1. OBIEE Metadata Repository Deployment Guide

1.1 Introduction

The Oracle Business Intelligence Server is a stand-alone process that maintains the logical data model which it provides to BI Presentation Services via ODBC. Metadata is maintained for the data model in a local proprietary file called the repository file (rpd). On the back-end, the BI Server connects to customer data stores via data source adaptors.

1.1.1 Layers in RPD

The Physical layer defines the data sources to which Oracle BI Server submits queries and the relationships between physical databases and other data sources that are used to process multiple data source queries. The recommended way to populate the Physical layer is by importing metadata from databases and other data sources. The data sources can be of the same or different varieties. You can import schemas or portions of schemas from existing data sources. Additionally, you can create objects in the Physical layer manually.

When you import metadata, many of the properties of the data sources are configured automatically based on the information gathered during the import process. After import, you can also define other attributes of the physical data sources, such as join relationships, that might not exist in the data source metadata. There can be one or more data sources in the Physical layer, including databases, spreadsheets, and XML documents. In this example, you import and configure tables from the sample SH schema included with the Oracle 10g database.

The Business Model and Mapping layer of the Administration Tool defines the business, or logical, model of the data and specifies the mappings between the business model and the Physical layer schemas. This is where the physical schemas are simplified to form the basis for the users' view of the data. The Business Model and Mapping layer of the Administration Tool can contain one or more business model objects. A business model object contains the business model definitions and the mappings from logical to physical tables for the business model.

The main purpose of the business model is to capture how users think about their business using their own vocabulary. The business model simplifies the physical schema and maps the users' business vocabulary to physical sources. Most of the vocabulary translates into logical columns in the business model. Collections of logical columns form logical tables. Each logical column (and hence each logical table) can have one or more physical objects as sources.

There are two main categories of logical tables: fact and dimension. Logical fact tables contain the measures by which an organization gauges its business operations and performance. Logical dimension tables contain the data used to qualify the facts.

The Presentation layer is built after the Physical layer and Business Model and Mapping layer and adds a level of abstraction over the Business Model and Mapping layer. It is the view of the data seen by end users in client tools and applications, such as Oracle BI Answers. The Presentation layer provides a means to further simplify or customize the Business Model and Mapping layer for end users. For example, you can organize columns into catalogs and folders.

Simplifying the view of the data for users makes it easier to craft queries based on users' business needs because you can expose only the data that is meaningful to the users, organize the data in a way that aligns with the way users think about the data, and rename data as necessary for the set of users.

You typically create Presentation layer objects by dragging objects from the Business Model and Mapping layer. Corresponding objects are automatically created in the Presentation layer. Presentation layer objects can then be renamed and reorganized.

1.1.2 FCUBS OBIEE RPD

In FCUBS OBIEE we have module specific RPDs. They are named in the format Module Name.RPD (for example FT.RPD, SI.RPD etc.). In this document we will see how merge all module specific RPDs to FCUBS Metadata RPD. We will also see how to deploy sample dashboards generated using these RPDs.

1.2 Prerequisites

1.2.1 Hardware / Software Required

Server	Oracle 10G AS 10.1.3.3, OBI 10.1.3.3.1, Oracle 10g client, OBIEE 11.1.1.6.0
Client Workstations	Internet Explorer 6.0, Win2K/Windows XP

1.3 Deployment in OBIEE 10g

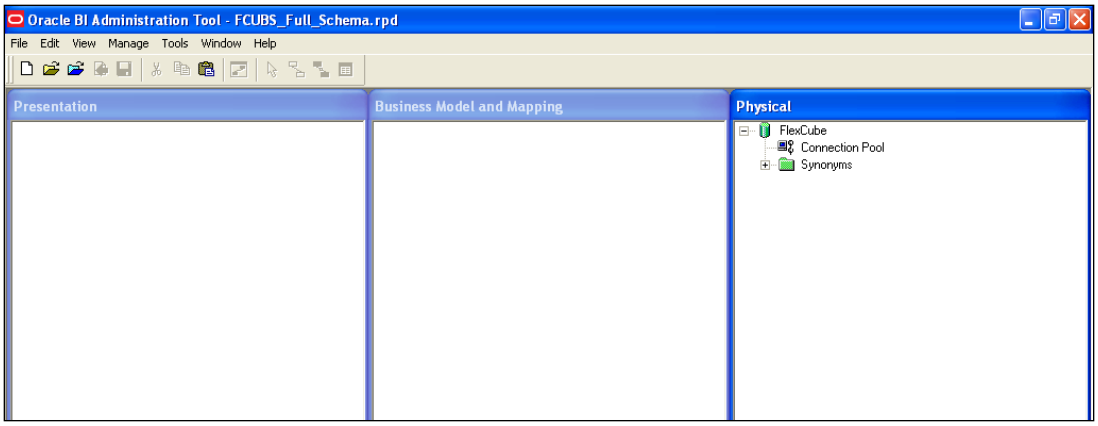
There are two major steps in deploying an OBIEE Dashboard, first we need to create the data object metadata (.rpd file) in the OBIEE Administration tool. Then, using the OBIEE Web, we create the Answers based on the .rpd file and assemble them in a Dashboard.

If the OBIEE server is present in Linux machine then merging of module specific repositories should be done using OBIEE Administration Tool installed on Windows machine and the merged repository should be copied from Windows to Linux machine in binary mode.

1.3.1 RPD Deployment Steps:

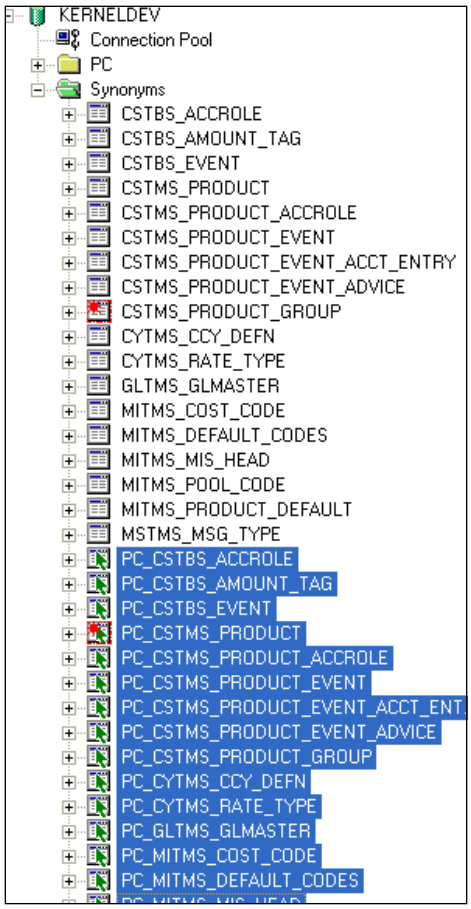
1. Open the following shipment media directory for RPD files. For the modules where modularity has been done, the RPDs will be under
   <<ShipmentMedia>>\SOFT\FLEXCUBE_Kernel\<Release_Folder>\MAIN\<<Module Code>>\OBIEE
   For example,
   <<ShipmentMedia>>\SOFT\FLEXCUBE_Kernel\<Release_Folder>\MAIN\BC\OBIEE

   For the modules where modularity has not been done, the RPDs will be under
   <<ShipmentMedia>>\SOFT\FLEXCUBE_Kernel\<Release_Folder>\MAIN\Other_Modules\OBIEE
2. Copy and paste the released .rpd files into local installation directory (D:\OBIEE\RPD). If the released .rpd files already there in the local installation directory overwrite them with the newly released files.
3. Open the FCUBS_Full_Schema.RPD using OBIEE Administration Tool, which will have following tree structure in it.

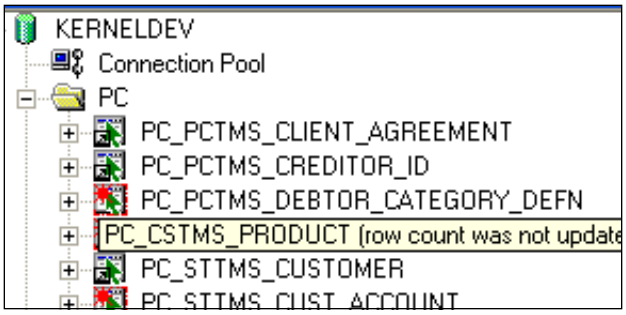


4. Open each remaining module specific RPDs (Ex. FT.rpd, PC.rpd, FX.rpd Etc.), one at a time using Administration Tool and do the following. (Username/Password : Administrator/Administrator)

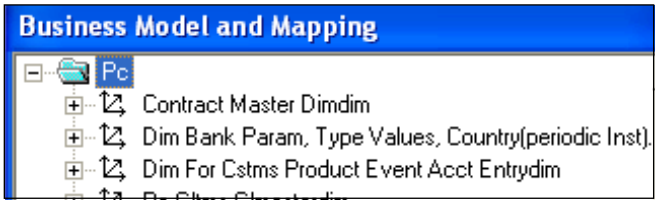
   Copy the aliases in the Synonyms folder and paste it to Synonyms folder of 'FCUBS_Full_Schema.RPD'.

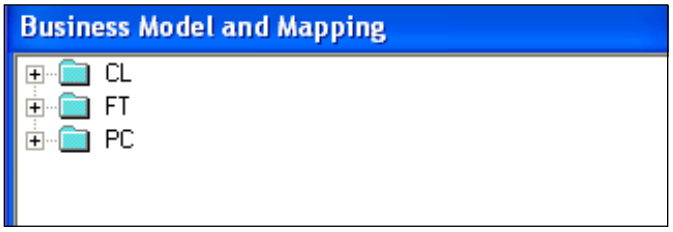


5. Copy and paste the module specific physical folder to the destination repository under database in the physical layer.



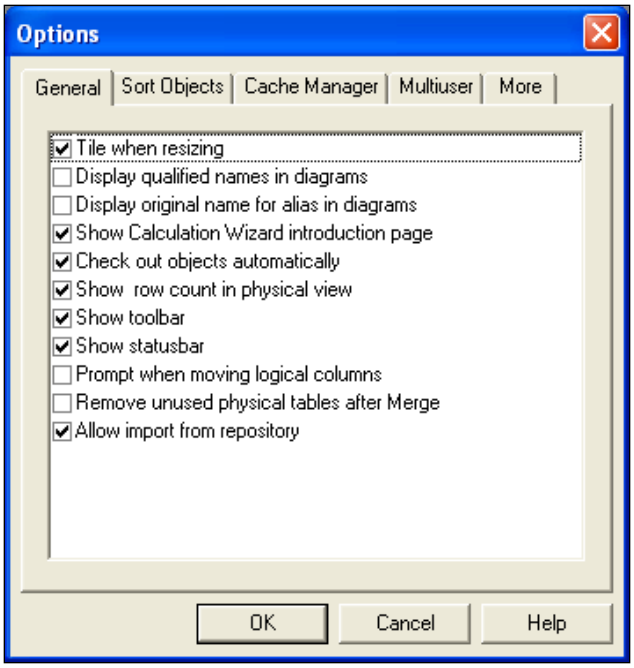
6. Copy and paste the module specific business model to the business model and mapping layer of Full schema repository.



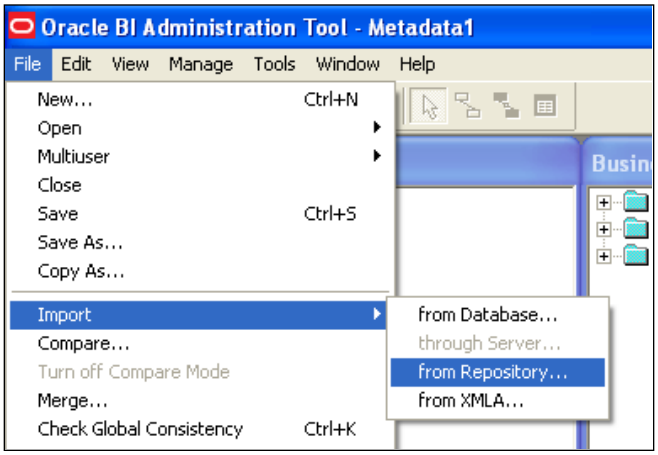


7. Copy and paste the module specific presentation catalog(s) to the presentation layer of Full schema repository.

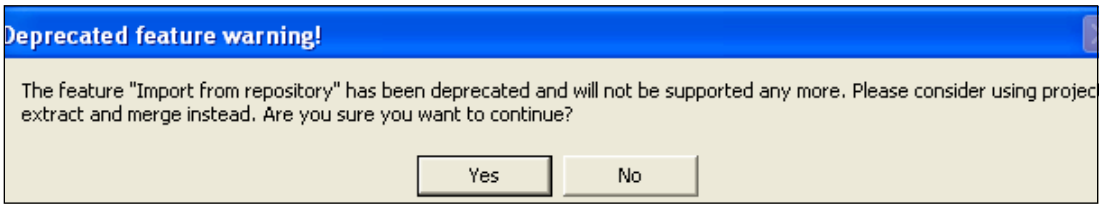
8. Close the repository and continue with other module repositories.
9. Save the Full Schema repository.
10. Import Initialization Blocks and Variables
11. From Full Schema RPD do the following
12. Enable the 'Import from Repository' by checking the option in Tools->Options as follows.



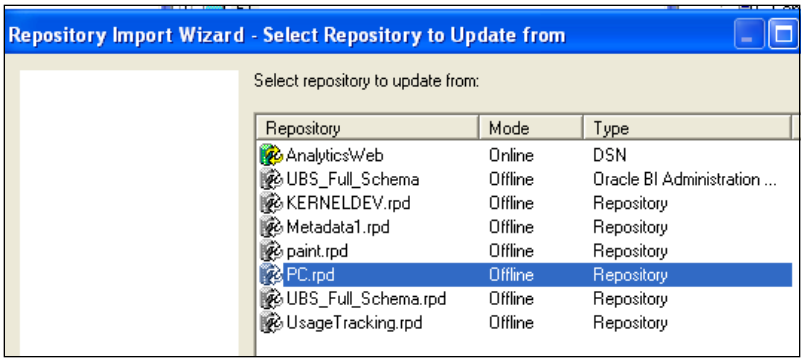
13. Click ‘OK’ and the following screen is displayed:



14. Ignore the following alert and click ‘Yes’.

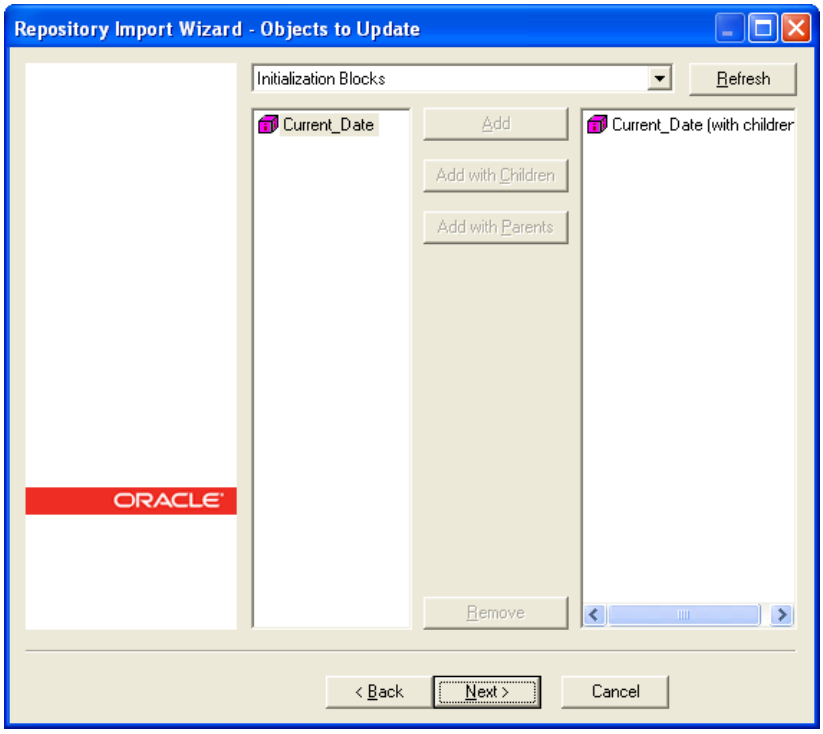


15. Select the module specific source repository from the select repository to update from window as follows:

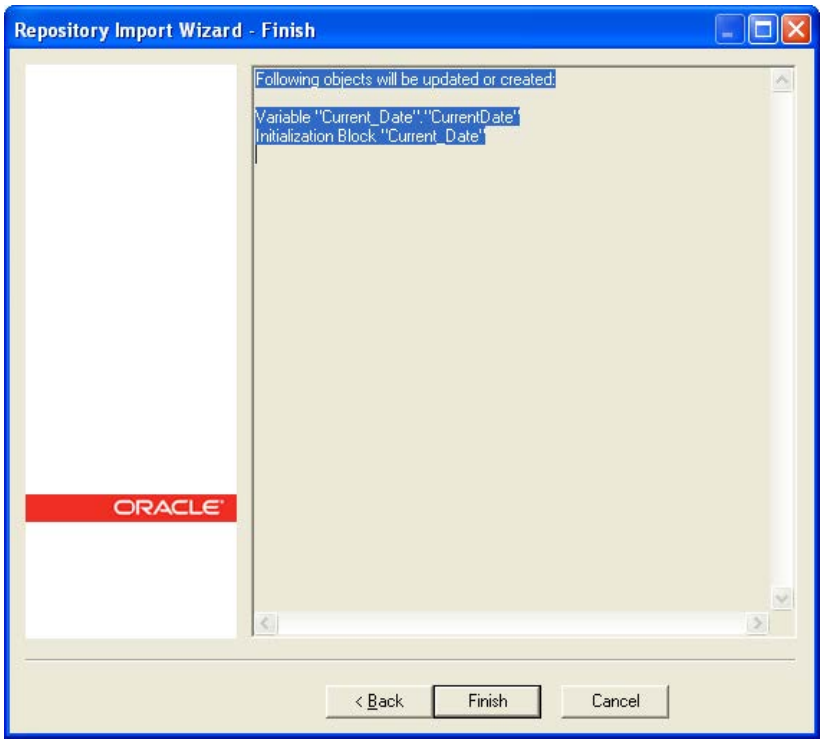


Note: Select Repository to update the list of repositories available in OracleBI\server\Repository only. So, temporarily keep module specific repositories in this location and remove the repositories once this step is completed.

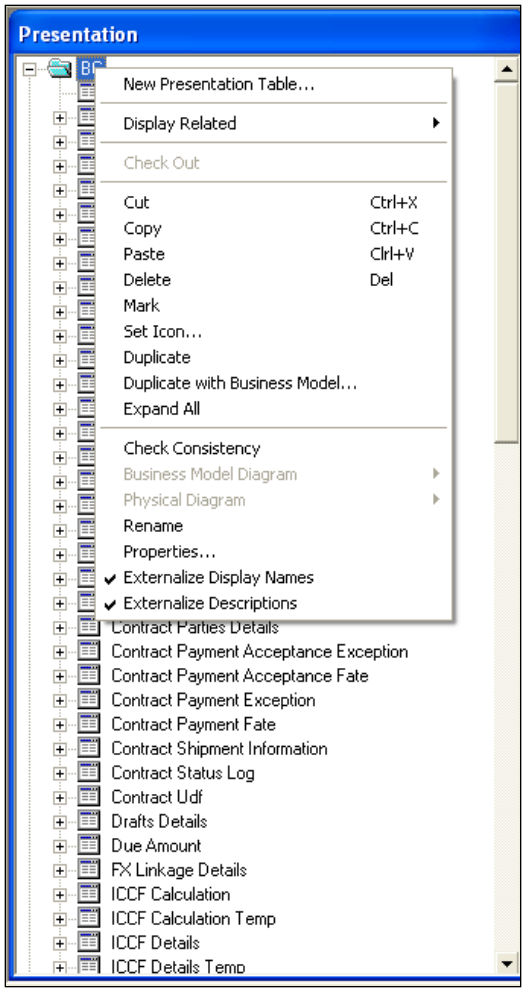
16. Click ‘Next’, will show you the objects needs to be imported. Select ‘Initialization Block’ from the drop-down menu and click on ‘Add with Children’.



17. Click ‘Next’ and click ‘Finish’.

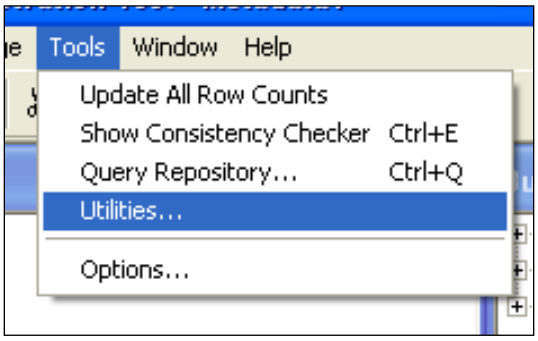


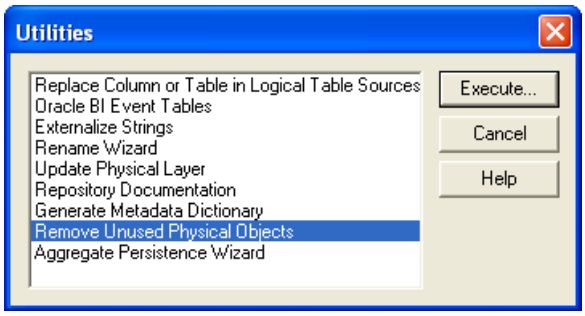
18. If labels need to be NLS enabled, externalize the each presentation catalog as follows.

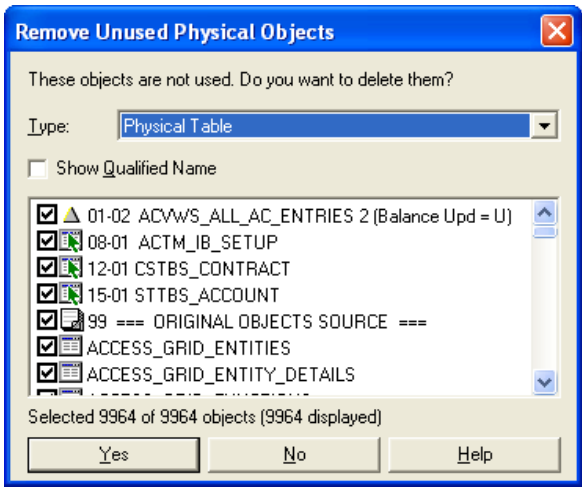


19. Save the Full Schema repository.

20. Remove Unused Physical Objects as follows:

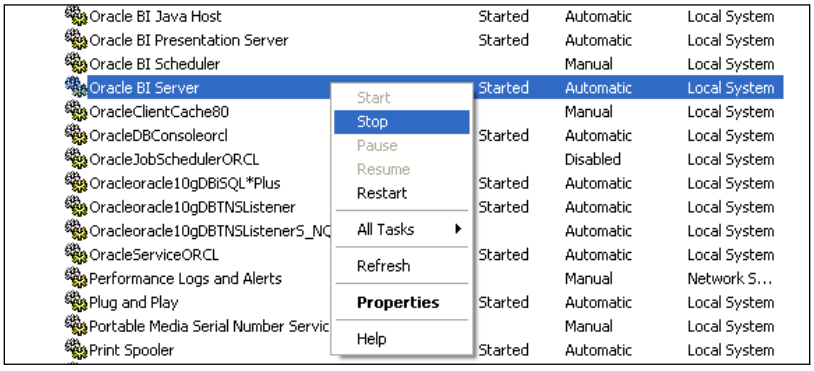






21. Click ‘Yes’

22. Stop the Oracle BI Server & Oracle BI Presentation server services from services window.



23. If server is present in Linux then go to <InstallDrive>/OracleBI/setup folder and execute the following command to stop BI Server and BI Presentation Server.

    ./run-sa.sh stop

    ./run-saw.sh stop

24. Rename the repository to FlexCube.rpd and put in following location:

    OracleBI\server\Repository

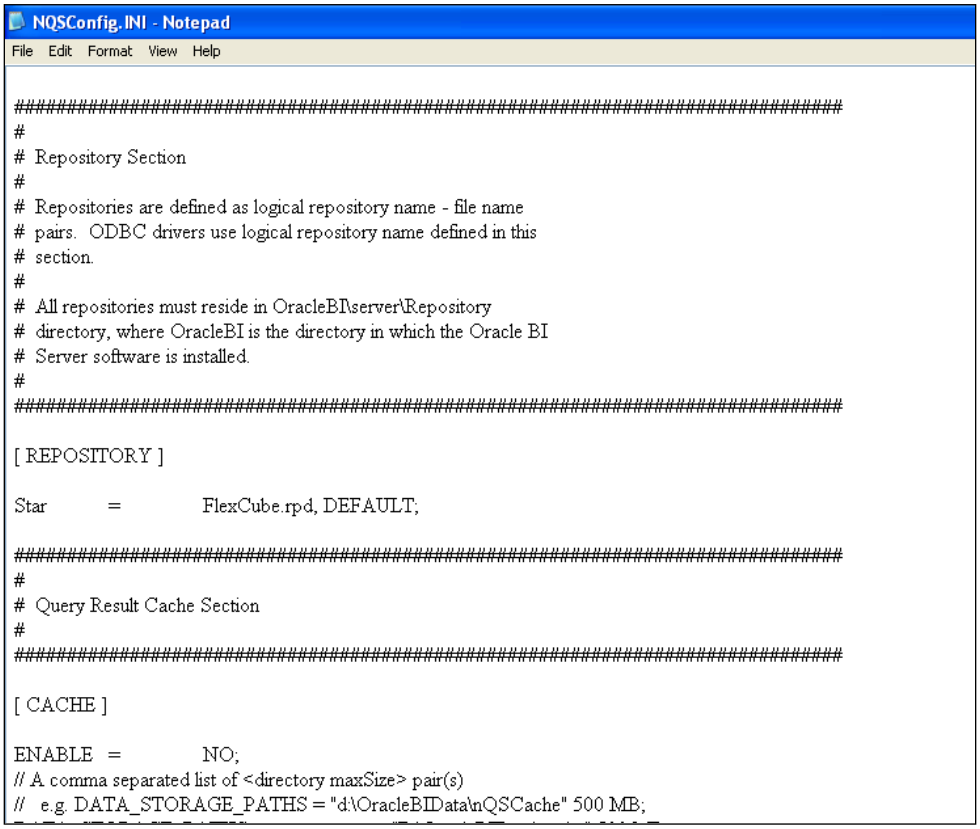
    If Server is present in Linux machine then copy FlexCube.rpd in binary mode to:

    <OracleBI InstallDir>\server\Repository

25. Open OracleBI\server\config\NQSConfig.INI and change the property as below:

    Star=FlexCube.rpd, DEFAULT;

    Under CACHE set ENABLE = NO

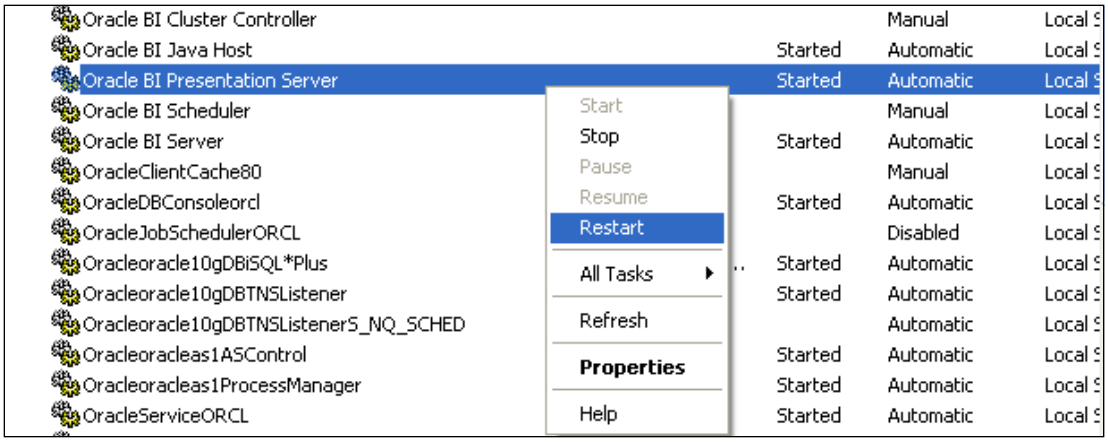


1.3.2 Web Catalog Deployment Steps

In OracleBIData\web\catalog create a folder called 'FlexCube'. Change catalog path in OracleBIData\web\config\instanceconfig.xml to point to FlexCube as follows.

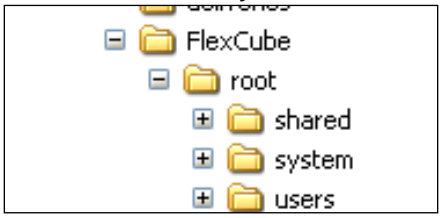
```
<?xml version="1.0" encoding="utf-8"?>
<WebConfig>
  <ServerInstance>
  <DSN>AnalyticsWeb</DSN>
<CatalogPath>D:/OracleBIData/web/catalog/FlexCube</CatalogPath>
 <JavaHome>C:\Program Files\Java\jdk1.5.0_06</JavaHome>
 <BIforOfficeURL>client/OracleBIOffice.exe</BIforOfficeURL>
```

1. Restart the presentation services.



2. If server is present in Linux then go to <InstallDrive>/OracleBI/setup folder and execute the following command to start BI Presentation Server.
   ./run-saw.sh start

3. You will see directory created in following structure in OracleBIData\web\catalog.



4. Open the following shipment media directory for Web catalogs.
   <<Shipment Media>>\SOFT\FLEXCUBE_Kernel\<Release_Folder>\<<Module Code>>\OBIEE

5. Copy and paste the released .zip files into local directory (D:\OBIEE\WebCatalog). Overwrite with released files, if files already exist.

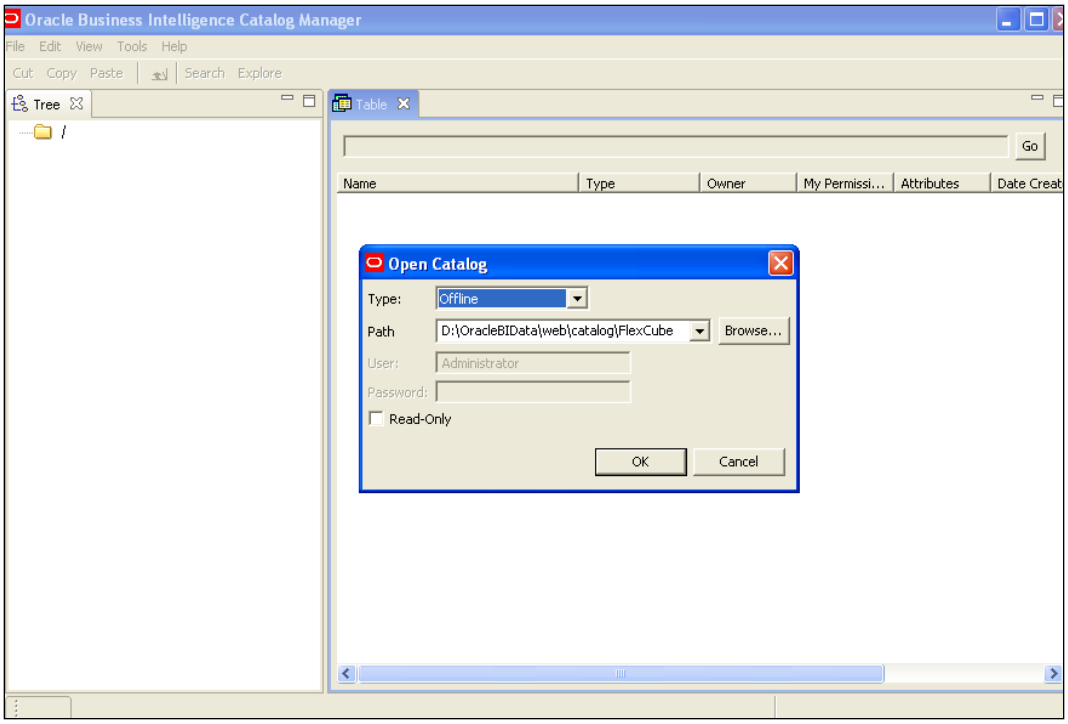
6. Extract all the zip files.

7. Copy and paste the extracted files (Except .xml files) into OracleBIData\web\catalog\FlexCube\root\shared

   Copy and paste the .xml files into OracleBI\web\msgdb\customMessages.

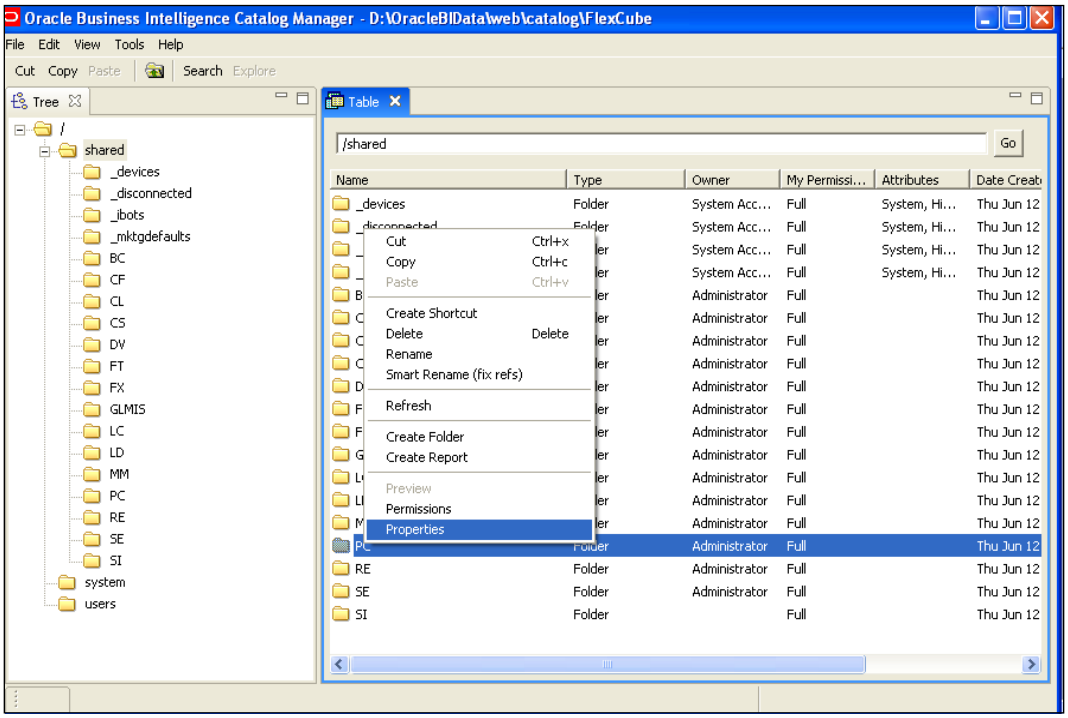
1.3.3 Web Catalog Permissions Changes

1. Once all the module specific web catalogs are extracted to the above location, use catalog manager to change the permissions of all presentation objects. This is required if the user wants to edit the saved answers and dashboard.

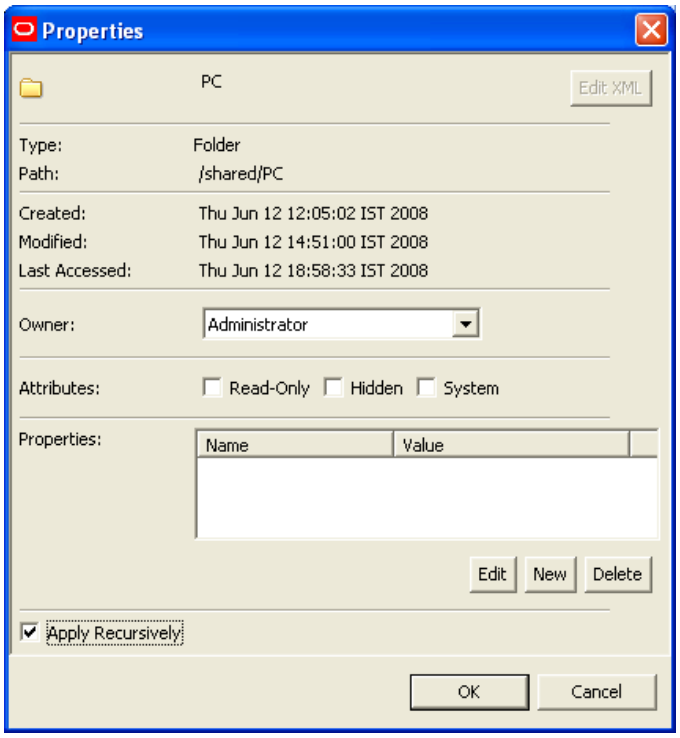


2. Open FlexCube catalog in the offline mode as shown above and change the permissions as shown below.

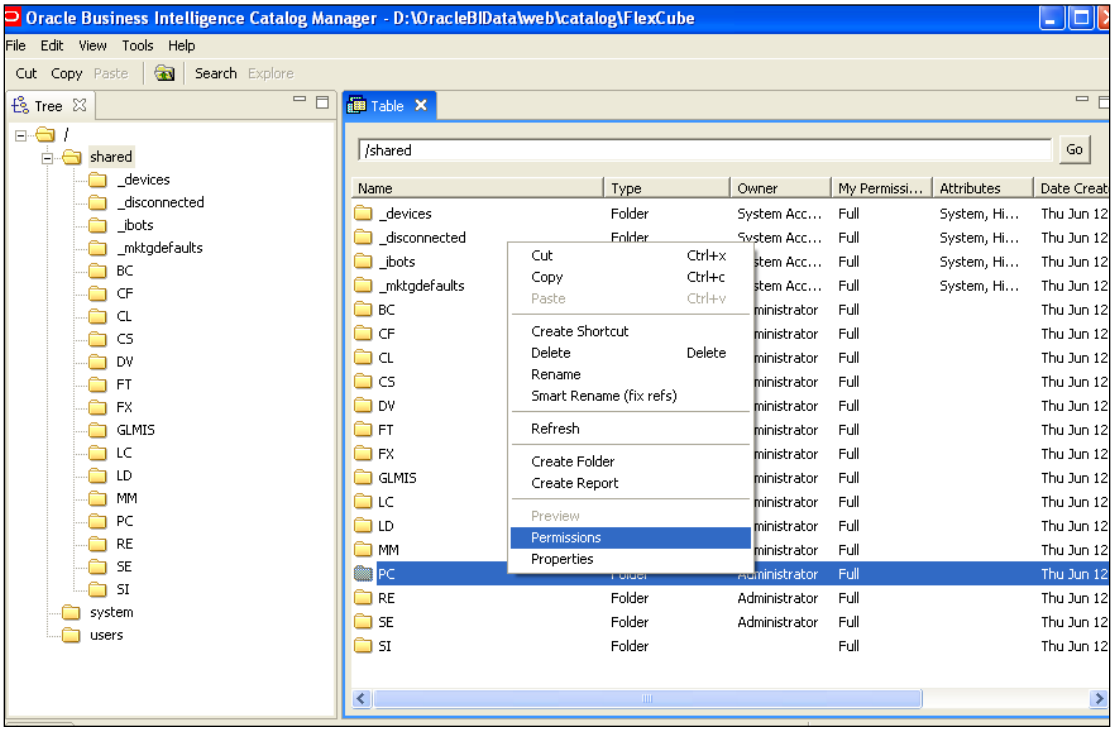
3. Select each module folder and right-click and select ‘Properties’ – Select the owner as ‘Administrator’ and Check the ‘Apply Recursively’ enabled as follows:



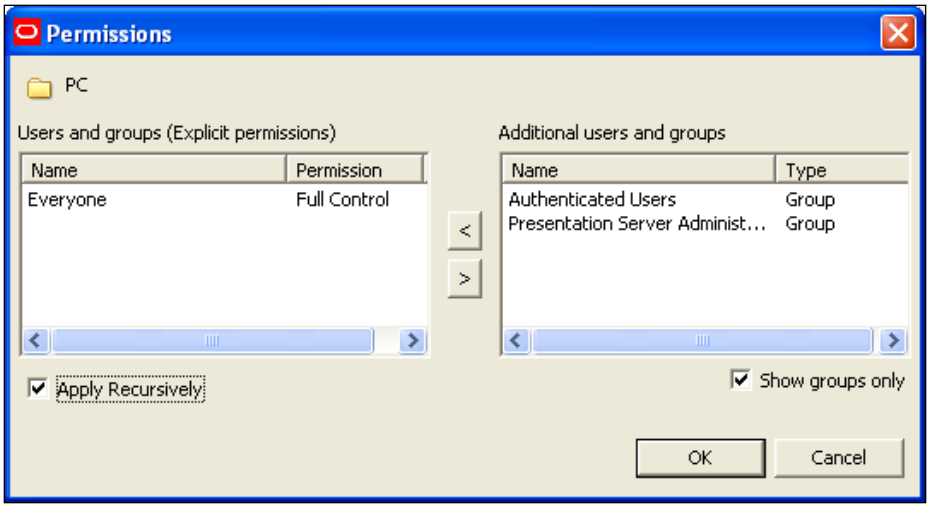
4. Select ‘Properties’ and the following screen appears:



Again, select the folder, right-click and select ‘Permissions’.



5. Change the permissions by selecting the ‘Everyone’ in left and change the permission to ‘Full Control’ and Check the ‘Apply Recursively’ enabled like below:



If the server is present in Linux Machine then zip the catalogs which are present in

OracleBIData\web\catalog\FlexCube\root\shared

Except the default folders (ie _devices, _disconnected, _ibots, _mktgdefaults and the corresponding .atr files) from windows and copy it to

OracleBIData\web\catalog\FlexCube\root\shared in Linux machine

6. Once all the above steps done, start the Oracle BI Server, Oracle BI Presentation Server services from Services window.

   If server is present in Linux then go to <InstallDrive>/OracleBI/setup folder and execute the following command to start BI Server and BI Presentation Server.

   ./run-sa.sh start

   ./run-saw.sh start

7. Start OC4J from Programs->Oracle Business Intelligence->Start OC4J

   In Linux go to <InstallDrive>/OracleBI/oc4j_bi/bin and execute the following commands to restart the OC4J

   oc4j –stop

   oc4j –start

8. Login to Presentation services from Programs->Oracle Business Intelligence->Presentation Services.

9. Enable 'Write Back option to Database' by going to:

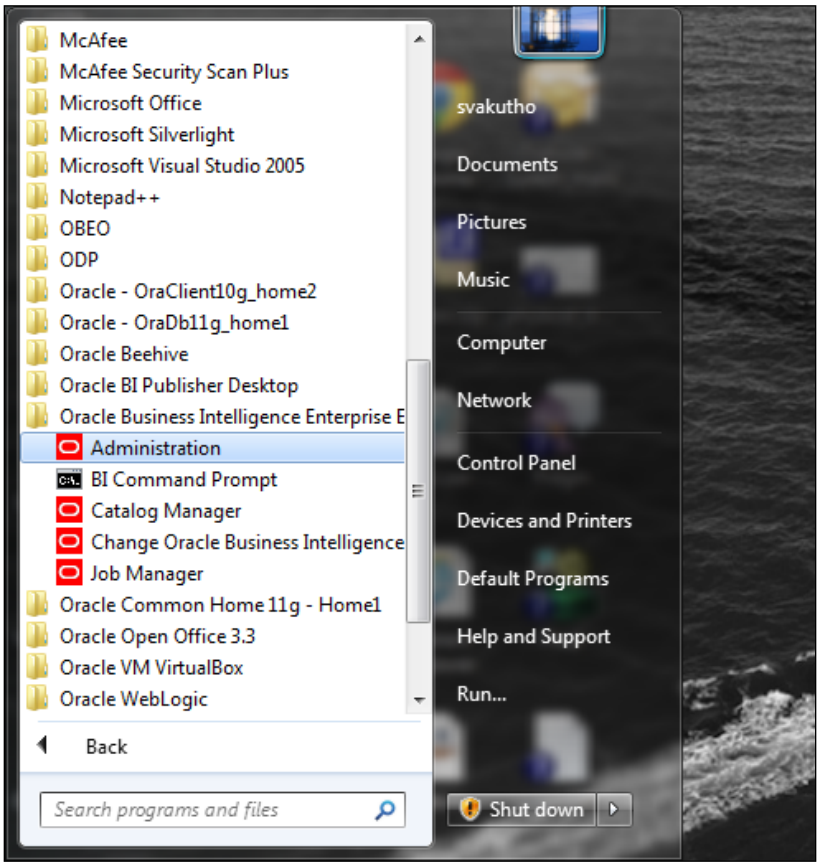
   Settings->Administration->Manage Privileges->Write Back to Database

10. Provide privilege for Presentation Service Administrator.

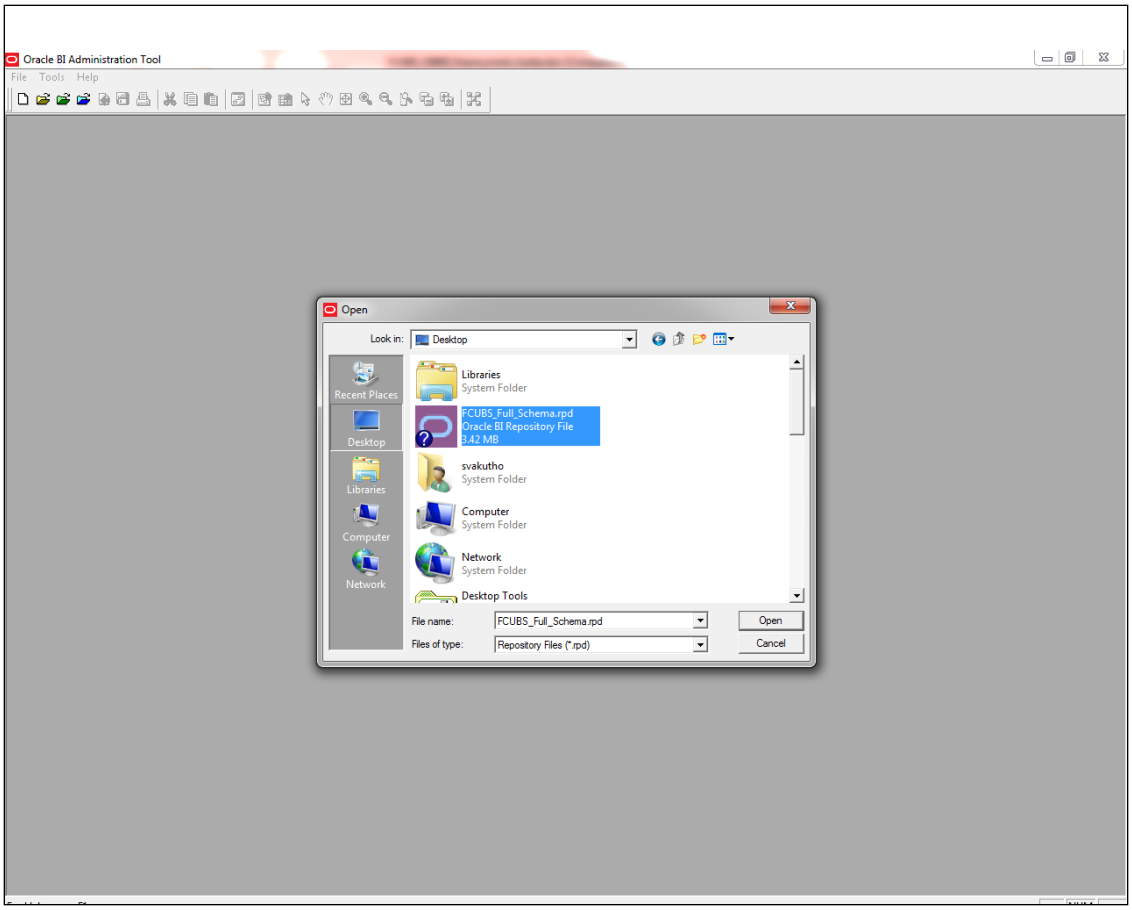
1.4 Deployment in OBIEE 11g

1.4.1 Rpd Connection Changes

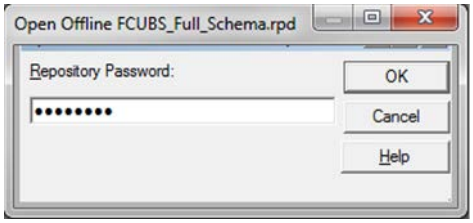
1. Open ‘OBIEE Administration tool’.



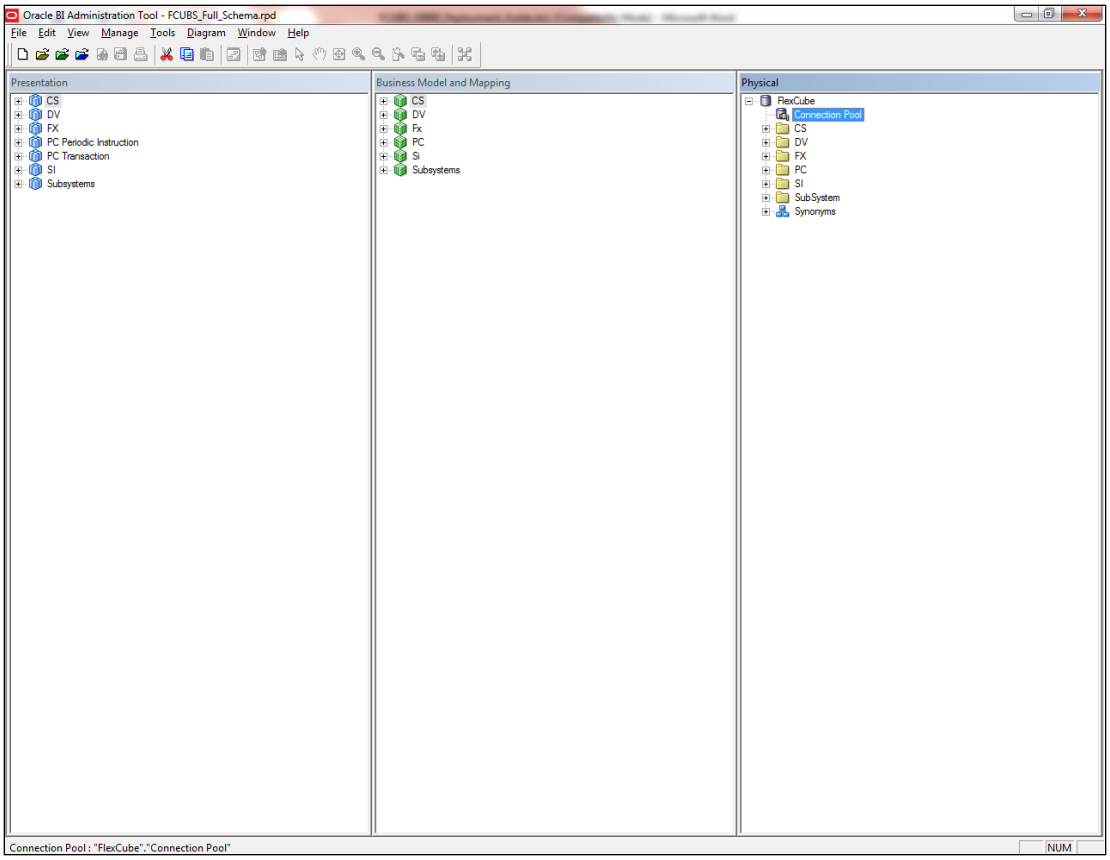
2. Open rpd in the offline mode.



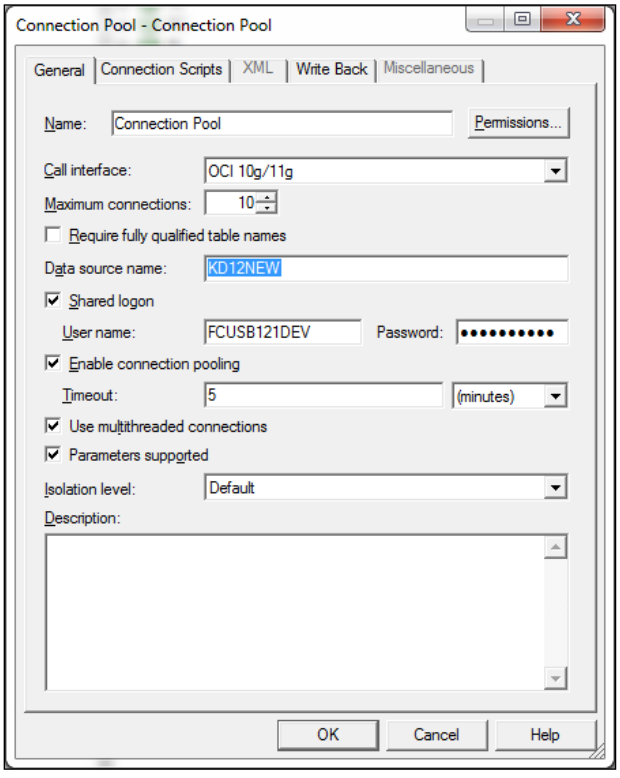
3. Enter the Password: Admin123 and click ‘OK’.



4. Double-click on connection pool.

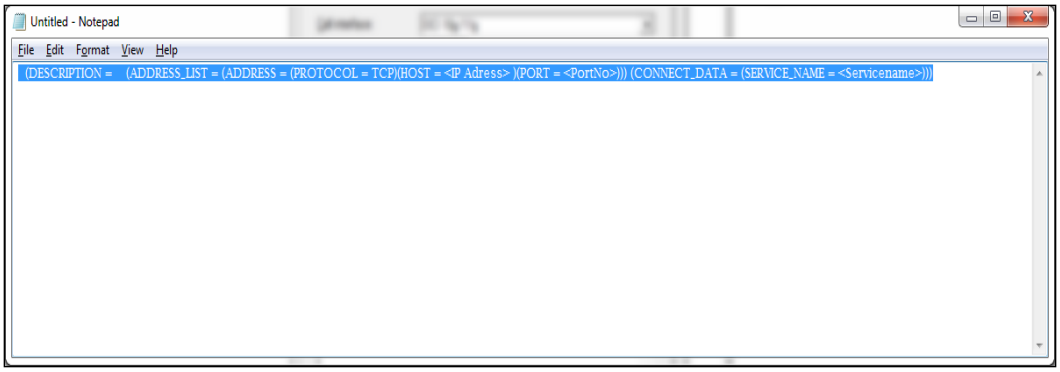


5. Change the Data source name.

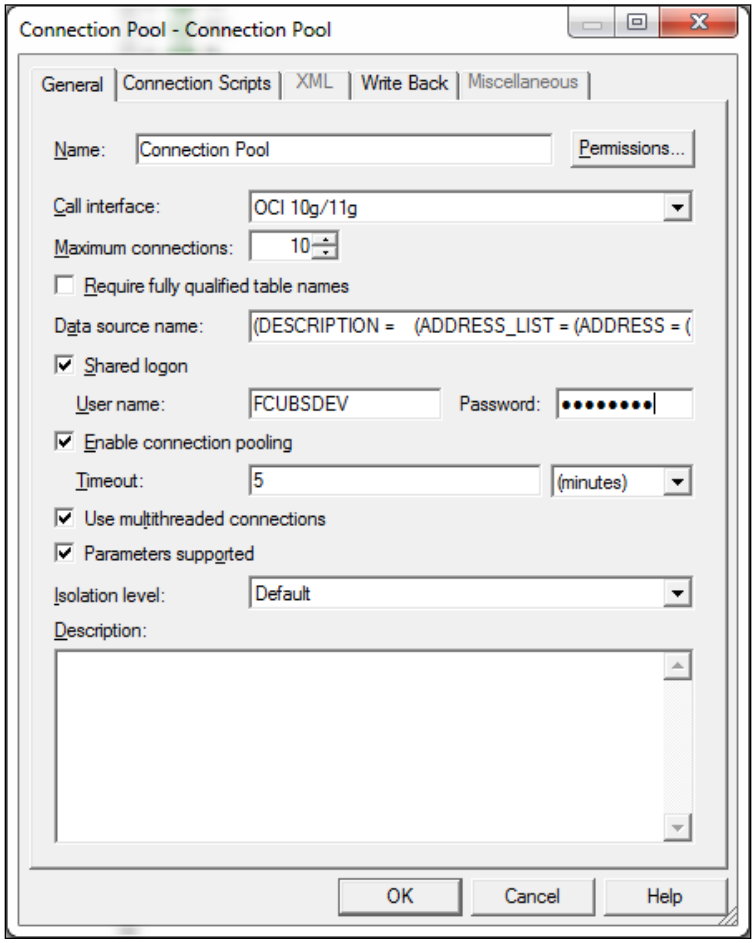


Change Data source name for the marked info given in the below format:

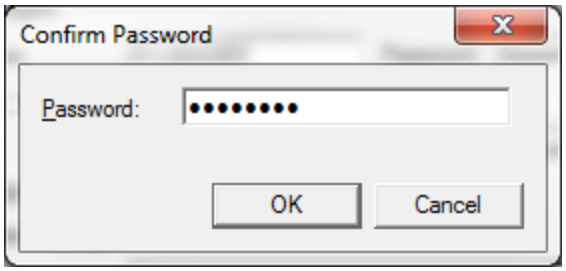
(DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCP)(HOST = <*Host Address*>)(PORT = <*Port*>)))(CONNECT_DATA = (SERVICE_NAME <*Servicename*>)))



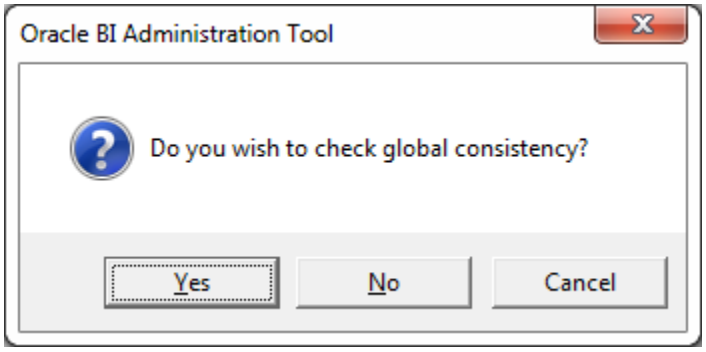
6. Enter the User ID and Password and click OK. Again, enter the same password when it prompts. Save the Rpd changes.



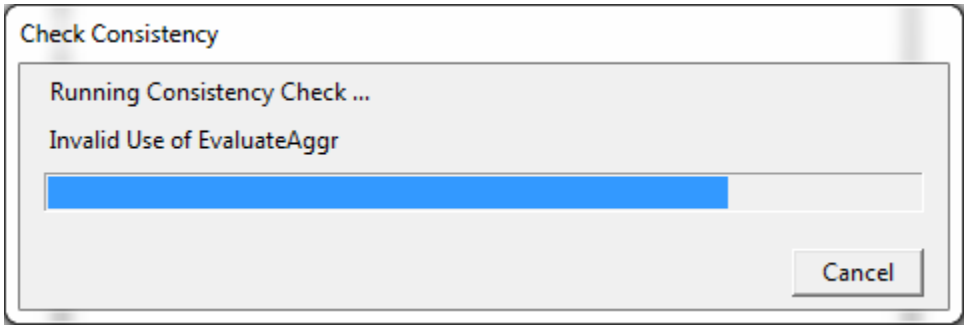
7. Click ‘OK’ and the follwing screen is displayed:



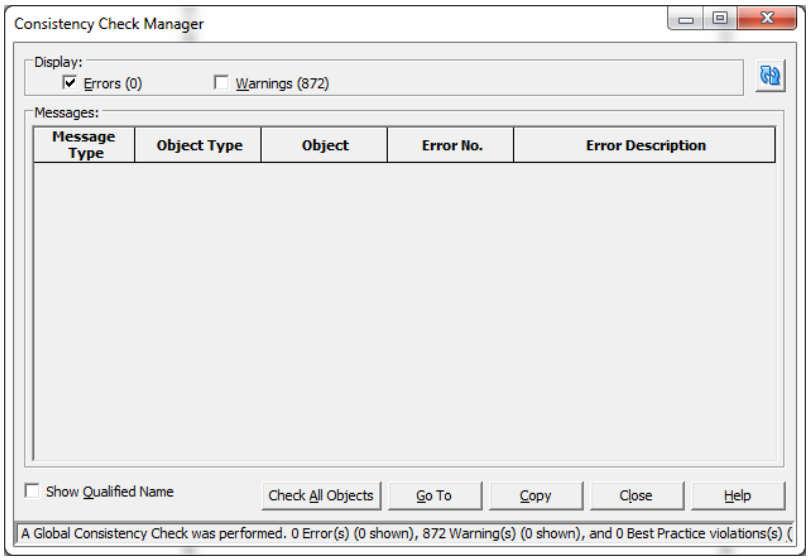
8. Click ‘OK’ and the following screen is displayed:



9. Click ‘Yes’.

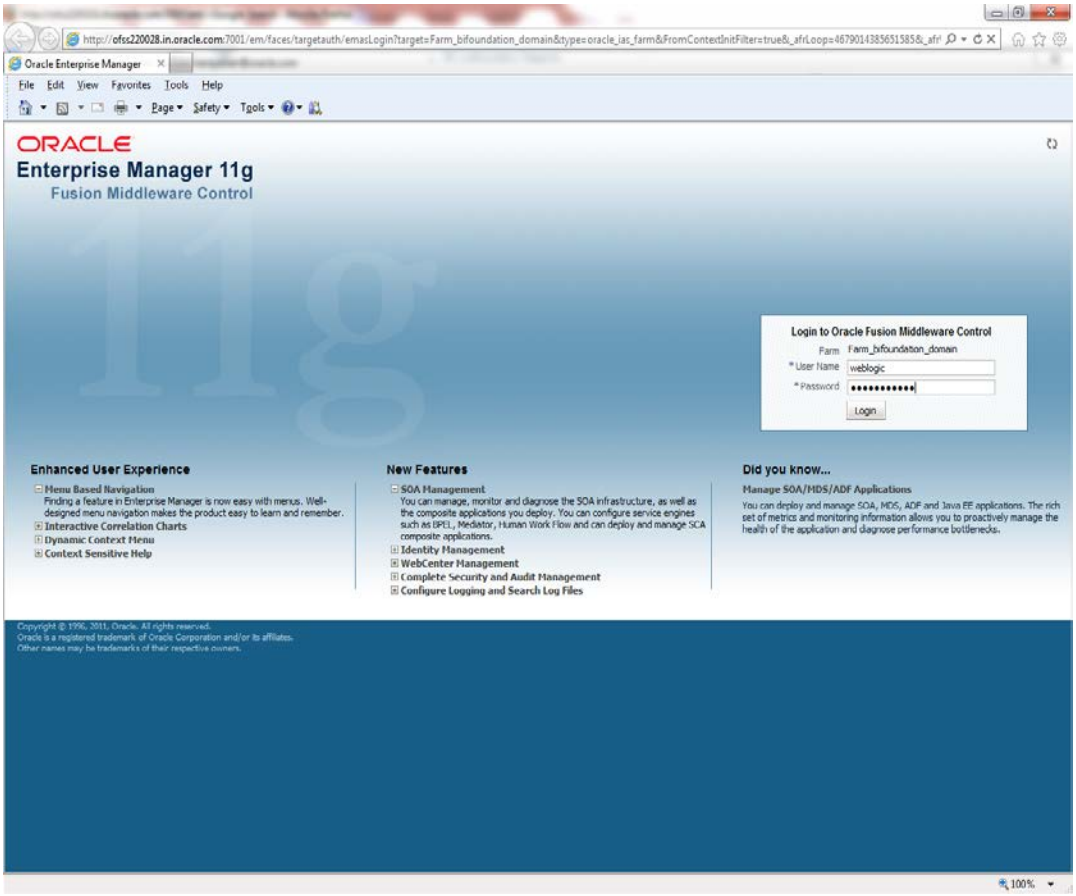


10. Click ‘Close’ in below window.



1.4.2 Deploying RPD using Enterprise Manager

1. Login to OBIEE Enterprise Manager using OBIEE Admin User ID and Password.


Oracle Enterprise Manager
File Edit View Favorites Tools Help
ORACLE
Enterprise Manager 11g
Fusion Middleware Control
Login to Oracle Fusion Middleware Control
Farm Farm_bifoundation_domain
* User Name weblogic
* Password
Login
Enhanced User Experience
Menu Based Navigation
Finding a feature in Enterprise Manager is now easy with menus. Well-designed menu navigation makes the product easy to learn and remember.
Interactive Correlation Charts
Dynamic Context Menu
Context Sensitive Help
New Features
SOA Management
You can manage, monitor and diagnose the SOA infrastructure, as well as the composite applications you deploy. You can configure service engines such as BPEL, Mediator, Human Work Flow and can deploy and manage SCA composite applications.
Identity Management
WebCenter Management
Complete Security and Audit Management
Configure Logging and Search Log Files
Did you know...
Manage SOA/MDS/ADF Applications
You can deploy and manage SOA, MDS, ADF and Java EE applications. The rich set of metrics and monitoring information allows you to proactively manage the health of the application and diagnose performance bottlenecks.
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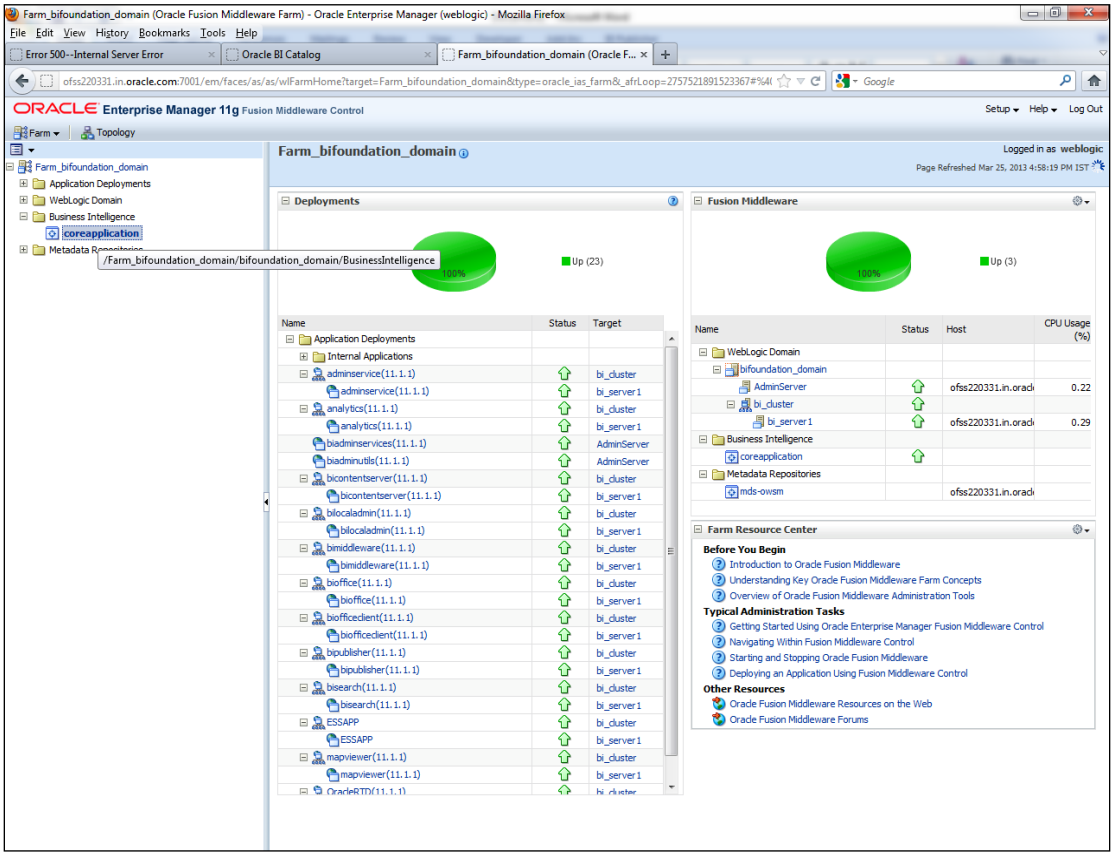
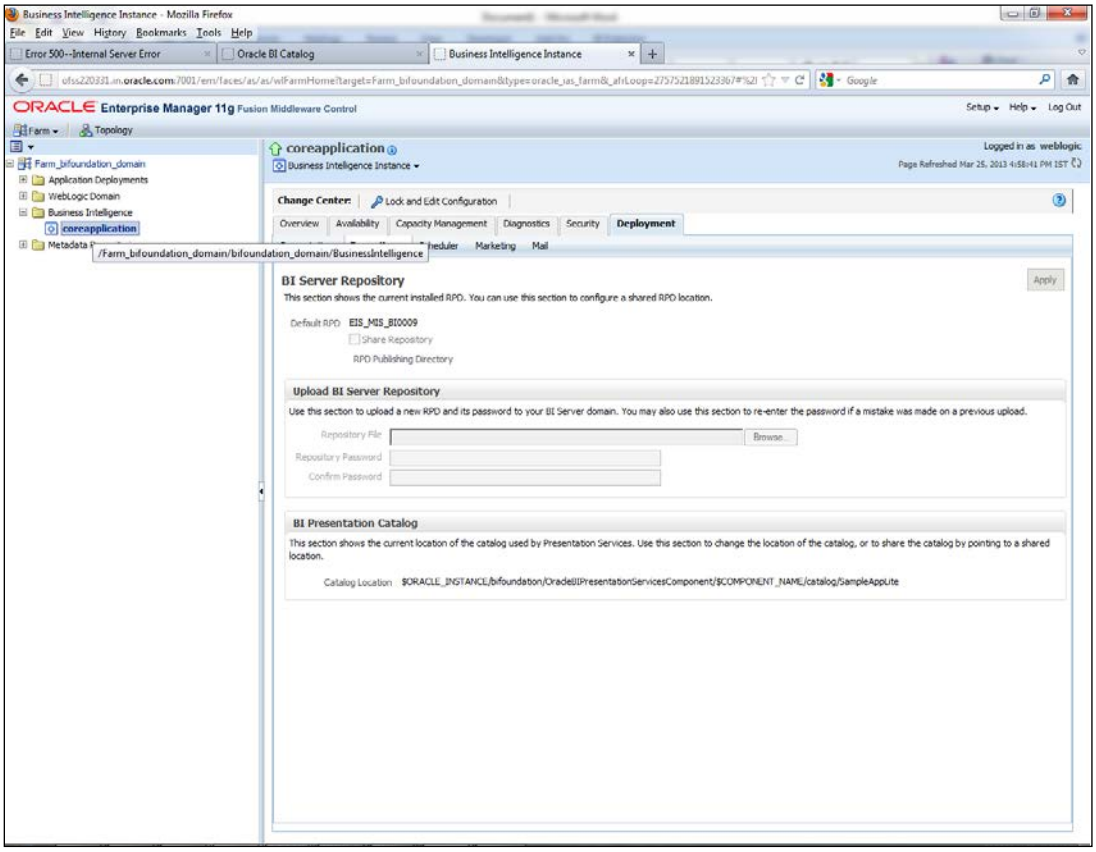
100%

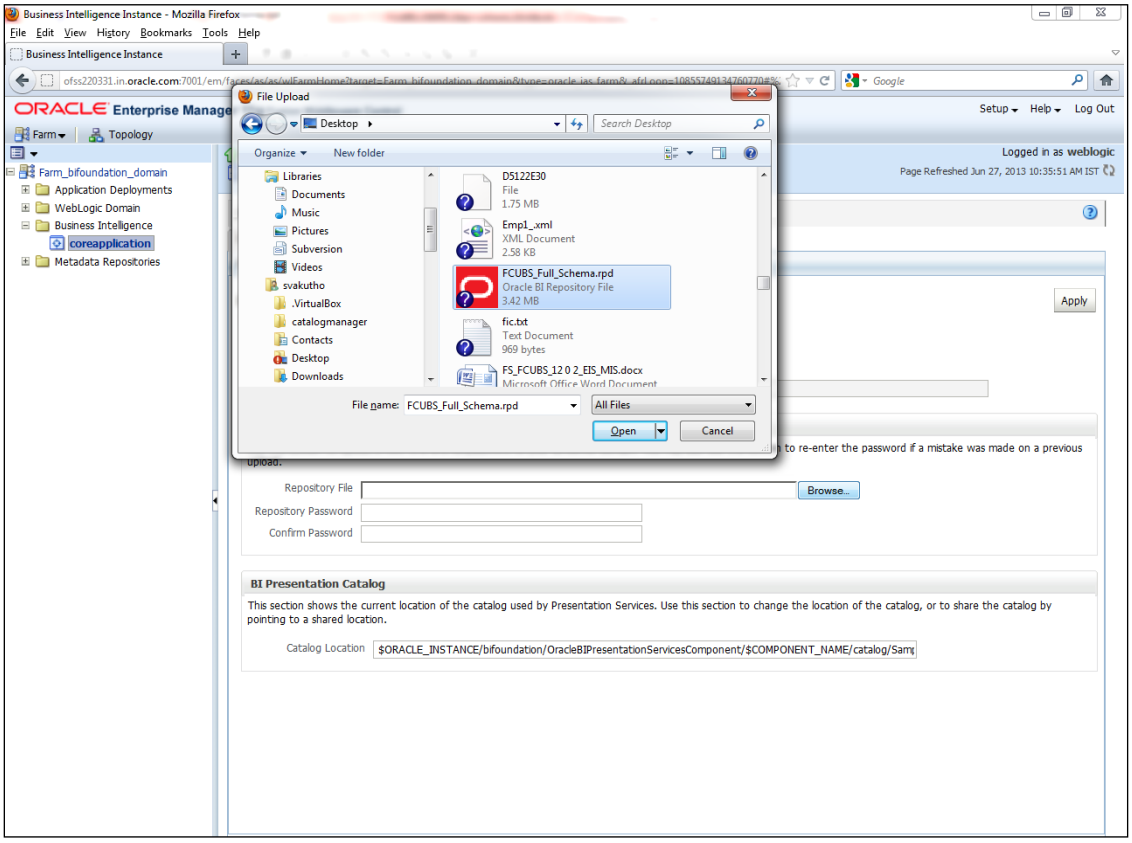
2. Click on core application under Business Intelligence Folder as shown.



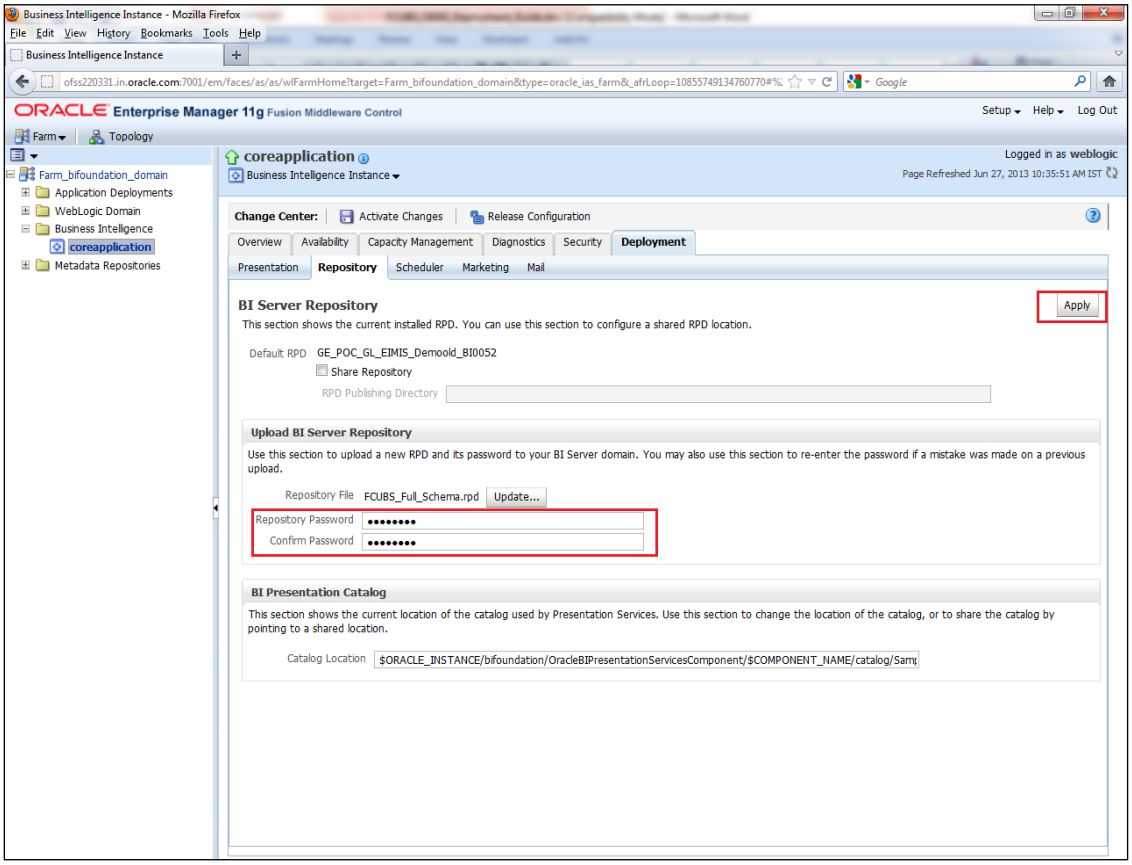
3. Click on Lock and Edit and go to Deployment Tab.



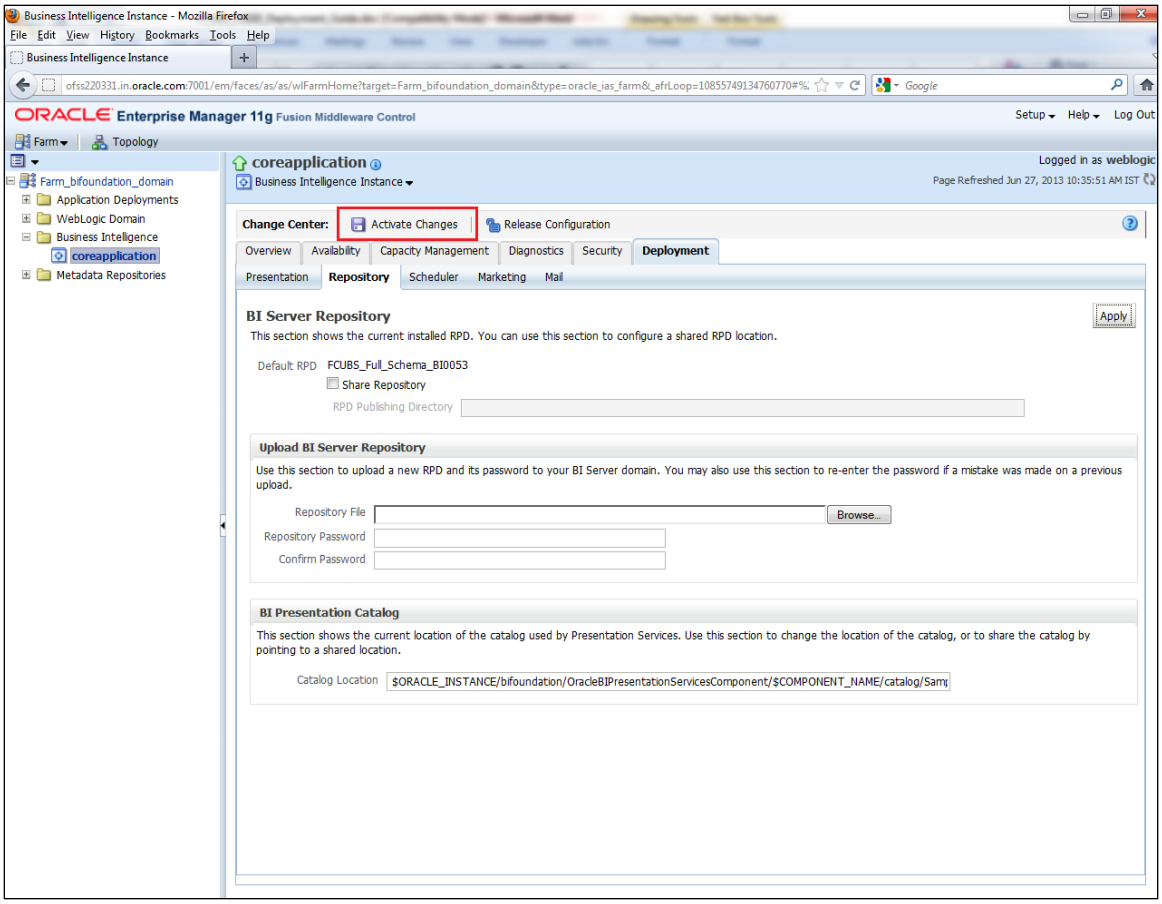
4. Click on Browse and select the Rpd to make it online.



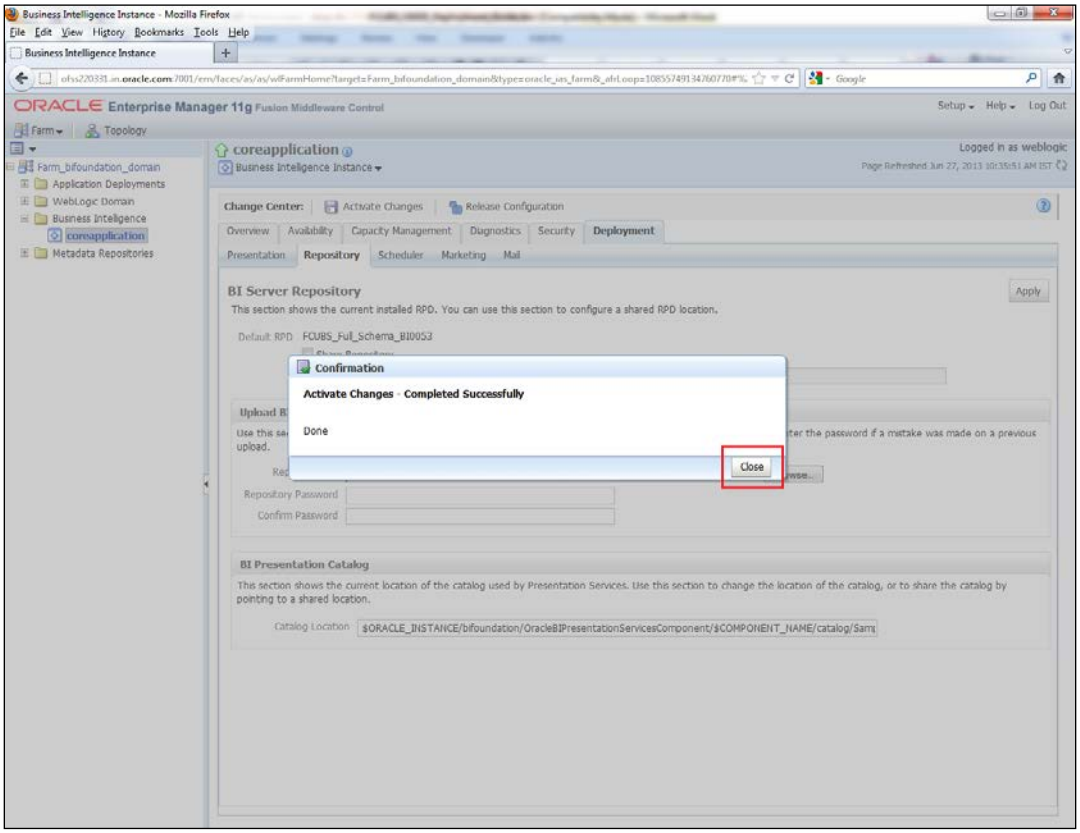
5. Enter the Repository password and Confirm Password as Admin123/Admin123.



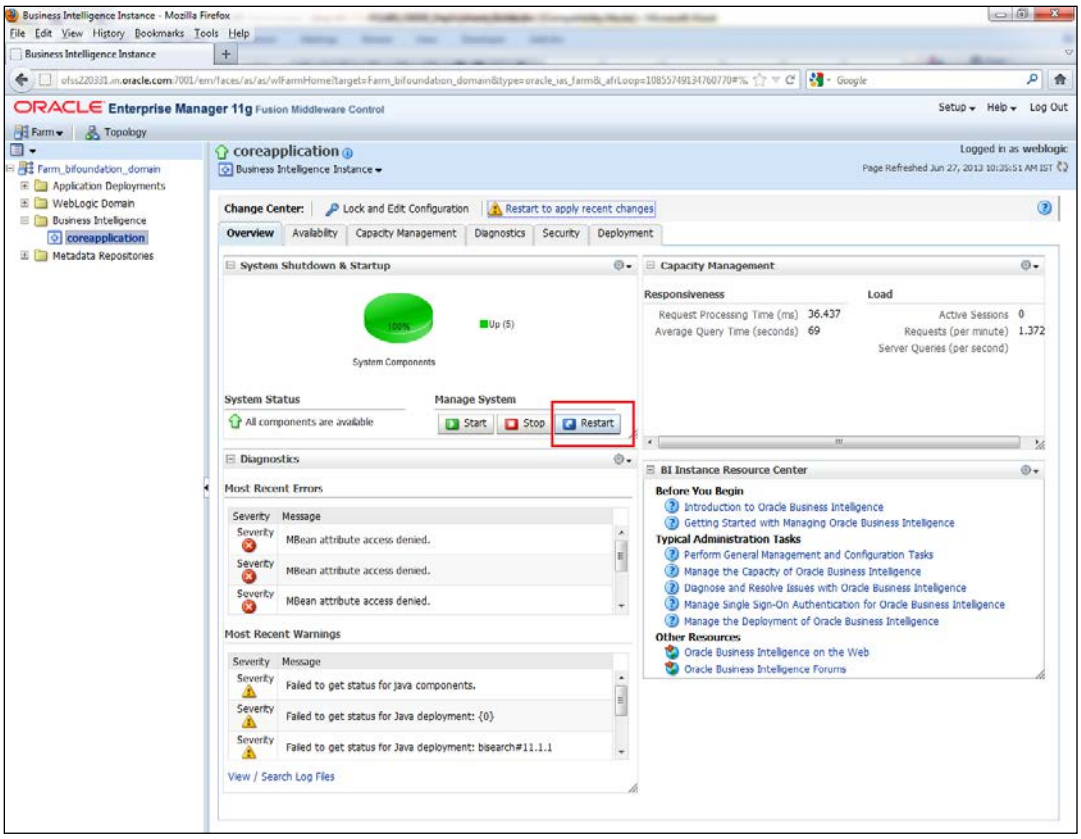
6. Click ‘Apply’.
7. Click’ Activate Changes’.


Business Intelligence Instance - Mozilla Firefox
File Edit View History Bookmarks Tools Help
Business Intelligence Instance
ofss220331.in.oracle.com:7001/em/faces/as/as/wlFarmHome?target=Farm_bifoundation_domain&type=oracle_ias_farm&_afrLoop=10855749134760770#%
Google
ORACLE Enterprise Manager 11g Fusion Middleware Control
Setup Help Log Out
Farm Topology
Farm_bifoundation_domain
Application Deployments
WebLogic Domain
Business Intelligence
coreapplication
Metadata Repositories
coreapplication
Business Intelligence Instance
Logged in as weblogic
Page Refreshed Jun 27, 2013 10:35:51 AM IST
Change Center:
Activate Changes
Release Configuration
Overview
Availability
Capacity Management
Diagnostics
Security
Deployment
Presentation
Repository
Scheduler
Marketing
Mail
BI Server Repository
Apply
This section shows the current installed RPD. You can use this section to configure a shared RPD location.
Default RPD FCUBS_Full_Schema_BI0053
Share Repository
RPD Publishing Directory
Upload BI Server Repository
Use this section to upload a new RPD and its password to your BI Server domain. You may also use this section to re-enter the password if a mistake was made on a previous upload.
Repository File
Browse...
Repository Password
Confirm Password
BI Presentation Catalog
This section shows the current location of the catalog used by Presentation Services. Use this section to change the location of the catalog, or to share the catalog by pointing to a shared location.
Catalog Location
$ORACLE_INSTANCE/bifoundation/OracleBIPresentationServicesComponent/$COMPONENT_NAME/catalog/Sam

8. Let the below process to complete and click ‘Close’.



9. Click ‘Restart’ the instance to take the effect of changes.

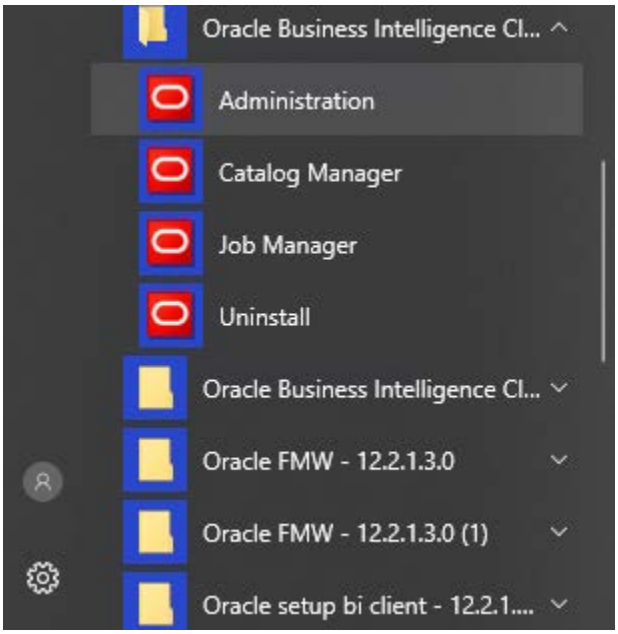


This completes the deployment.

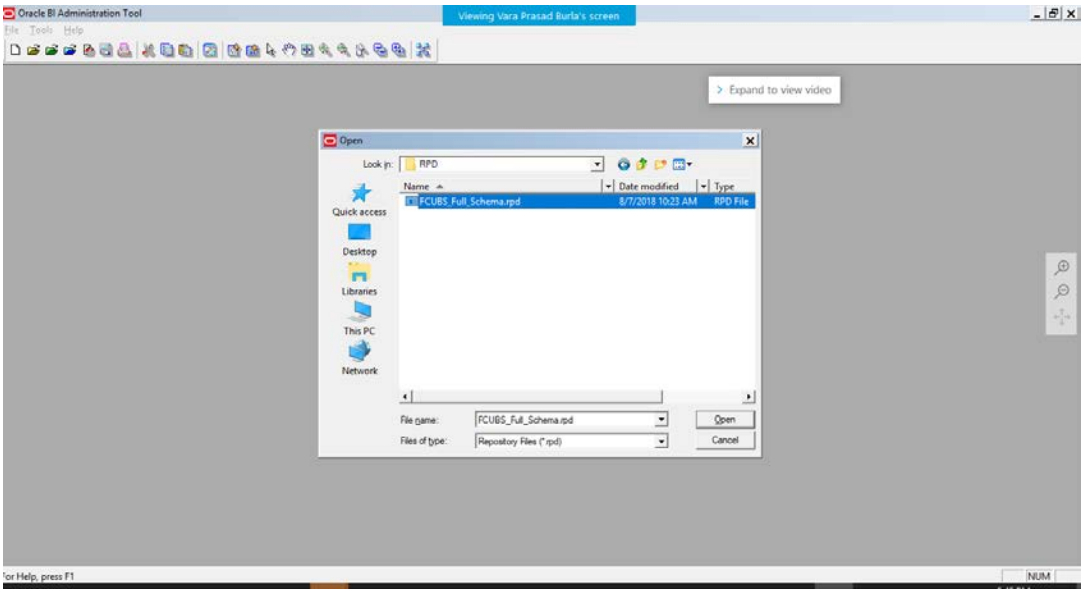
1.5 Deployment in OBIEE 12c

1.5.1 Rpd Connection Changes

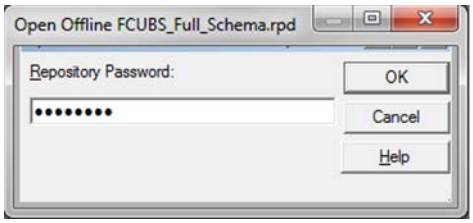
1. Open OBIEE ‘Administration’ tool.



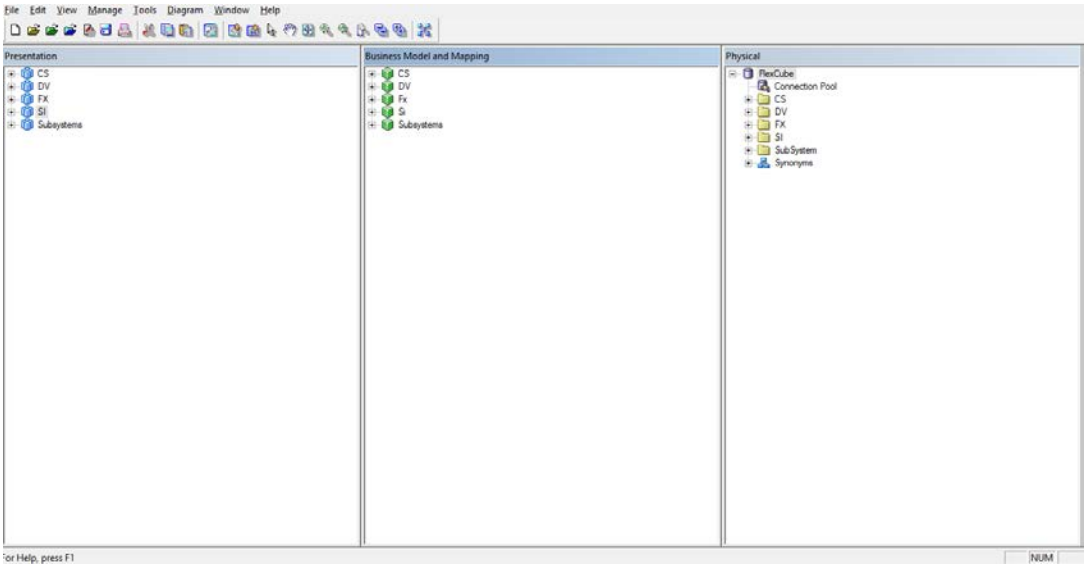
2. Open rpd in the offline mode.



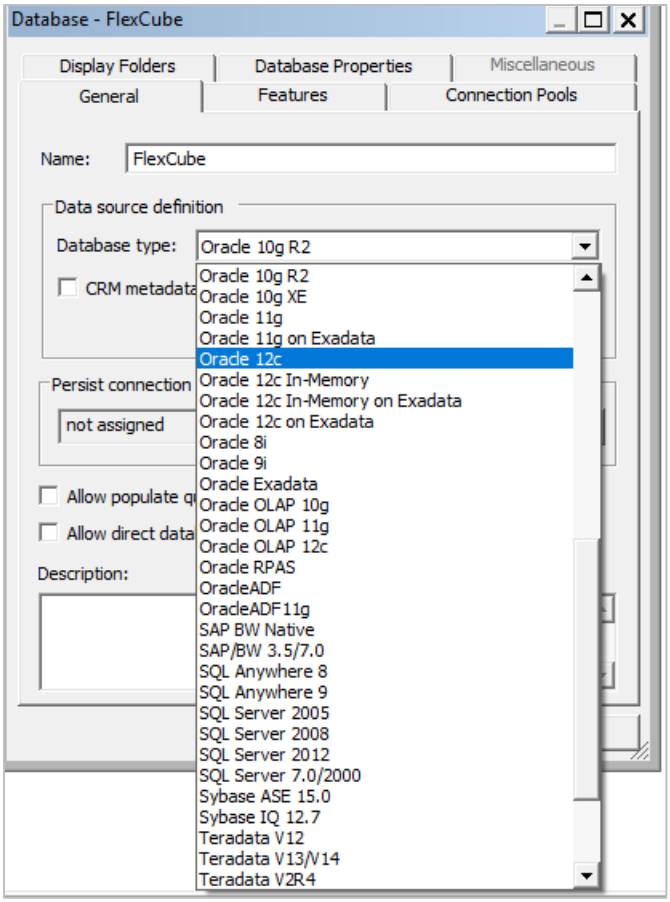
3. Enter the password as Admin123 and click ‘OK’.



4. Double-click on the Flexcube in the physical layer present on the right. It opens the database properties.



5. In the Database Properties, change the Database Type to ‘Oracle12c’.

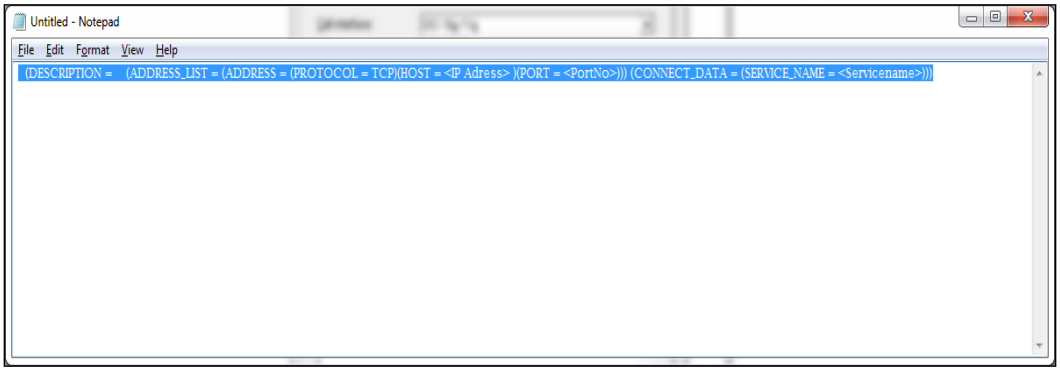


1. Change Data source name for the marked info given in the below format:

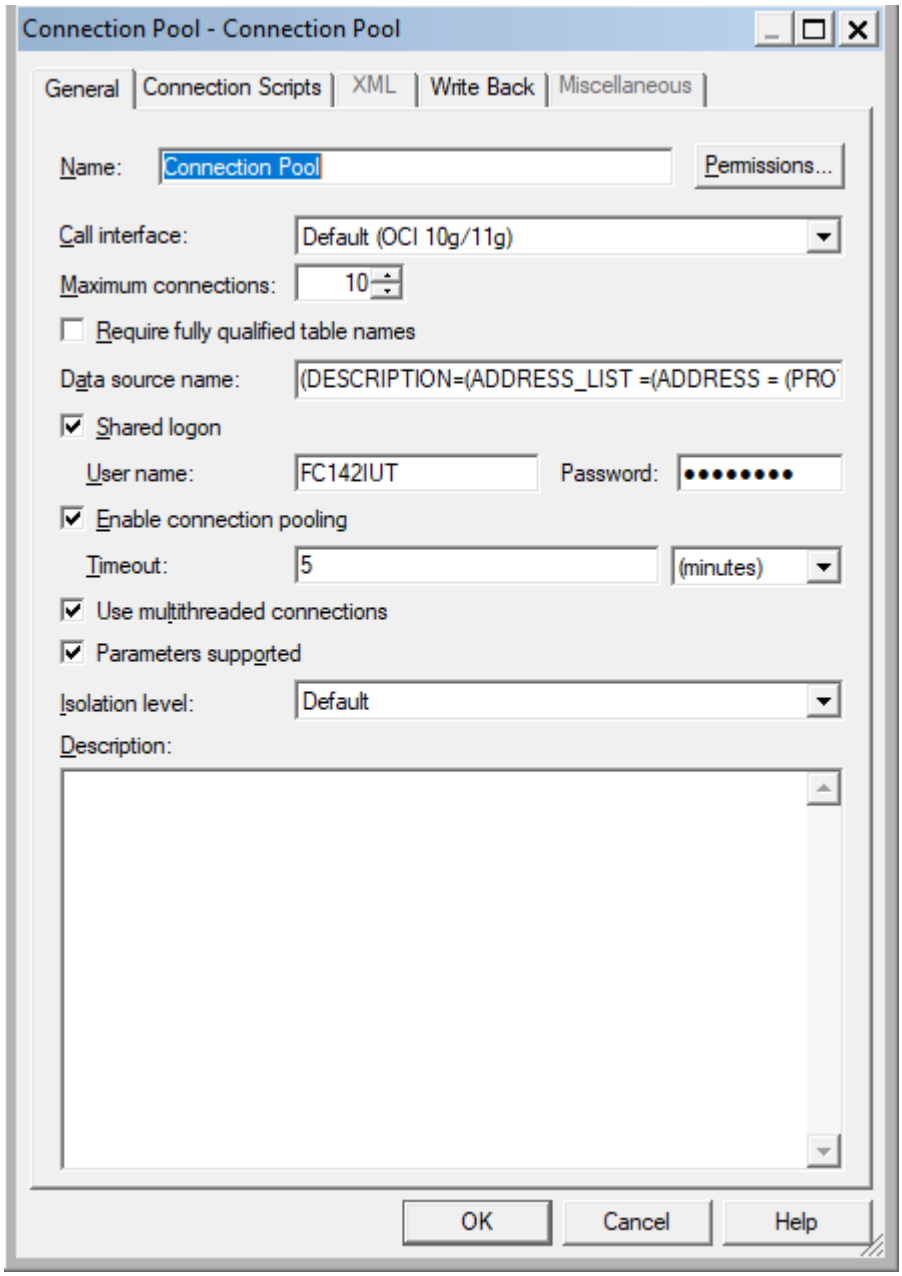
   (DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCP)(HOST = <*Host Address*>)(PORT = <*Port*>)))(CONNECT_DATA = (SERVICE_NAME <*Servicename*>)))

   Eg:

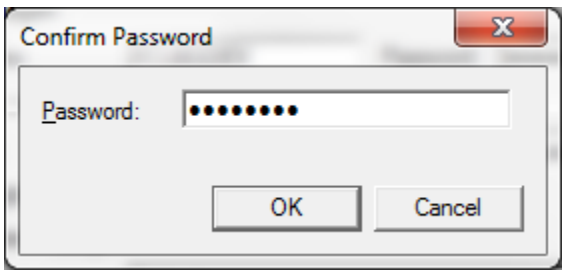
   (DESCRIPTION=(ADDRESS_LIST =(ADDRESS = (PROTOCOL = TCP)(HOST = whf00brs.in.oracle.com)(PORT = 1522)))(CONNECT_DATA =(SERVICE_NAME = FC142DEVPDB2)))



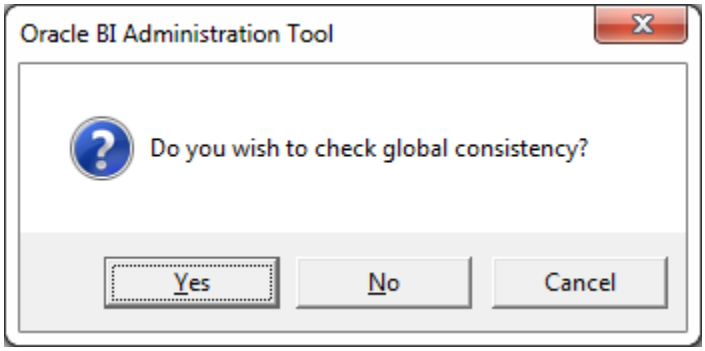
2. Enter the User ID and password and click OK. Again enter the same password when it prompts. Save the Rpd changes.



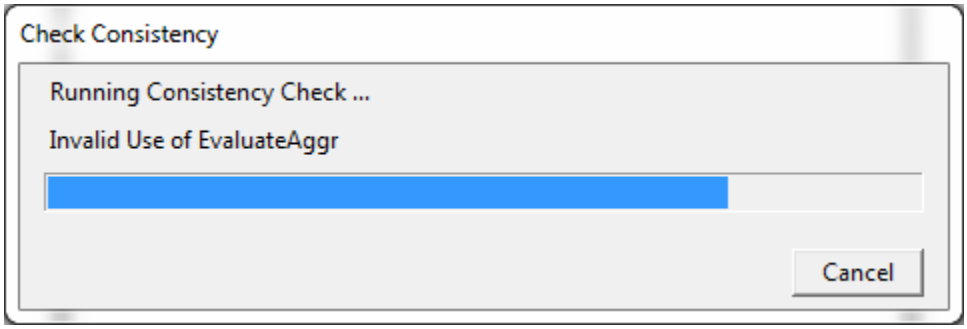
3. Click ‘OK’ and the follwing screen is displayed:



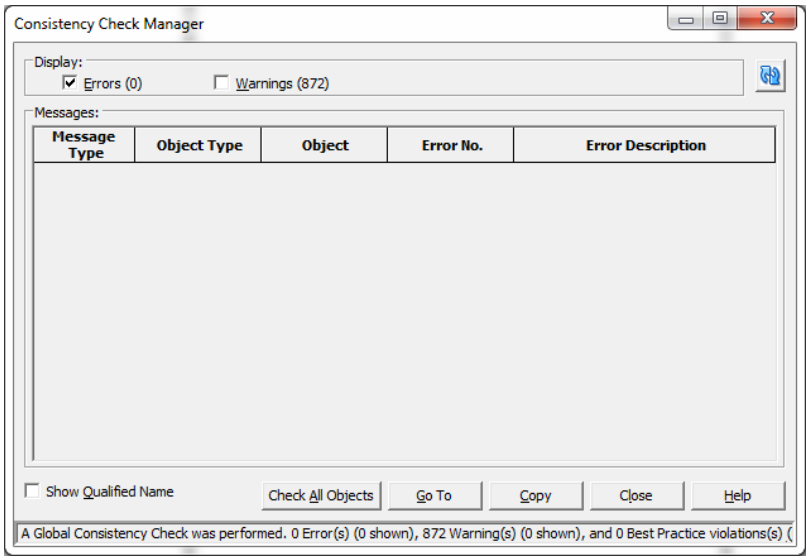
4. Click ‘OK’ and the following screen is displayed:



5. Click ‘Yes’.



6. Click ‘Close’ in below window.



1.5.2 Merge Repositories

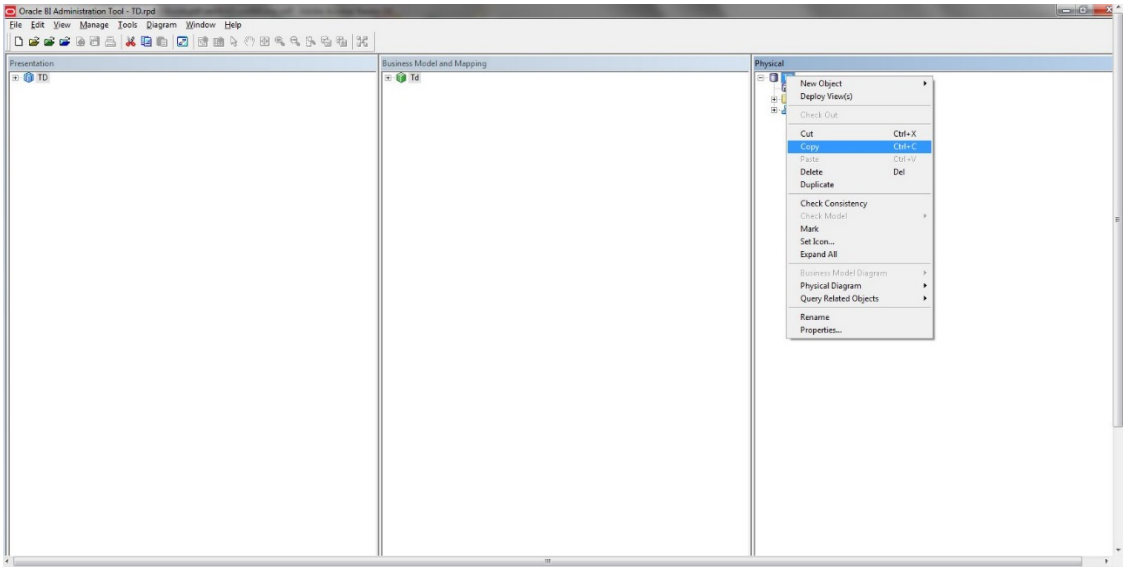
To Merge Repositories and to make FCUBS_Full_Schema.rpd we need to follow below steps.

All the OBIEE repositories are in MAIN/<Module>/OBIEE_11g

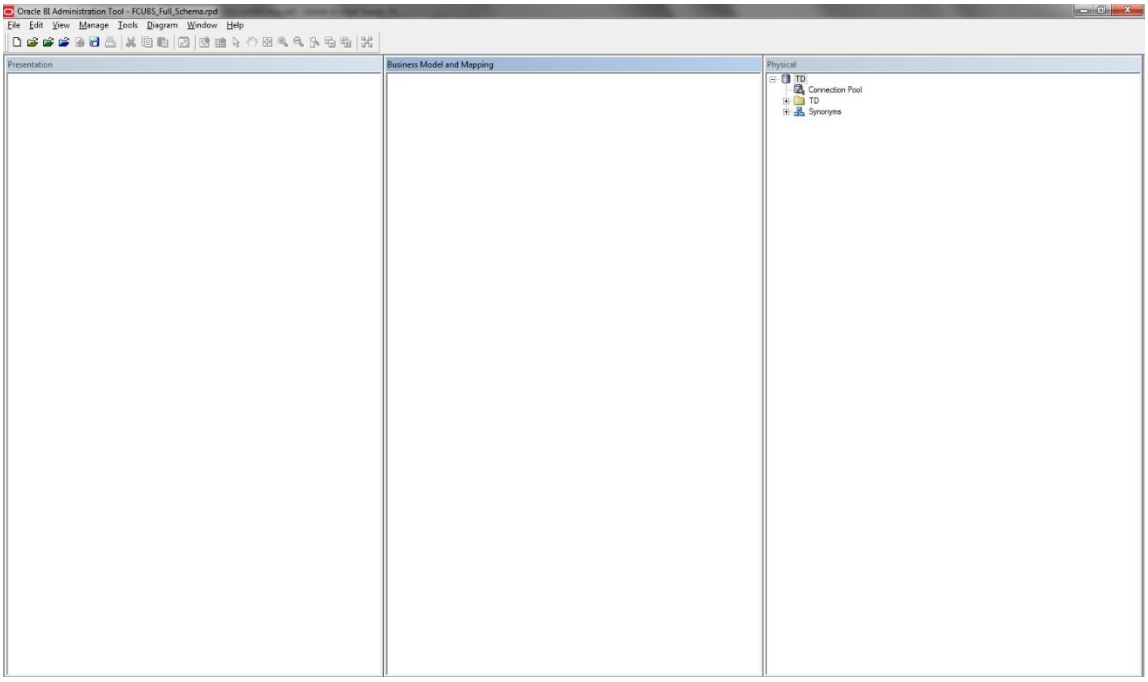
1. Open the ‘FCUBS_Full_Schema.rpd’ from svn. This is an empty repository.

2. Open the repository to be merged eg TD.rpd

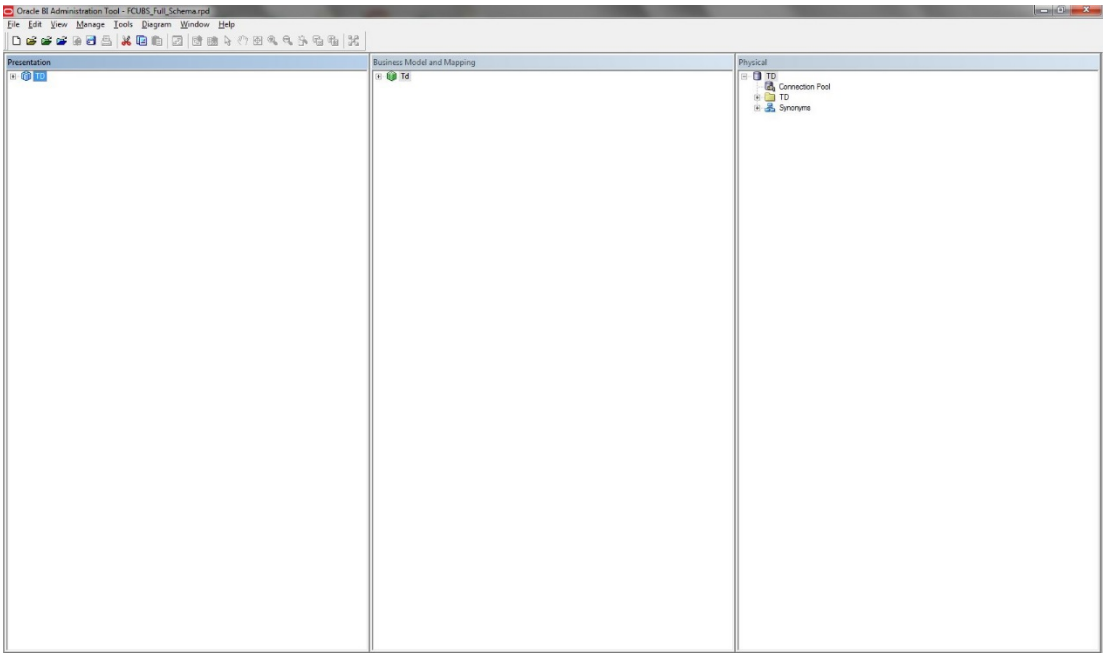
3. Copy TD folder under Physical layer in TD rpd and paste in physical layer of FCUBS_Full_Schema.rpd.



4. After pasting, FCUBS_Full_Schema.rpd would look like below:

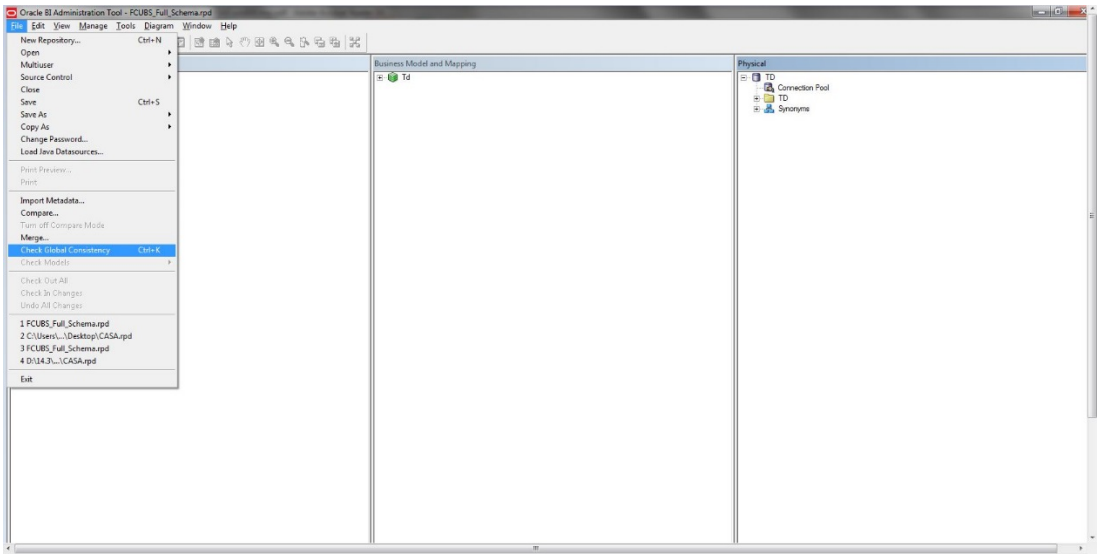


5. Similarly copy the folders from Business model and Presentation layer from ‘Td.rpd’ to ‘FCUBS_Full_Schema.rpd’. Then ‘FCUBS_Full_Schema.rpd’ would like below:



6. Please follow the order of Physical, Business Model and Presentation layer to paste in 'FCUBS_Full_Schema.rpd'.

7. Save the repository and do a global consistency check to see 0 errors. Similarly repeat the merging process for all modules.



1.5.3 Deploying RPD using putty

1. Copy the rpd in the below path in OBIEE server.

   Path :<Oracle_Home>/user_projects/domains/bi/bitools/bin

   Example Path : /scratch/app/obi12213/user_projects/domains/OBIEE12C/bitools/bin

2. Run putty and then go to path:

cd <Oracle_Home>/user_projects/domains/bi/bitools/bin

Example cd /scratch/app/obi12213/user_projects/domains/OBIEE12C/bitools/bin

3. Run the below command from the putty to deploy RPD.

Syntax:

sh data-model-cmd.sh uploadrpd -I <RPDname> [-W <RPDpwd>] -SI <service_instance> -U <cred_username> [-P <cred_password>] [-S <hostname>] [-N <port_number>] [-SSL] [-H]

Example:

sh datamodel.sh upload**rpd** -I FCUBS_Full_Schema.**rpd** -W Admin123 -SI ssi -U weblogic -P weblogic123

OBIEE Metadata Repository Deployment Guide
[Apr] [2020]
Version 14.4.0.0.0

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
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