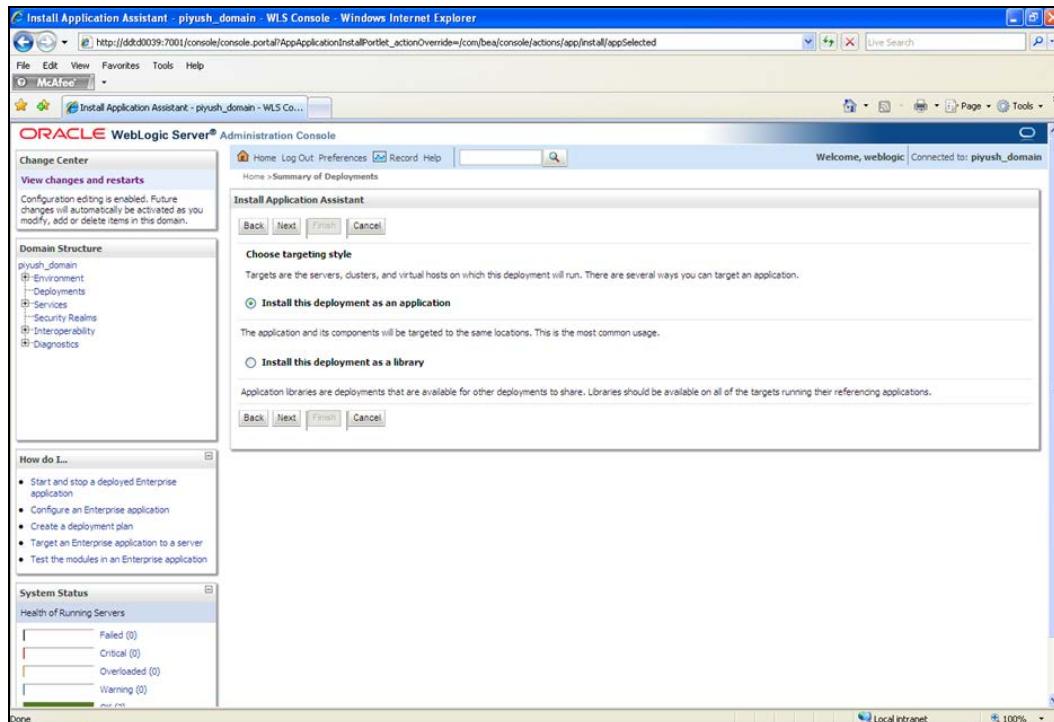
Step-4 – Select the path where Gateway EJB EAR generated



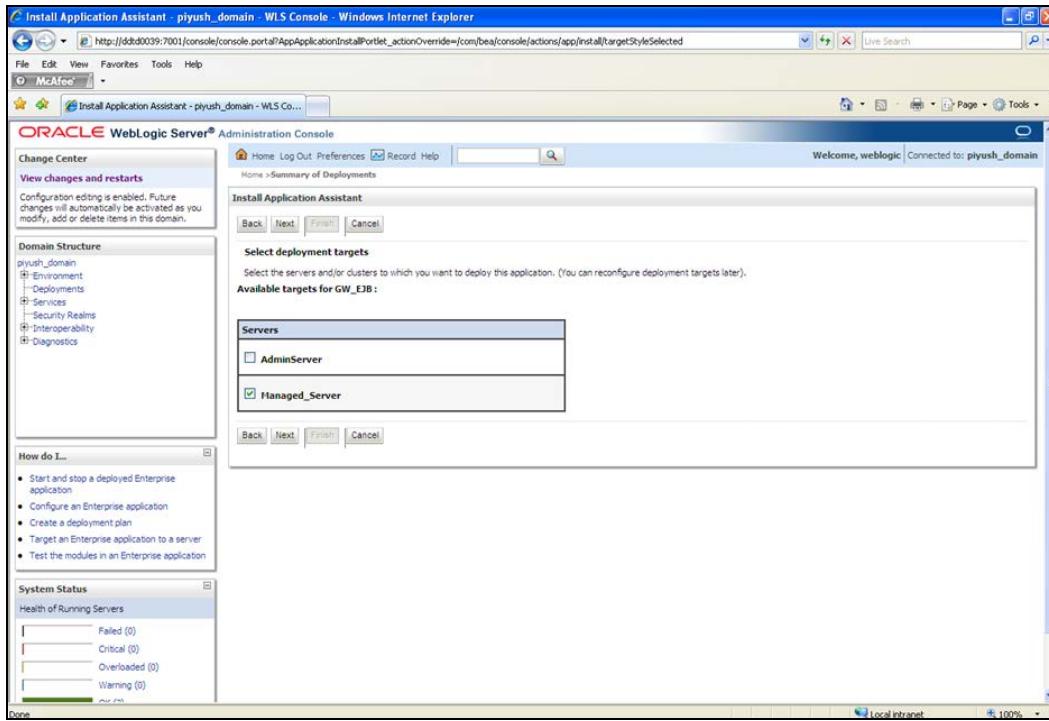
Step-5 – Ensure upload success and select Next



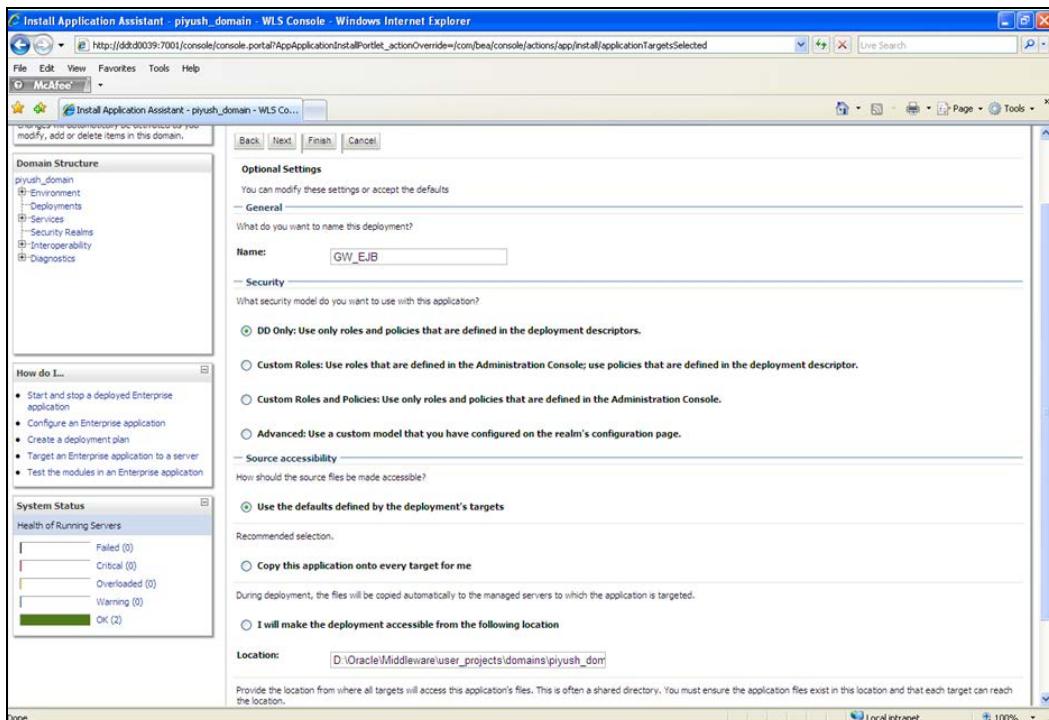
Step-6 – Select Install the deployment as an application



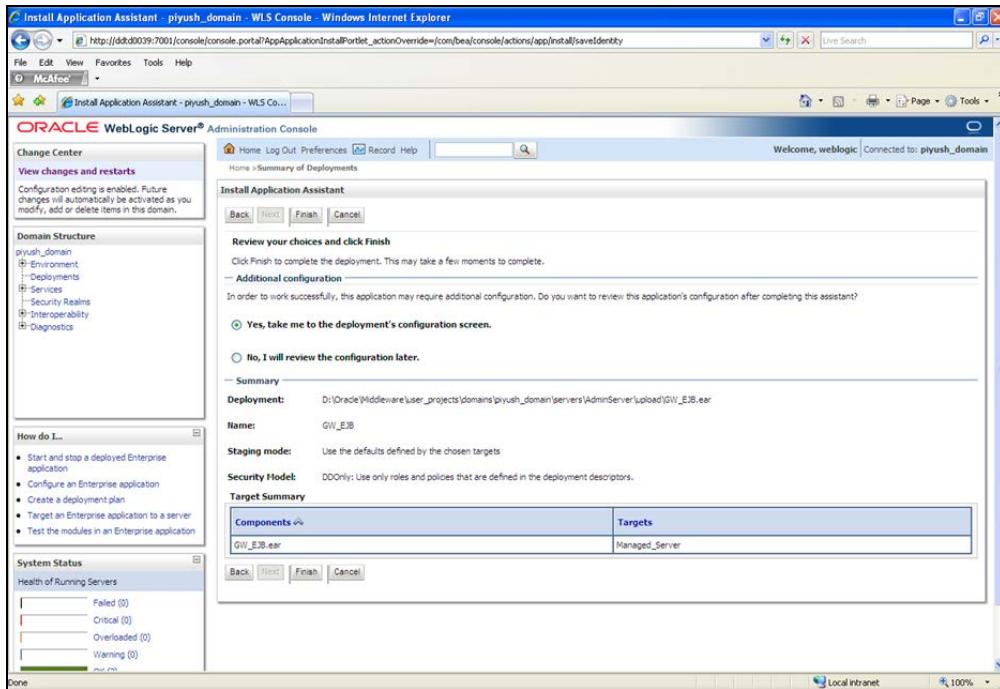
Step-7 – Select the appropriate Server where application need to be deployed



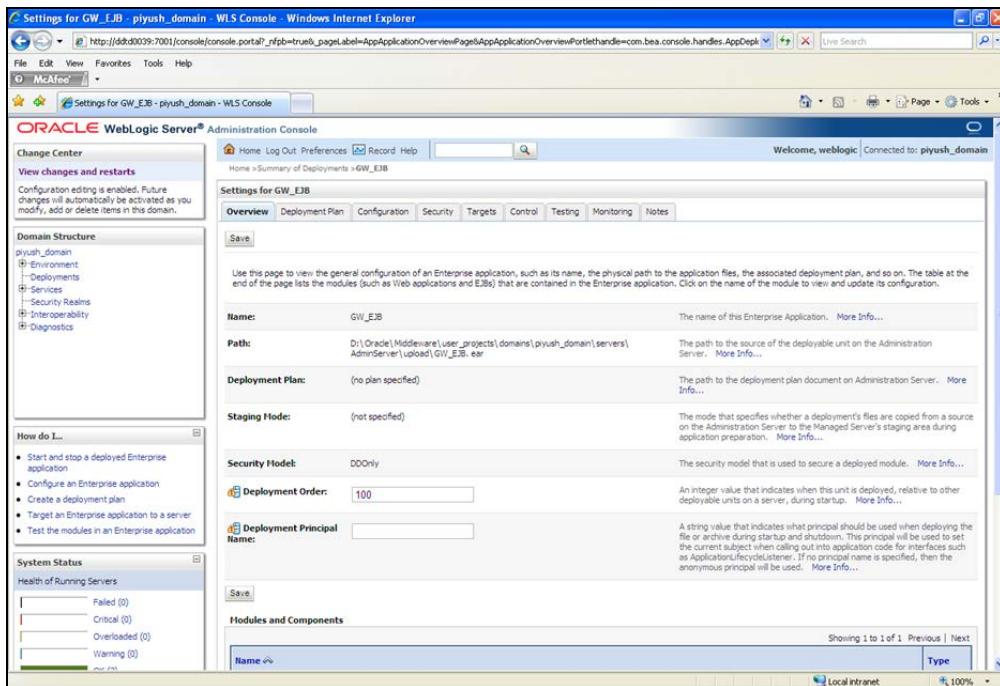
Step-8 – Select Next



Step-9 - Select Finish



Step-10 – Select Save



Step-11 – Ensure the GW_EJB application is Active and health OK

The screenshot shows the Oracle WebLogic Server Administration Console. The main title bar says "Summary of Deployments - piyush_domain - WLS Console - Windows Internet Explorer". The URL in the address bar is "http://ddcd0039:7001/console/console.portal?_nfpb=true&_pageLabel=AppDeploymentsControlPage". The left sidebar has a tree view of "Domain Structure" with "piyush_domain" expanded, showing "Environment", "Deployments" (which is selected), "Services", "Security Realms", "Interoperability", and "Diagnostics". Below this is a "How do I..." section with links for installing enterprise applications, configuring them, updating/redeploying, starting/stopping, monitoring modules, deploying EJB modules, and installing web applications. A "System Status" box shows "Health of Running Servers" with 0 Failed and 0 Critical. The main content area is titled "Summary of Deployments" with tabs for "Control" and "Monitoring". It displays a table of deployed applications. The table has columns for Name, State, Health, Type, and Deployment Order. One row is shown: "GW_EJB" (State: Active, Health: OK, Type: Enterprise Application, Deployment Order: 100). There are buttons for Install, Update, Delete, Start, and Stop.

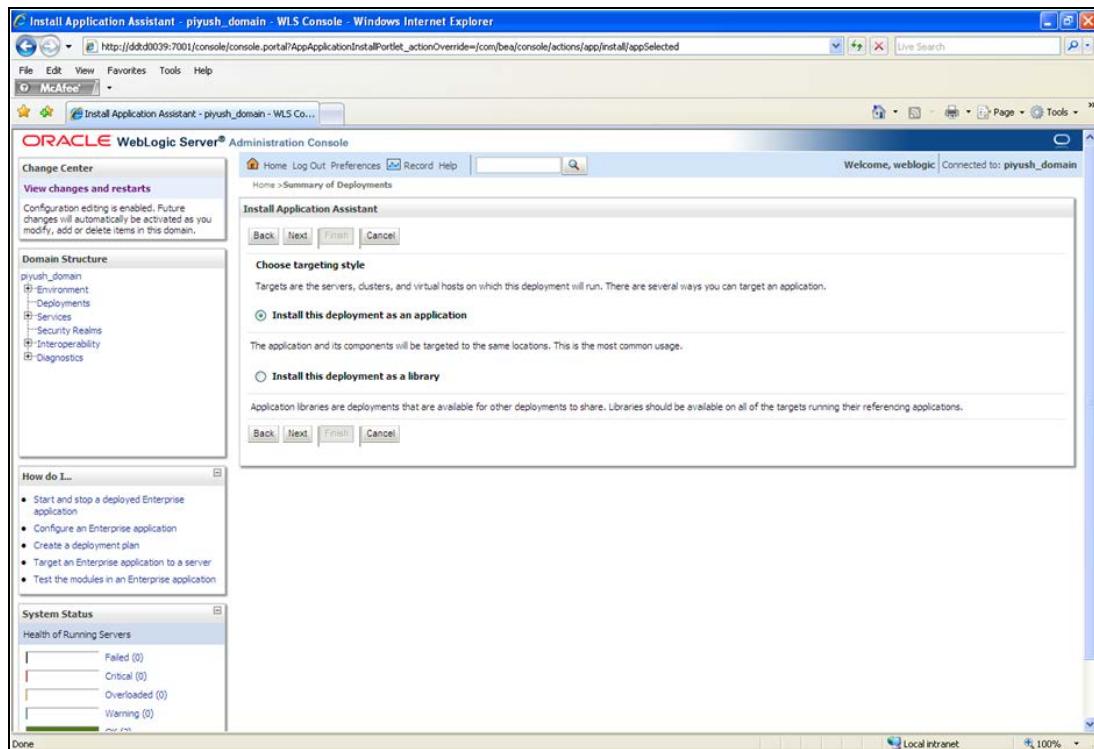
5.5.2 Deploying of Web Service EAR file

This section describes the steps to deploy the Web service EAR file.

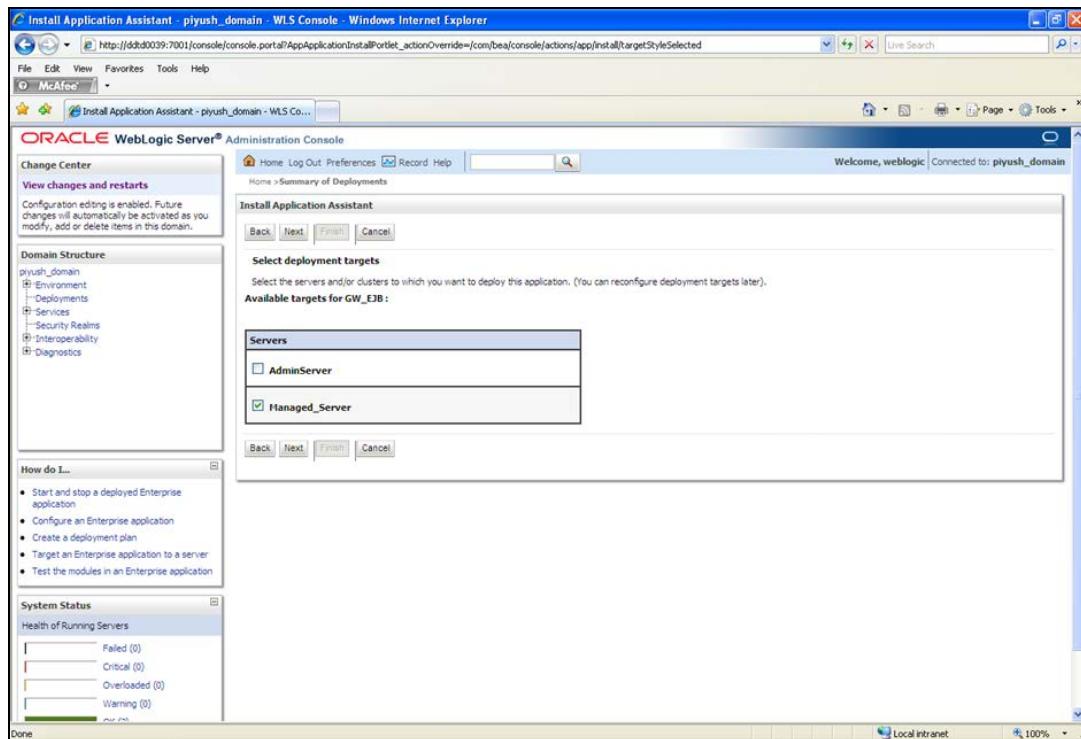
Step-a – Select upload your file and pick the web service EAR file

The screenshot shows the Oracle WebLogic Server Administration Console. The title bar says "Install Application Assistant - piyush_domain - WLS Console - Windows Internet Explorer". The URL in the address bar is "http://ddcd0039:7001/console/console.portal?_nfpb=true&_actionOverride=/com/bea/console/actions/app/install/selectUploadApp". The left sidebar is identical to the previous screenshot, showing the domain structure with "Deployments" selected. The main content area is titled "Install Application Assistant". It has buttons for Back, Next, Finish, and Cancel. A section titled "Upload a Deployment to the admin server" instructs users to click the Browse button to select an application or module. The "Deployment Archive:" field contains the path "D:\installer113\GW_WS\src\clear\FCMobileService\FCMobileService". Below this is another section titled "Upload a deployment plan (this step is optional)" with a "Deployment Plan Archive:" field and a "Browse..." button. The status bar at the bottom shows "Done".

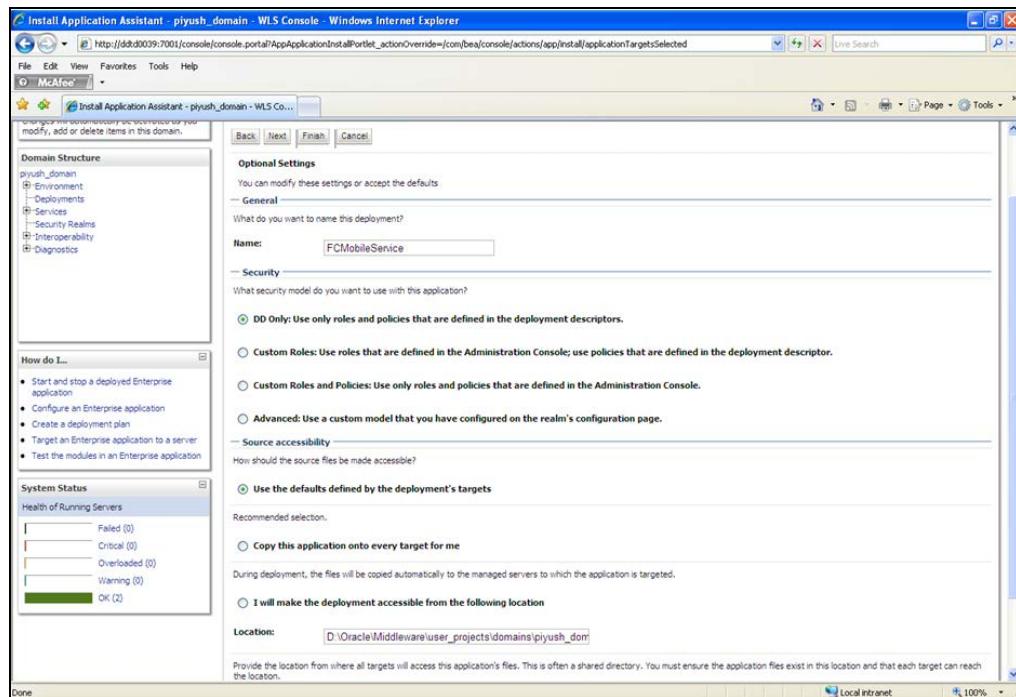
Step-b – Select Install the deployment as an application



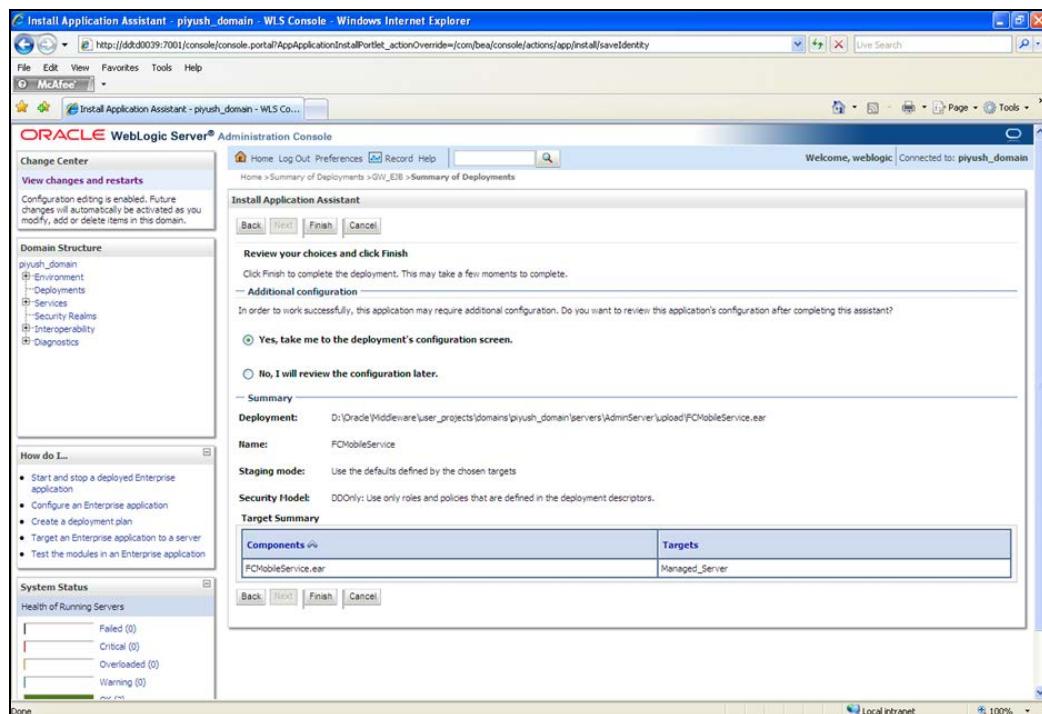
Step-c – Select the Server appropriately



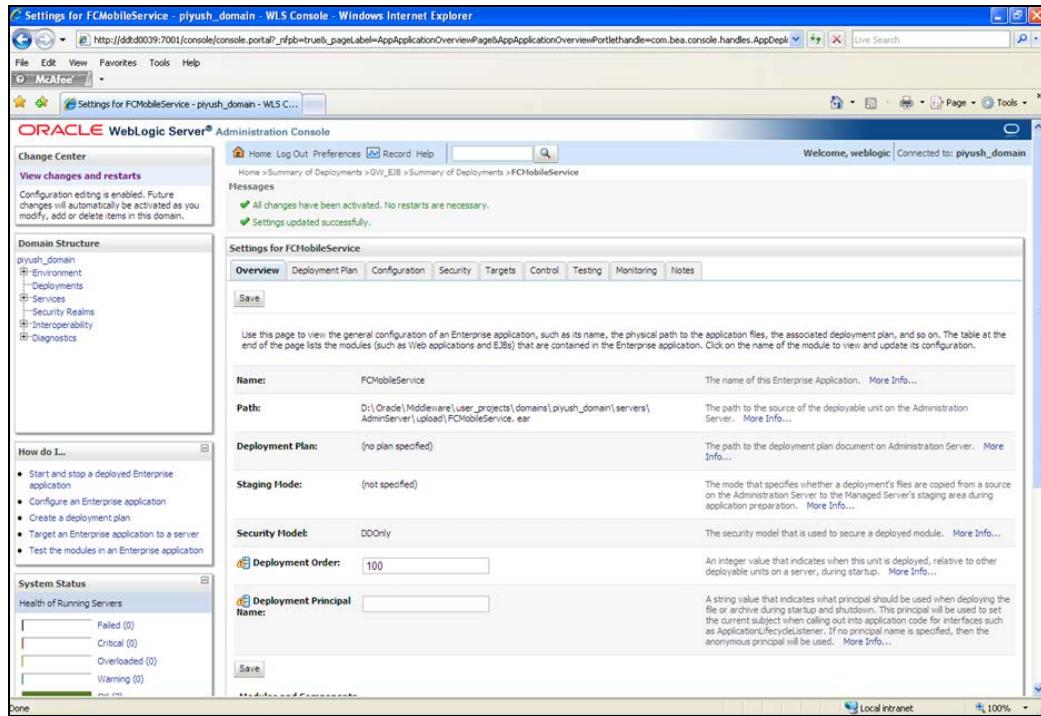
Step-d – Select Next



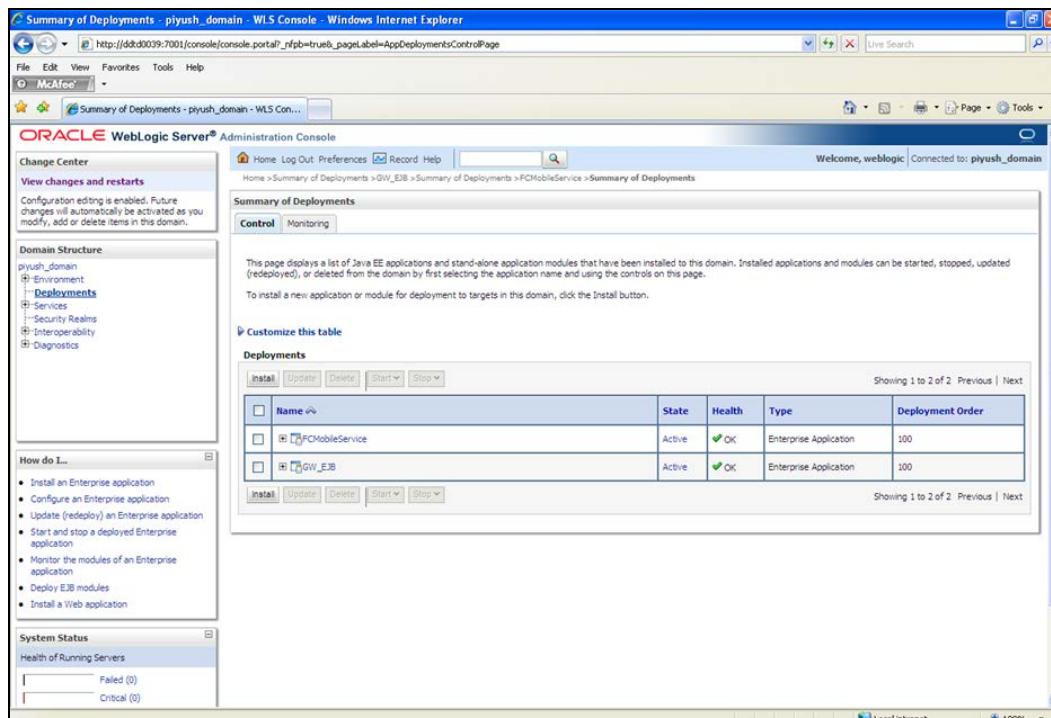
Step-e – Select Finish



Step-f – Ensure successful messages shown



Step-g – Save the deployment and ensure it started OK



5.6 Testing the Web Service

This section describes the steps to test the web service in Web logic application server.

Step-1 – expand Web service and select Web service that need to be tested

Summary of Deployments - piyush_domain - WLS Console - Windows Internet Explorer

File Edit View Favorites Tools Help

ORACLE WebLogic Server Administration Console

Change Center
View changes and restarts
Configuration editing is enabled. Future changes will automatically be activated as you modify, add or delete items in this domain.

Domain Structure
piyush_domain
- Environment
- Deployments
- Services
- Security Realms
- Interoperability
- Diagnostics

How do I...
• Install an Enterprise application
• Configure an Enterprise application
• Update (redeploy) an Enterprise application
• Start and stop a deployed Enterprise application
• Monitor the modules of an Enterprise application
• Deploy EJB modules
• Install a Web application

System Status
Health of Running Servers
Failed (0)
Critical (0)

Summary of Deployments
Control Monitoring

This page displays a list of Java EE applications and stand-alone application modules that have been installed to this domain. Installed applications and modules can be started, stopped, updated (redeployed), or deleted from the domain by first selecting the application name and using the controls on this page.

To install a new application or module for deployment to targets in this domain, click the Install button.

Customize this table

Deployments

<input type="checkbox"/>	Name	State	Health	Type	Deployment Order
<input type="checkbox"/>	FCMobileService	Active	OK	Enterprise Application	100
Modules					
<input type="checkbox"/>	FCMobileService			Web Application	
<input type="checkbox"/>	EJBs				
None to display					
Web Services					
<input type="checkbox"/>	FCMobileService			Web Service	
<input type="checkbox"/>	GW_EJB	Active	OK	Enterprise Application	100

Showing 1 to 2 of 2 Previous | Next

Install Update Delete Start Stop

Step-2 – Select Testing

Settings for FCMobileService - piyush_domain - WLS Console - Windows Internet Explorer

File Edit View Favorites Tools Help

ORACLE WebLogic Server Administration Console

Change Center
View changes and restarts
Configuration editing is enabled. Future changes will automatically be activated as you modify, add or delete items in this domain.

Domain Structure
piyush_domain
- Environment
- Deployments
- Services
- Security Realms
- Interoperability
- Diagnostics

How do I...
• Install a Web service
• Start and stop a Web service
• Attach a WS-Policy file to a Web service
• Configure Web services
• View the SOAP message handlers of a Web service
• View the WSDL of a Web service
• Test a Web service
• Monitor Web services

System Status
Health of Running Servers
Failed (0)
Critical (0)

Settings for FCMobileService
Overview Configuration Security Testing Monitoring

Use this page to test that your Web service is deployed and that it is working as expected. In the table, expand the name of the Web service to see a list of its test points. Click ?WSDL to view its dynamic WSDL in a separate browser window. Click Test Client to invoke a new browser window where you can test each operation individually by entering parameter values, executing the operation, and viewing the results.

Deployment Tests

Name	Test Point	Comments
FCMobileService		Test points for this WebService module.

Showing 1 to 1 of 1 Previous | Next

Step-3 – Select Test Client

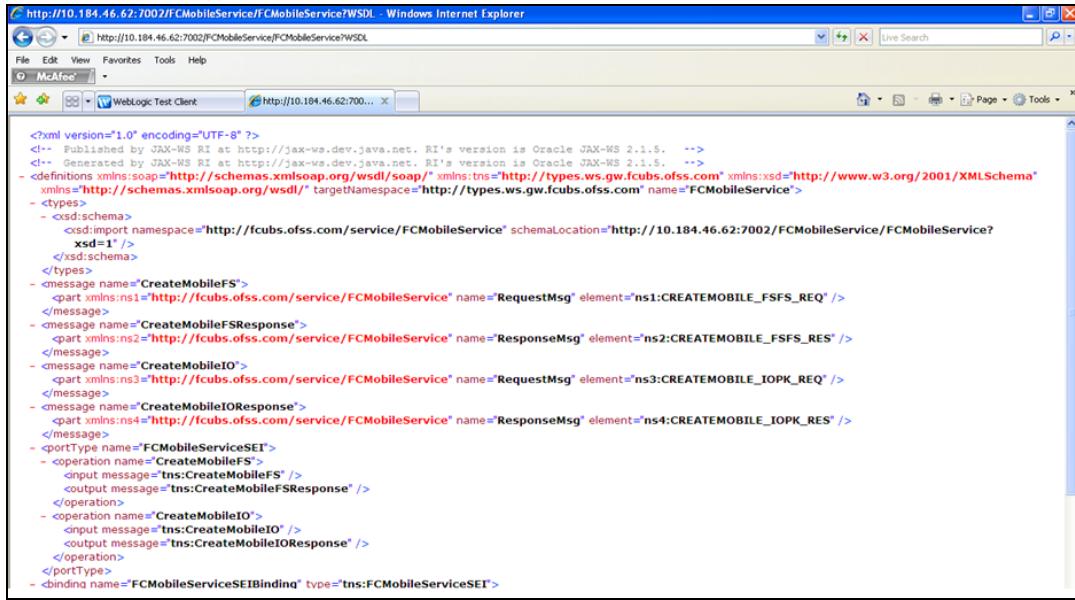
Step-4 – Populate the request XML message with business data and select Operation. Check the response XML thrown.

Also Copy & paste the WSDL Url onto a browser to check whether the Web service is running.

WSDL Url: http://<IP address>:<Port>/<Service_Name>/<Service_Name>?WSDL

Example: <http://10.184.46.62:7002/FCMobileService/FCMobileService?WSDL>

On pasting the WSDL URL, the WSDL should be displayed in the browser, which confirms the status of Web service to be running.



The screenshot shows a Microsoft Internet Explorer window displaying the WSDL (Web Services Description Language) XML code for the FCMobileService. The URL in the address bar is <http://10.184.46.62:7002/FCMobileService/FCMobileService?WSDL>. The XML code is color-coded to highlight different elements like tags and namespaces. The code includes definitions for types, messages, and operations, such as CreateMobileFS, CreateMobileFSResponse, CreateMobileIO, and CreateMobileIOResponse, along with their respective request and response parts. It also defines port types and binding for the FCMobileService.

```
<?xml version="1.0" encoding="UTF-8" ?>
<!-- Published by JAX-WS RI at http://jax-ws.dev.java.net. RI's version is Oracle JAX-WS 2.1.5. -->
<!-- Generated by JAX-WS RI at http://jax-ws.dev.java.net. RI's version is Oracle JAX-WS 2.1.5. -->
- <definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/" xmlns:tns="http://types.ws.gw.fcubs.ofss.com" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns="http://schemas.xmlsoap.org/wsdl/" targetNamespace="http://types.ws.gw.fcubs.ofss.com" name="FCMobileService">
  - <types>
    - <xsd:schema>
      <xsd:import namespace="http://fcubs.ofss.com/service/FCMobileService" schemaLocation="http://10.184.46.62:7002/FCMobileService/FCMobileService?WSDL#fcubs.ofss.com_FCMobileServiceType1" />
    </xsd:schema>
  </types>
  - <message name="CreateMobileFS">
    <part xmlns:ns1="http://fcubs.ofss.com/service/FCMobileService" name="RequestMsg" element="ns1:CREATEMOBILE_FSFS_REQ" />
  </message>
  - <message name="CreateMobileFSResponse">
    <part xmlns:ns2="http://fcubs.ofss.com/service/FCMobileService" name="ResponseMsg" element="ns2:CREATEMOBILE_FSFS_RES" />
  </message>
  - <message name="CreateMobileIO">
    <part xmlns:ns3="http://fcubs.ofss.com/service/FCMobileService" name="RequestMsg" element="ns3:CREATEMOBILE_IOPK_REQ" />
  </message>
  - <message name="CreateMobileIOResponse">
    <part xmlns:ns4="http://fcubs.ofss.com/service/FCMobileService" name="ResponseMsg" element="ns4:CREATEMOBILE_IOPK_RES" />
  </message>
  - <portType name="FCMobileServiceSET">
    - <operation name="CreateMobileFS">
      <input message="tns:CreateMobileFS" />
      <output message="tns:CreateMobileFSResponse" />
    </operation>
    - <operation name="CreateMobileIO">
      <input message="tns:CreateMobileIO" />
      <output message="tns:CreateMobileIOResponse" />
    </operation>
  </portType>
  - <binding name="FCMobileServiceSEIBinding" type="tns:FCMobileServiceSET">
```

6. Annexure A – FCMobileService – Sample files

6.1 XSD files

6.1.1 CS-Mobil-Types.xsd

```
<?xml version="1.0" encoding="UTF-8"?>

<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
elementFormDefault="qualified">

    <xs:annotation>
        <xs:documentation xml:lang="en">All Types of JKDMOBIL
    </xs:documentation>
</xs:annotation>

<xs:complexType name="Mobil-PK-Type">
    <xs:sequence>
        <xs:element name="CELL_NO" type="xs:decimal"/>
        <xs:element name="CUSTOMER_NO" minOccurs="1">
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:maxLength value="9"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:element>
    </xs:sequence>
</xs:complexType>

<xs:complexType name="Mobil-Full-Type">
    <xs:sequence>
```

```

<xs:element name="CUSTOMER_NO" minOccurs="1">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="9"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>

<xs:element name="CELL_NO" minOccurs="1" type="xs:decimal"/>

<xs:element name="MAKER" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="12"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>

<xs:element name="MAKERSTAMP" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>

<xs:element name="CHECKER" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="12"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>

<xs:element name="CHECKERSTAMP" minOccurs="0">

```

```

<xs:simpleType>
  <xs:restriction base="xs:string">
    <xs:maxLength value="35" />
  </xs:restriction>
</xs:simpleType>
</xs:element>

<xs:element name="MODNO" minOccurs="0" type="xs:decimal" />

<xs:element name="TXNSTAT" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="1" />
    </xs:restriction>
  </xs:simpleType>
</xs:element>

<xs:element name="AUTHSTAT" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="1" />
    </xs:restriction>
  </xs:simpleType>
</xs:element>

<xs:element name="Jktm-Junk-Mobil-Dtl" minOccurs="0"
maxOccurs="unbounded">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="CUSTOMER_NO" minOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="9" />
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

```

</xs:simpleType>

</xs:element>

<xs:element name="ACCOUNT_NO" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="20"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>

<xs:element name="NAME" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="105"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>

<xs:element name="TXNDETL" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="7"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>

<xs:element name="STATUS" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="10"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>

```

```

<xs:element name="CELL_NO" minOccurs="0" type="xs:decimal" />

</xs:sequence>

</xs:complexType>

</xs:element>

<xs:element name="Jktm-Junk-Mobile-Dtl2" minOccurs="0">

<xs:complexType>

<xs:sequence>

<xs:element name="CUSTOMER_NO" minOccurs="1">

<xs:simpleType>

<xs:restriction base="xs:string">

<xs:maxLength value="9" />

</xs:restriction>

</xs:simpleType>

</xs:element>

<xs:element name="CUSTOMER_NAME" minOccurs="0">

<xs:simpleType>

<xs:restriction base="xs:string">

<xs:maxLength value="105" />

</xs:restriction>

</xs:simpleType>

</xs:element>

<xs:element name="CUSTOMER_CATEGORY" minOccurs="0">

<xs:simpleType>

<xs:restriction base="xs:string">

<xs:maxLength value="10" />

</xs:restriction>

</xs:simpleType>

</xs:element>

<xs:element name="ADDRESS" minOccurs="0">

<xs:simpleType>

```

```

<xs:restriction base="xs:string">
    <xsmaxLength value="105" />
</xs:restriction>
</xs:simpleType>

</xs:element>

<xs:element name="CITY" minOccurs="0">
    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xsmaxLength value="30" />
        </xs:restriction>
    </xs:simpleType>
</xs:element>

<xs:element name="COUNTRY" minOccurs="0">
    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xsmaxLength value="25" />
        </xs:restriction>
    </xs:simpleType>
</xs:element>

</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>

<xs:complexType name="Mobil-Query-IO-Type">
    <xs:sequence>
        <xs:element name="CUSTOMER_NO" minOccurs="1">
            <xs:simpleType>

```

```

<xs:restriction base="xs:string">

    <xsmaxLength value="9"/>

</xs:restriction>

</xs:simpleType>

</xs:element>

<xs:element name="CELL_NO" minOccurs="1" type="xs:decimal"/>

</xs:sequence>

</xs:complexType>

</xs:complexType name="Mobil-Create-IO-Type">

<xs:sequence>

<xs:element name="CUSTOMER_NO" minOccurs="1">

<xs:simpleType>

<xs:restriction base="xs:string">

    <xsmaxLength value="9"/>

</xs:restriction>

</xs:simpleType>

</xs:element>

<xs:element name="CELL_NO" minOccurs="1" type="xs:decimal"/>

<xs:element name="Jktm-Junk-Mobil-Dtl" minOccurs="0"
maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="CUSTOMER_NO" minOccurs="1">

<xs:simpleType>

<xs:restriction base="xs:string">

    <xsmaxLength value="9"/>

</xs:restriction>

</xs:simpleType>

```

```

</xs:element>

<xs:element name="ACCOUNT_NO" minOccurs="0">

    <xs:simpleType>

        <xs:restriction base="xs:string">

            <xs:maxLength value="20"/>

        </xs:restriction>

    </xs:simpleType>

</xs:element>

<xs:element name="NAME" minOccurs="0">

    <xs:simpleType>

        <xs:restriction base="xs:string">

            <xs:maxLength value="105"/>

        </xs:restriction>

    </xs:simpleType>

</xs:element>

<xs:element name="TXNDETL" minOccurs="0">

    <xs:simpleType>

        <xs:restriction base="xs:string">

            <xs:maxLength value="7"/>

        </xs:restriction>

    </xs:simpleType>

</xs:element>

<xs:element name="STATUS" minOccurs="0">

    <xs:simpleType>

        <xs:restriction base="xs:string">

            <xs:maxLength value="10"/>

        </xs:restriction>

    </xs:simpleType>

</xs:element>

<xs:element name="CELL_NO" minOccurs="0" type="xs:decimal"/>

```

```

        </xs:sequence>

    </xs:complexType>

</xs:element>

<xs:element name="Jktm-Junk-Mobile-Dtl2" minOccurs="0">

    <xs:complexType>

        <xs:sequence>

            <xs:element name="CUSTOMER_NO" minOccurs="1">

                <xs:simpleType>

                    <xs:restriction base="xs:string">

                        <xs:maxLength value="9"/>

                    </xs:restriction>

                </xs:simpleType>

            </xs:element>

            <xs:element name="CUSTOMER_NAME" minOccurs="0">

                <xs:simpleType>

                    <xs:restriction base="xs:string">

                        <xs:maxLength value="105"/>

                    </xs:restriction>

                </xs:simpleType>

            </xs:element>

            <xs:element name="CUSTOMER_CATEGORY" minOccurs="0">

                <xs:simpleType>

                    <xs:restriction base="xs:string">

                        <xs:maxLength value="10"/>

                    </xs:restriction>

                </xs:simpleType>

            </xs:element>

            <xs:element name="ADDRESS" minOccurs="0">

                <xs:simpleType>

                    <xs:restriction base="xs:string">

```

```

        <xs:maxLength value="105" />

    </xs:restriction>

</xs:simpleType>

</xs:element>

<xs:element name="CITY" minOccurs="0">

    <xs:simpleType>

        <xs:restriction base="xs:string">

            <xs:maxLength value="30" />

        </xs:restriction>

    </xs:simpleType>

</xs:element>

<xs:element name="COUNTRY" minOccurs="0">

    <xs:simpleType>

        <xs:restriction base="xs:string">

            <xs:maxLength value="25" />

        </xs:restriction>

    </xs:simpleType>

</xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

<xs:complexType name="Mobil-Modify-IO-Type">

    <xs:sequence>

        <xs:element name="CUSTOMER_NO" minOccurs="1">

            <xs:simpleType>

                <xs:restriction base="xs:string">

```

```

        <xs:maxLength value="9" />

    </xs:restriction>

</xs:simpleType>

</xs:element>

<xs:element name="CELL_NO" minOccurs="1" type="xs:decimal" />

<xs:element name="MAKER" minOccurs="0">

    <xs:simpleType>

        <xs:restriction base="xs:string">

            <xs:maxLength value="12" />

        </xs:restriction>

    </xs:simpleType>

</xs:element>

<xs:element name="MAKERSTAMP" minOccurs="0">

    <xs:simpleType>

        <xs:restriction base="xs:string">

            <xs:maxLength value="35" />

        </xs:restriction>

    </xs:simpleType>

</xs:element>

</xs:sequence>

</xs:complexType>

```

```

<xs:complexType name="Mobil-Authorize-IO-Type">

    <xs:sequence>

        <xs:element name="CUSTOMER_NO" minOccurs="1">

            <xs:simpleType>

                <xs:restriction base="xs:string">

                    <xs:maxLength value="9" />

                </xs:restriction>

```

```

        </xs:simpleType>

    </xs:element>

    <xs:element name="CELL_NO" minOccurs="1" type="xs:decimal"/>

    <xs:element name="CHECKER" minOccurs="0">

        <xs:simpleType>

            <xs:restriction base="xs:string">

                <xs:maxLength value="12"/>

            </xs:restriction>

        </xs:simpleType>

    </xs:element>

    <xs:element name="CHECKERSTAMP" minOccurs="0">

        <xs:simpleType>

            <xs:restriction base="xs:string">

                <xs:maxLength value="35"/>

            </xs:restriction>

        </xs:simpleType>

    </xs:element>

    <xs:element name="MODNO" minOccurs="0" type="xs:decimal"/>

</xs:sequence>

</xs:complexType>

</xs:schema>

```

6.1.2 CS-CreateMobil-Req-Full-MSG.xsd

```

<?xml version="1.0" encoding="UTF-8"?>

<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns="http://fcubs.ofss.com/service/FCMobileService"
targetNamespace="http://fcubs.ofss.com/service/FCMobileService"
elementFormDefault="qualified">

    <xs:include schemaLocation="IS-Messaging.xsd"/>

    <xs:include schemaLocation="CS-Mobil-Types.xsd"/>

    <xs:element name="CREATEMOBIL_FSFS_REQ">

        <xs:complexType>

```

```

<xs:sequence>

<xs:element name="FCUBS_HEADER" type="FCUBS_HEADERType" />

<xs:element name="FCUBS_BODY">

<xs:complexType>

<xs:sequence>

<xs:annotation>

<xs:documentation xml:lang="en">This XSD Gives
Information about Full Request

</xs:documentation>

</xs:annotation>

<xs:element name="Jktm-Junk-Mobile-Full" type="Mobil-Full-
Type" />

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:schema>

```

6.1.3 CS-CreateMobil-Req-IO-MSG.xsd

```

<?xml version="1.0" encoding="UTF-8"?>

<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns="http://fcubs.ofss.com/service/FCMobileService"
targetNamespace="http://fcubs.ofss.com/service/FCMobileService"
elementFormDefault="qualified">

<xs:include schemaLocation="IS-Messaging.xsd"/>

<xs:include schemaLocation="CS-Mobil-Types.xsd"/>

<xs:element name="CREATEMOBIL_IOPK_REQ">

<xs:complexType>

<xs:sequence>

<xs:element name="FCUBS_HEADER" type="FCUBS_HEADERType" />

<xs:element name="FCUBS_BODY">

```

```

<xs:complexType>
    <xs:sequence>
        <xs:annotation>
            <xs:documentation xml:lang="en">This XSD Gives
Information about IO Request
        </xs:documentation>
    </xs:annotation>
    <xs:element name="Jktm-Junk-Mobile-IO" type="Mobil-Create-
IO-Type" />
    </xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

6.1.4 CS-CreateMobil-Res-Full-MSG.xsd

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns="http://fcubs.ofss.com/service/FCMobileService"
targetNamespace="http://fcubs.ofss.com/service/FCMobileService"
elementFormDefault="qualified">
    <xs:include schemaLocation="IS-Messaging.xsd"/>
    <xs:include schemaLocation="CS-Mobil-Types.xsd"/>
    <xs:element name="CREATEMOBIL_FSFS_RES">
        <xs:complexType>
            <xs:sequence>
                <xs:element name="FCUBS_HEADER" type="FCUBS_HEADERType" />
                <xs:element name="FCUBS_BODY" >
                    <xs:complexType>
                        <xs:sequence>
                            <xs:annotation>

```

```

        <xs:documentation xml:lang="en">This XSD Gives
Information about Full Response

        </xs:documentation>

        </xs:annotation>

        <xs:element name="Jktm-Junk-Mobile-Full" type="Mobil-Full-
Type" />

        <xs:element name="FCUBS_ERROR_RESP" type="ERRORType"
minOccurs="0" maxOccurs="unbounded" />

        <xs:element name="FCUBS_WARNING_RESP" type="WARNINGType"
minOccurs="0" maxOccurs="unbounded" />

        </xs:sequence>

        </xs:complexType>

        </xs:element>

        </xs:sequence>

        </xs:complexType>

        </xs:element>

    </xs:schema>

```

6.1.5 CS-CreateMobil-Res-PK-MSG.xsd

```

<?xml version="1.0" encoding="UTF-8"?>

<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns="http://fcubs.ofss.com/service/FCMobileService"
targetNamespace="http://fcubs.ofss.com/service/FCMobileService"
elementFormDefault="qualified">

    <xs:include schemaLocation="IS-Messaging.xsd"/>

    <xs:include schemaLocation="CS-Mobil-Types.xsd"/>

    <xs:element name="CREATEMOBIL_IOPK_RES">

        <xs:complexType>

            <xs:sequence>

                <xs:element name="FCUBS_HEADER" type="FCUBS_HEADERType" />

                <xs:element name="FCUBS_BODY">

                    <xs:complexType>

                        <xs:sequence>

```

```

<xs:annotation>

    <xs:documentation xml:lang="en">This XSD Gives
Information about PK Response

    </xs:documentation>

</xs:annotation>

<xs:choice>

    <xs:element name="Jktm-Junk-Mobile-PK" type="Mobil-PK-
Type" />

    <xs:element name="Jktm-Junk-Mobile-IO" type="Mobil-
Create-IO-Type" />

    </xs:choice>

    <xs:element name="FCUBS_ERROR_RESP" type="ERRORTYPE"
minOccurs="0" maxOccurs="unbounded" />

    <xs:element name="FCUBS_WARNING_RESP" type="WARNINGTYPE"
minOccurs="0" maxOccurs="unbounded" />

    </xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:schema>

```

6.2 WSDL file

6.2.1 FCMobileService.wsdl

```

<?xml version= "1.0" encoding="UTF-8"?>

<wsdl:definitions name="FCMobileService"

targetNamespace = "http://types.ws.gw.fcubs.ofss.com"

xmlns:tns = "http://types.ws.gw.fcubs.ofss.com"

xmlns:wsdlsoap = "http://schemas.xmlsoap.org/wsdl/soap/"

xmlns:wsdl = "http://schemas.xmlsoap.org/wsdl/"

xmlns:xs = "http://www.w3.org/2001/XMLSchema"

```

```

xmlns="http://schemas.xmlsoap.org/wsdl/"
xmlns:ns="http://fcubs.ofss.com/service/FCMobileService">

<wsdl:types>

  <xs:schema>
    <xs:import namespace="http://fcubs.ofss.com/service/FCMobileService"
      schemaLocation="..../XSD/CS-CreateMobil-Req-Full-MSG.xsd"/>
  </xs:schema>
  <xs:schema>
    <xs:import namespace="http://fcubs.ofss.com/service/FCMobileService"
      schemaLocation="..../XSD/CS-CreateMobil-Res-Full-MSG.xsd"/>
  </xs:schema>
  <xs:schema>
    <xs:import namespace="http://fcubs.ofss.com/service/FCMobileService"
      schemaLocation="..../XSD/CS-CreateMobil-Req-IO-MSG.xsd"/>
  </xs:schema>
  <xs:schema>
    <xs:import namespace="http://fcubs.ofss.com/service/FCMobileService"
      schemaLocation="..../XSD/CS-CreateMobil-Res-PK-MSG.xsd"/>
  </xs:schema>
</wsdl:types>

<wsdl:message name="CreateMobileFSReq">
  <wsdl:part name="RequestMsg" element="ns:CREATEMOBILE_FSFS_REQ"/>
</wsdl:message>

<wsdl:message name="CreateMobileFSRes">
  <wsdl:part name="ResponseMsg" element="ns:CREATEMOBILE_FSFS_RES"/>
</wsdl:message>

```

```

<wsdl:message name="CreateMobileIOReq">
  <wsdl:part name="RequestMsg" element="ns:CREATEMOBILE_IOPK_REQ"/>
</wsdl:message>

<wsdl:message name="CreateMobilePKRes">
  <wsdl:part name="ResponseMsg" element="ns:CREATEMOBILE_IOPK_RES"/>
</wsdl:message>

<wsdl:portType name="FCMobileServiceSEI" >
  <wsdl:operation name="CreateMobileIO">
    <wsdl:input message="tns:CreateMobileIOReq"/>
    <wsdl:output message="tns:CreateMobilePKRes"/>
  </wsdl:operation>

  <wsdl:operation name="CreateMobileFS">
    <wsdl:input message="tns:CreateMobileFSReq"/>
    <wsdl:output message="tns:CreateMobileFSRes"/>
  </wsdl:operation>
</wsdl:portType>

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

```

```

        <wsdlsoap:body use="literal"/>

    </wsdl:output>

</wsdl:operation>

<wsdl:operation name="CreateMobileIO">

    <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="FCMobileService">

    <wsdl:port name="FCMobileServiceSEI" binding="tns:FCMobileService">

        <wsdlsoap:address
location="http://localhost:9080/FCMobileService/services/FCMobileService"/>

    </wsdl:port>

</wsdl:service></wsdl:definitions>

```

6.3 Implementation Java files

6.3.1 FCMobileServiceImpl.java

```

/*
 * Class Name: FCMobileServiceImpl
 *
 * Date:      July 11, 2006 1:09:20 PM

```

```

*
* Copyright 2005-2011 Oracle Financial Services Software Limited
*
* 10-11, SDF I, SEEPZ, Andheri (East),
*
* Mumbai - 400 096.
*
* India
*
*
* This source is part of the General Framework and is copyrighted by
*
* Oracle Financial Services Software Limited.
*
*
* All rights reserved. No part of this work may be reproduced, stored in a
*
* retrieval system, adopted or transmitted in any form or by any means,
*
* electronic, mechanical, photographic, graphic, optic recording or otherwise,
*
* translated in any language or computer language, without the prior written
*
* permission of Oracle Financial Services Software Limited.
*
*/

```

```

package com.ofss.fcubs.gw.ws.types;

import com.iflex.fcubs.gwservices.ejb.GWEJBClient;
import com.iflex.fcubs.gwutil.GWGenUtils;
import com.iflex.fcubs.gwutil.GWProperties;
import com.iflex.fcubs.gwutil.GWPropertiesConstants;
import com.iflex.fcubs.gwutil.GWPropertiesUtil;
import com.iflex.fcubs.gwutil.logging.GWLogger;
import com.iflex.fcubs.gwutil.logging.GWLoggerProperties;
import com.iflex.fcubs.gwutil.xml.GWXMLUtils;
import com.iflex.fcubs.gwutil.JAXBContextFactory;

import javax.xml.bind.JAXBContext;
import javax.xml.bind.JAXBException;

```

```

import javax.xml.bind.Marshaller;
import javax.xml.bind.Unmarshaller;

import java.io.ByteArrayInputStream;
import java.io.ByteArrayOutputStream;

import javax.annotation.PostConstruct;
import javax.annotation.PreDestroy;

import javax.jws.WebService;
import javax.xml.ws.BindingType;

@WebService(
    portName="FCMobileServiceSEI",
    serviceName="FCMobileService",
    targetNamespace="http://types.ws.gw.fcubs.ofss.com",
    endpointInterface="com.ofss.fcubs.gw.ws.types.FCMobileServiceSEI")
@BindingType("http://schemas.xmlsoap.org/wsdl/soap/http")

public class FCMobileServiceImpl implements FCMobileServiceSEI
{
    //=====
    //===== CLASS VARIABLES =====
    //=====

    private final String g className = "FCMobileServiceImpl";
    private final String g serviceName = "FCMobileService";
    private String EJB_CALL_TYPE = "LOCAL";
    private String g_operationName = null;
    private GWProperties g_GWProperties = null;
    private GWLoggerProperties g_GWLoggerProp = null;
}

```

```

private JAXBContext context = null;

//===== INITIALIZE METHODS =====

@PostConstruct

public void init()

{
    try{
        initializeComp();
    }
    catch(Exception ex){
        ex.printStackTrace();
    }
}

@PreDestroy

public void destroy() {
    g_GWProperties = null;
    g_GWLoggerProp = null;
}

public void initializeComp() throws Exception {

    String l_confp = GWPropertiesUtil.getGWPropPath() +
GWPropertiesConstants.GW_WS_PROP_FILENAME;

    g_GWProperties = new GWProperties(l_confp);

    String loggerPath =
g_GWProperties.getProperty(GWPropertiesConstants.LOGGER_PATH);

    g_GWLoggerProp = new GWLoggerProperties(loggerPath);

    EJB_CALL_TYPE =
g_GWProperties.getProperty(GWPropertiesConstants.EJB_CALL_TYPE,GWPropertiesCons
tants.EJB_LOCAL_CALL);
}

```

```

public CREATEMOBILEFSFSRES createMobileFS(CREATEMOBILEFSFSREQ requestMsg)
{
    g_operationName = "CreateMobile";

    String l_methodName = "createMobileFS(CREATEMOBILEFSFSREQ requestMsg)";

    CREATEMOBILEFSFSRES responseMsg = null;

    String l_req_msg = null;

    String l_resp_msg = null;

    GWLogger g_gwLog = null;

    try {
        if(g_gwLog == null)

        {
            g_gwLog = new GWLogger (
g_GWLoggerProp, GWPropertiesConstants.WS_GATEWAY + "_");

        }

        g_gwLog.println (g_className,l_methodName, " - ---START - ---");

        //Marshalling Request Object to XML

        context =
JAXBContextFactory.getInstance().getContext("com.ofss.fcubs.gw.ws.types");

        Marshaller marsh = context.createMarshaller();

        marsh.setProperty(Marshaller.JAXB_FORMATTED_OUTPUT, true);

        ByteArrayOutputStream output = new ByteArrayOutputStream();

        marsh.marshal(requestMsg, output);

        l_req_msg = output.toString("utf-8");

        g_gwLog.println (g_className,l_methodName,"Request XML Message:
\n" + l_req_msg + "\n");

        l_resp_msg = callEJB(l_req_msg, g_gwLog);

        g_gwLog.println (g_className,l_methodName,"Response XML Message:
\n" + l_resp_msg + "\n");
    }
}

```

```

        //Unmarshalling Response XML to Object

        ByteArrayInputStream input = new ByteArrayInputStream
(l_resp_msg.getBytes());

        Unmarshaller unmarsh = context.createUnmarshaller();

        responseMsg = (CREATEMOBILEFSFSRES)unmarsh.unmarshal(input);

        g_gwLog.println (g_className,l_methodName, "----END----");

    }

catch (JAXBException e) {

    System.out.println("JAXBException: " + e.getMessage());

    e.printStackTrace();

}

catch(Exception ex) {

    g_gwLog.printStackTrace (g_className, l_methodName, ex);

}

finally {

    flushLogger(g_gwLog);

}

return responseMsg;

}

public CREATEMOBILEIOPKRES createMobileIO(CREATEMOBILEIOPKREQ requestMsg)

{

    g_operationName = "CreateMobile";

    String lMethodName = "createMobileIO(CREATEMOBILEIOPKREQ requestMsg)";

    CREATEMOBILEIOPKRES responseMsg = null;

    String l_req_msg = null;

```

```

String l_resp_msg = null;

GWLogger g_gwLog = null;

try {
    if(g_gwLog == null)
    {
        g_gwLog = new GWLogger (
            g_GWLoggerProp, GWPropertiesConstants.WS_GATEWAY + "_");
    }

    g_gwLog.println (g_className,l_methodName, " - ---START - ---");

    //Marshalling Request Object to XML

    context =
JAXBContextFactory.getInstance().getContext("com.ofss.fcubs.gw.ws.types");

    Marshaller marsh = context.createMarshaller();

    marsh.setProperty(Marshaller.JAXB_FORMATTED_OUTPUT, true);

    ByteArrayOutputStream output = new ByteArrayOutputStream();

    marsh.marshal(requestMsg, output);

    l_req_msg = output.toString("utf-8");

    g_gwLog.println (g_className,l_methodName,"Request XML Message:
\n" + l_req_msg + "\n");

    l_resp_msg = callEJB(l_req_msg, g_gwLog);

    g_gwLog.println (g_className,l_methodName,"Response XML Message:
\n" + l_resp_msg + "\n");

    //Unmarshalling Response XML to Object

    ByteArrayInputStream input = new ByteArrayInputStream
(l_resp_msg.getBytes());

    Unmarshaller unmarsh = context.createUnmarshaller();

    responseMsg = (CREATEMOBILEIOPKRES)unmarsh.unmarshal(input);

    g_gwLog.println (g_className,l_methodName, "----END----");
}

```

```

        }

    catch (JAXBException e) {
        System.out.println("JAXBException: " + e.getMessage());
        e.printStackTrace();
    }

    catch(Exception ex) {
        g_gwLog.printStackTrace (g_className, l_methodName, ex);
    }

    finally {
        flushLogger(g_gwLog);
    }

    return responseMsg;
}

private String callEJB(String p_reqMsg, GWLogger g_gwLog) throws Exception
{
    String lMethodName = "callEJB(String p_reqMsg, String g_gwLog)";
    String l_reqMsg = p_reqMsg;
    String l_respMsg = null;

    String l_replNS = "xmlns=\"http://fcubs.ofss.com/service/" + g_serviceName
+ "\"";

    g_gwLog.println (g_className,l_methodName,"----START----");
    String l_reqMsg_rootElement = GWGenUtils.getRootElement(l_reqMsg);

    String l_respMsg_rootElement =
l_reqMsg_rootElement.replaceAll("_REQ", "_RES");

    String l_controlMetaData = " <FCUBS_CONTROL_METADATA> " +

```

```

    "\n\t<COMM_DET> " +
    "\n\t\t<GATEWAY> " +
GWPropertiesConstants.WS_GATEWAY + "</GATEWAY> " +
    "\n\t</COMM_DET> " +
    "\n\t<MSG_PROC_DET> " +
    "\n\t\t<SERVICE>" + g_serviceName +
"</SERVICE>" +
    "\n\t\t<OPERATION>" + g_operationName +
"</OPERATION>" +
    "\n\t</MSG_PROC_DET> " +
"\n</FCUBS_CONTROL_METADATA> ;

g_gwLog.println (g_className, l_methodName,"l_controlMetaData = \n" +
l_controlMetaData + "\n");

GWEJBClient l_GWEJBClient = new GWEJBClient(g_GWProperties);

if ((GWPropertiesConstants.EJB_LOCAL_CALL).equals(EJB_CALL_TYPE)) {
    g_gwLog.println (g_className,l_methodName,"Calling
GWEJBClient.callLocaleEJB");
    l_respMsg = l_GWEJBClient.callLocaleEJB(l_reqMsg, l_controlMetaData);
    g_gwLog.println (g_className,l_methodName,"After calling
GWEJBClient.callLocaleEJB");
}

else if ((GWPropertiesConstants.EJB_REMOTE_CALL).equals(EJB_CALL_TYPE)) {
    g_gwLog.println (g_className,l_methodName, "Calling
GWEJBClient.callRemoteEJB");
    l_respMsg = l_GWEJBClient.callRemoteEJB(l_reqMsg, l_controlMetaData);
    g_gwLog.println (g_className, l_methodName, "After calling
GWEJBClient.callRemoteEJB");
}

g_gwLog.println (g_className,l_methodName,"Response message from EJB: \n" +
l_respMsg + "\n");

```

```

g_gwLog.println (g_className,l_methodName,"Calling GWGenUtils.replace");

if( l_respMsg.indexOf("<" + l_respMsg_rootElement) != -1) {

    l_respMsg = GWGenUtils.replace(l_respMsg, "<" +l_respMsg_rootElement,
">","<" +l_respMsg_rootElement+"\t" + l_replNS , false);

}

else {

    String lErrMsg = "Correct root tag (<" +l_respMsg_rootElement+">) +" +
missing in the Request Message";

    g_gwLog.println (g_className, l_methodName, lErrMsg + ":" +
l_respMsg);

    throw new Exception(lErrMsg);

}

g_gwLog.println (g_className, l_methodName, "----After Calling
GWGenUtils.replace---");

g_gwLog.println (g_className, l_methodName, "Response message to be sent:
\n" + l_respMsg + "\n");

g_gwLog.println (g_className, l_methodName, "----END----");

return l_respMsg;

}

private void flushLogger(GWLogger g_gwLog)

{

    if (g_gwLog != null)

    {

        g_gwLog.flushLogger ();

        g_gwLog = null;

    }

}

}

```

6.4 Gateway static data from Open Development

6.4.1 GWTB AMEND FIELDS JKDMOBIL.INC

```
DELETE GWTB_AMEND_FIELDS A WHERE A.RAD_FUNCTION_ID = 'JKDMOBIL' ;  
  
INSERT INTO  
GWTB_AMEND_FIELDS(NODE_NAME, FIELD_NAME, SERVICE_NAME, OPERATION_CODE, RAD_FUNCTION_ID)  
VALUES('JKTJUNK_MOBILE', 'MAKER_ID', NULL, 'JKDMOBIL MODIFY', 'JKDMOBIL');  
  
INSERT INTO  
GWTB_AMEND_FIELDS(NODE_NAME, FIELD_NAME, SERVICE_NAME, OPERATION_CODE, RAD_FUNCTION_ID)  
VALUES('JKTJUNK_MOBILE', 'MAKER_DT_STAMP', NULL, 'JKDMOBIL MODIFY', 'JKDMOBIL');  
  
COMMIT;
```

6.4.2 GWTB AMEND NODES JKDMOBIL.INC

```
DELETE GWTB_AMEND_NODES A WHERE A.RAD_FUNCTION_ID = 'JKDMOBIL' ;  
  
INSERT INTO  
GWTB_AMEND_NODES(NODE_NAME, NEW_ALLOWED, DELETE_ALLOWED, ALL_RECORDS, SERVICE_NAME,  
OPERATION_CODE, RAD_FUNCTION_ID)  
VALUES('JKTJUNK_MOBILE', 'N', 'N', 'Y', NULL, 'JKDMOBIL_EXECUTEQUERY', 'JKDMOBIL')  
;  
  
INSERT INTO  
GWTB_AMEND_NODES(NODE_NAME, NEW_ALLOWED, DELETE_ALLOWED, ALL_RECORDS, SERVICE_NAME,  
OPERATION_CODE, RAD_FUNCTION_ID)  
VALUES('JKTJUNK_MOBILE_DTL', 'N', 'N', 'Y', NULL, 'JKDMOBIL_EXECUTEQUERY', 'JKDMOBIL')  
;  
  
INSERT INTO  
GWTB_AMEND_NODES(NODE_NAME, NEW_ALLOWED, DELETE_ALLOWED, ALL_RECORDS, SERVICE_NAME,  
OPERATION_CODE, RAD_FUNCTION_ID)  
VALUES('JKTJUNK_MOBILE_DTL2', 'N', 'N', 'Y', NULL, 'JKDMOBIL_EXECUTEQUERY', 'JKDMOBIL')  
;  
  
INSERT INTO  
GWTB_AMEND_NODES(NODE_NAME, NEW_ALLOWED, DELETE_ALLOWED, ALL_RECORDS, SERVICE_NAME,  
OPERATION_CODE, RAD_FUNCTION_ID)  
VALUES('JKTJUNK_MOBILE', 'N', 'N', 'Y', NULL, 'JKDMOBIL_NEW', 'JKDMOBIL')  
;  
  
INSERT INTO  
GWTB_AMEND_NODES(NODE_NAME, NEW_ALLOWED, DELETE_ALLOWED, ALL_RECORDS, SERVICE_NAME,  
OPERATION_CODE, RAD_FUNCTION_ID)  
VALUES('JKTJUNK_MOBILE_DTL', 'N', 'N', 'Y', NULL, 'JKDMOBIL_NEW', 'JKDMOBIL')  
;  
  
INSERT INTO  
GWTB_AMEND_NODES(NODE_NAME, NEW_ALLOWED, DELETE_ALLOWED, ALL_RECORDS, SERVICE_NAME,  
OPERATION_CODE, RAD_FUNCTION_ID)  
VALUES('JKTJUNK_MOBILE_DTL2', 'N', 'N', 'Y', NULL, 'JKDMOBIL_NEW', 'JKDMOBIL');
```

```

INSERT INTO
GWTB_AMEND_NODES(NODE_NAME,NEW_ALLOWED,DELETE_ALLOWED,ALL_RECORDS,SERVICE_NAME
,OPERATION_CODE,RAD_FUNCTION_ID)
VALUES('JKTM_JUNK_MOBILE','N','N','Y',NULL,'JKDMOBIL MODIFY','JKDMOBIL');

INSERT INTO
GWTB_AMEND_NODES(NODE_NAME,NEW_ALLOWED,DELETE_ALLOWED,ALL_RECORDS,SERVICE_NAME
,OPERATION_CODE,RAD_FUNCTION_ID)
VALUES('JKTM_JUNK_MOBILE_DTL','N','N','Y',NULL,'JKDMOBIL MODIFY','JKDMOBIL');

INSERT INTO
GWTB_AMEND_NODES(NODE_NAME,NEW_ALLOWED,DELETE_ALLOWED,ALL_RECORDS,SERVICE_NAME
,OPERATION_CODE,RAD_FUNCTION_ID)
VALUES('JKTM_JUNK_MOBILE_DTL2','N','N','Y',NULL,'JKDMOBIL MODIFY','JKDMOBIL');

COMMIT;

```

6.4.3 GWTM AMEND FIELDS JKDMOBIL.INC

```

DELETE GWTM_AMEND_FIELDS A WHERE A.EXT_SYSTEM = 'FLEXCUBE' AND
RAD_FUNCTION_ID = 'JKDMOBIL' ;

INSERT INTO
GWTM_AMEND_FIELDS(EXT_SYSTEM,SOURCE_OPERATION,NODE_NAME,FIELD_NAME,RAD_FUNCTION_ID)
VALUES('FLEXCUBE','JKDMOBIL MODIFY','JKTM_JUNK_MOBILE','MAKER_ID','JKDMOBIL');

INSERT INTO
GWTM_AMEND_FIELDS(EXT_SYSTEM,SOURCE_OPERATION,NODE_NAME,FIELD_NAME,RAD_FUNCTION_ID)
VALUES('FLEXCUBE','JKDMOBIL MODIFY','JKTM_JUNK_MOBILE','MAKER_DT_STAMP','JKDMOBIL');

COMMIT;

```

6.4.4 GWTM AMEND MASTER JKDMOBIL.INC

```

DELETE GWTM_AMEND_MASTER A WHERE A.EXT_SYSTEM = 'FLEXCUBE' AND
RAD_FUNCTION_ID = 'JKDMOBIL' ;

INSERT INTO
GWTM_AMEND_MASTER(EXT_SYSTEM,SOURCE_OPERATION,SERVICE_NAME,OPERATION_CODE,MAKE
R_ID,CHECKER_ID,MAKER_DT_STAMP,CHECKER_DT_STAMP,ONCE_AUTH,AUTH_STAT,RECORD_STA
T,MOD_NO,RAD_FUNCTION_ID)
VALUES('FLEXCUBE','JKDMOBIL_EXECUTEQUERY',NULL,'JKDMOBIL_EXECUTEQUERY','RADTOO
L','RADTOOL',TO_DATE('18-MAR-2011','DD-MON-RRRR'),TO_DATE('18-MAR-2011','DD-
MON-RRRR'),'Y','A','O',1,'JKDMOBIL');

INSERT INTO
GWTM_AMEND_MASTER(EXT_SYSTEM,SOURCE_OPERATION,SERVICE_NAME,OPERATION_CODE,MAKE
R_ID,CHECKER_ID,MAKER_DT_STAMP,CHECKER_DT_STAMP,ONCE_AUTH,AUTH_STAT,RECORD_STA
T,MOD_NO,RAD_FUNCTION_ID)
VALUES('FLEXCUBE','JKDMOBIL_NEW',NULL,'JKDMOBIL_NEW','RADTOOL','RADTOOL',TO_DA
TE('18-MAR-2011','DD-MON-RRRR'),TO_DATE('18-MAR-2011','DD-MON-
RRRR'),'Y','A','O',1,'JKDMOBIL');

```

```

INSERT INTO
GWTM_AMEND_MASTER(EXT_SYSTEM,SOURCE_OPERATION,SERVICE_NAME,OPERATION_CODE,MAKE
R_ID,CHECKER_ID,MAKER_DT_STAMP,CHECKER_DT_STAMP,ONCE_AUTH,AUTH_STAT,RECORD_STA
T,MOD_NO,RAD_FUNCTION_ID)
VALUES('FLEXCUBE','JKDMOBIL MODIFY',NULL,'JKDMOBIL MODIFY','RADTOOL','RADTOOL'
,TO_DATE('18-MAR-2011','DD-MON-RRRR'),TO_DATE('18-MAR-2011','DD-MON-
RRRR'),'Y','A','O',1,'JKDMOBIL');

COMMIT;

```

6.4.5 GWTM AMEND NODES JKDMOBIL.INC

```

DELETE GWTM_AMEND_NODES A WHERE A.EXT_SYSTEM = 'FLEXCUBE' AND RAD_FUNCTION_ID
= 'JKDMOBIL';

INSERT INTO
GWTM_AMEND_NODES(EXT_SYSTEM,SOURCE_OPERATION,NODE_NAME,NEW_ALLOWED,DELETE_ALLO
WED,ALL_RECORDS,RAD_FUNCTION_ID)
VALUES('FLEXCUBE','JKDMOBIL_EXECUTEQUERY','JKTM_JUNK_MOBILE','N','N','Y','JKDM
OBIL');

INSERT INTO
GWTM_AMEND_NODES(EXT_SYSTEM,SOURCE_OPERATION,NODE_NAME,NEW_ALLOWED,DELETE_ALLO
WED,ALL_RECORDS,RAD_FUNCTION_ID)
VALUES('FLEXCUBE','JKDMOBIL_EXECUTEQUERY','JKTM_JUNK_MOBILE_DTL','N','N','Y','
JKDMOBIL');

INSERT INTO
GWTM_AMEND_NODES(EXT_SYSTEM,SOURCE_OPERATION,NODE_NAME,NEW_ALLOWED,DELETE_ALLO
WED,ALL_RECORDS,RAD_FUNCTION_ID)
VALUES('FLEXCUBE','JKDMOBIL_EXECUTEQUERY','JKTM_JUNK_MOBILE_DTL2','N','N','Y',
'JKDMOBIL');

INSERT INTO
GWTM_AMEND_NODES(EXT_SYSTEM,SOURCE_OPERATION,NODE_NAME,NEW_ALLOWED,DELETE_ALLO
WED,ALL_RECORDS,RAD_FUNCTION_ID)
VALUES('FLEXCUBE','JKDMOBIL_NEW','JKTM_JUNK_MOBILE','N','N','Y','JKDMOBIL');

INSERT INTO
GWTM_AMEND_NODES(EXT_SYSTEM,SOURCE_OPERATION,NODE_NAME,NEW_ALLOWED,DELETE_ALLO
WED,ALL_RECORDS,RAD_FUNCTION_ID)
VALUES('FLEXCUBE','JKDMOBIL_NEW','JKTM_JUNK_MOBILE_DTL','N','N','Y','JKDMOBIL
');

INSERT INTO
GWTM_AMEND_NODES(EXT_SYSTEM,SOURCE_OPERATION,NODE_NAME,NEW_ALLOWED,DELETE_ALLO
WED,ALL_RECORDS,RAD_FUNCTION_ID)
VALUES('FLEXCUBE','JKDMOBIL_NEW','JKTM_JUNK_MOBILE_DTL2','N','N','Y','JKDMOBIL
');

INSERT INTO
GWTM_AMEND_NODES(EXT_SYSTEM,SOURCE_OPERATION,NODE_NAME,NEW_ALLOWED,DELETE_ALLO
WED,ALL_RECORDS,RAD_FUNCTION_ID)
VALUES('FLEXCUBE','JKDMOBIL MODIFY','JKTM_JUNK_MOBILE','N','N','Y','JKDMOBIL');

INSERT INTO
GWTM_AMEND_NODES(EXT_SYSTEM,SOURCE_OPERATION,NODE_NAME,NEW_ALLOWED,DELETE_ALLO
WED,ALL_RECORDS,RAD_FUNCTION_ID)
VALUES('FLEXCUBE','JKDMOBIL MODIFY','JKTM_JUNK_MOBILE_DTL','N','N','Y','JKDMOB
IL');

```

```
INSERT INTO
GWTM_AMEND_NODES(EXT_SYSTEM,SOURCE_OPERATION,NODE_NAME,NEW_ALLOWED,DELETE_ALLO
WED,ALL_RECORDS,RAD_FUNCTION_ID)
VALUES('FLEXCUBE','JKDMOBIL MODIFY','JKTM_JUNK_MOBILE_DTL2','N','N','Y','JKDMO
BIL');

COMMIT;
```



Web Service Development
[October] [2015]
Version 12.1.0.0.0

Oracle Financial Services Software Limited
Oracle Park
Off Western Express Highway
Goregaon (East)
Mumbai, Maharashtra 400 063
India

Worldwide Inquiries:
Phone: +91 22 6718 3000
Fax: +91 22 6718 3001
www.oracle.com/financialservices/

Copyright © [2007], [2015], Oracle and/or its affiliates. All rights reserved.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate failsafe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

This software or hardware and documentation may provide access to or information on content, products and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.