Installation Manual
Oracle Financial Services Operational Risk Economic Capital
Release 2.1.1.0.0
June 2014

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<u>Document Control</u>

Version Number	Revision Date	Changes Done
Version 2.1.1	Revised on June 2014	Updated the Environment and Generic Software section to qualify on RHEL/OEL 5.3-5.8/Oracle Solaris 5.10/IBM AIX 5.3_6.1 on (Web logic 10.3.5.0/Websphere 7.0.0.17/ Tomcat 7.0.19 (64 bit).
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Executive Summary

The document consists of all the installation, Pre and Post configuration procedures, which have been structured considering all the 2.1.1 enhancements. You can find the latest copy of this document in OTN library which includes all the recent additions/revisions (if any) done till date.

Before you begin the installation, ensure that you have an access to Oracle Support Portal with the required login credentials to quickly notify us for any specific issues. You can obtain one by contacting Oracle Support.

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1. **About this Manual**

1.1 Oracle Financial Services Analytical Applications Infrastructure Overview

Oracle Financial Services Analytical Application Infrastructure (*OFSAAI*) is an analytical application platform, which is built to be multi-tiered, and open-systems compliant. OFSAAI is fully web-enabled. It is a 100% thin-client, browser-based interface with zero footprint which dramatically reduces the cost of application deployment. All OFSAAI processes, including those related to business, are metadata-driven, thereby providing a high degree of operational and usage flexibility, and a single consistent view of information to all users.

OFSAAI product suite includes a Rules framework designer engine, Unified Metadata Manager which has a semantic layer of metadata abstraction that is common over both relational and OLAP repositories.

1.2 Analytical Applications Overview

Oracle Financial Services Operational Risk Economic Capital (OREC) application enables you to model the distribution of potential losses due to operational risk. In this application, a Loss Distribution Based approach consistent with Basel – II guidelines has been incorporated, to estimate the Economic Capital (EC) of the operational risk at the firm level. According to Basel II guidelines, financial institutions are required to develop their own internal measurement methods that estimate the expected and unexpected operational losses based on the combined use of internal, relevant external and scenario data for Standard or Internal Reporting Groups (RG).

1.3 Audience

This manual is meant for the OFSAAI Application System Administrator as they play an integral part in installing the Oracle Financial Services Analytical Applications.

1.4 Scope

This manual provides a step-wise instruction to install the Oracle Financial Services Operational Risk Economic Capital Release 2.1.1.0.0, in an existing OFSAAI v7.3.3.3.0 Platform hosted on RHEL 5.3-5.8/OEL 5.3 to 5.8/ AIX 5.3-6.1/ Solaris 5.10, – Oracle 11g R2 (11.2.0.2.0) – Tomcat 7.0.19/ Websphere 7.0.0.17/ Web logic 10.3.5.0 – 64 bit environment.

1.5 Organization of the Manual

The Installation Manual is organized into the following chapters:

- **Prerequisites** section identifies the hardware and base software environment that is required for successful installation and functioning of Oracle Financial Services Operational Risk Economic Capital Release 2.1.1.0.0.

- **Installing the Application** section details the pre-installation activities followed by systematic instructions on the various installation options.

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- **Post Installation Activities** section details the steps that are required to be performed after the successful installation of the Oracle Financial Services Operational Risk Economic Capital Release 2.1.1.0.0.

1.6 Conventions Used in this Manual

- References to sections or chapters in the manual are displayed in *Italics.*

- Screen names are displayed in the following manner:

  Introduction screen

- Options and buttons are displayed in Bold.

- Notes are displayed as follows:

NOTE:

It is important that the password should be six characters long. If you do not adhere to this pre-requisite, you will see a system message that reads **Password must be at least six characters long**.

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2. **Pre-installation Configuration**

The list of pre-configurations required to install and run the OFSAAI 7.3.3.3.0 Infrastructure is stated in this section. Further, the installation process requires certain environmental variables to be set prior to starting the installation. Ensure the following requirements are met before installation.

- Prerequisites

- Environment

- Generic Software

- Preinstallation Activities

- Pre-Upgrade Activities

2.1 **Prerequisites**

- Infrastructure version 7.3.3.3.0 and the below patches should be applied.

  - Bug 18357346

  - Bug 18432771

  Refer to *OFSAAI Installation and Configuration Guide*.

2.2 **Environment**

RHEL 5.3/5.8 – OEL 5.3/5.8 – Oracle 11g R2 (11.2.0.2.0) – Websphere 7.0.0.17/ Web logic 10.3.5.0 /Tomcat 7.0.19 (64 bit)

Type	Description
OS	• Red hat Enterprise Linux Server release 5.8 (Tikanga) - 64 bit • Oracle Enterprise Linux Server release 5.8 (Carthage) - 64 bit • Red hat Enterprise Linux Server release 5.3 (Tikanga) - 64 bit • Oracle Enterprise Linux Server release 5.3 (Carthage) - 64 bit
Infrastructure Application Server	• Oracle Client 11g R2 (11.2.0.2.0) - 64 bit • Sun JRE Standard Edition 1.6.0_25 - 64 bit • Sun JDK Standard Edition 1.6.0_25 - 64 bit
Infrastructure Database Server	• Oracle Database Server 11g Release 2 (11.2.0.2.0)-64 bit with or without RAC [Enterprise edition with partitioning

Type	Description
	capability] • Sun JRE Standard Edition 1.6.0_25 - 64 bit • Sun JDK Standard Edition 1.6.0_25 - 64 bit
Infrastructure Web Server	• Oracle 11g R2 (11.2.0.2.0) JDBC driver (Oracle thin driver) • Sun JRE Standard Edition 1.6.0_25 – 64 bit • Sun JDK Standard Edition 1.6.0_25 – 64 bit • Web logic 10.3.5.0 with JDK Standard Edition 1.6.0_25 – 64 bit • Websphere 7.0.0.17 with IBM Runtime, Java technology JDK 1.6.0 (SR9 FP1) – 64 bit • Apache Tomcat 7.0.19 pointing to JDK Standard Edition 1.6.0_25 – (64 bit) **Note:** Any one of the above mentioned web servers (Tomcat, Websphere or Web logic) installation is required based on requirement.
Reporting Tool	Oracle Business Intelligence Enterprise Edition Suite – 11.1.1.7.1

AIX 5.3 (ML 12) & AIX 6.1 (ML 07) - Oracle 11g R2 (11.2.0.2.0) - Web logic 10.3.5.0 / Websphere 7.0.0.17 / Tomcat 7.0.19 (64 bit)

Type	Description
OS	• AIX 5.3 (ML 12) - 64 bit • AIX 6.1 (ML 07) - 64 bit
Infrastructure Application Server	• Oracle Client 11g R2 (11.2.0.2.0) - 64 bit • IBM AIX Runtime, Java Technology JRE 1.6.0 (SR10) - 64 bit • IBM AIX Runtime, Java Technology JDK 1.6.0 (SR10) - 64 bit
Infrastructure Database Server	• Oracle Database Server 11g Release 2 (11.2.0.2.0)-64 bit with or without RAC [Enterprise edition with partitioning

Type	Description
	capability]
	• IBM AIX Runtime, Java Technology JRE 1.6.0 (SR10) - 64 bit
	• IBM AIX Runtime, Java Technology JDK 1.6.0 (SR10) - 64 bit
Infrastructure Web Server	• Oracle 11g R2 (11.2.0.2.0) JDBC driver (Oracle thin driver)
	• IBM AIX Runtime, Java Technology JRE 1.6.0 (SR10) - 64 bit
	• IBM AIX Runtime, Java Technology JDK 1.6.0 (SR10) - 64 bit
	• Web logic 10.3.5.0 pointing to IBM AIX Runtime, Java Technology JDK 1.6.0 (SR10)- 64 bit
	• Websphere 7.0.0.17 pointing to IBM Runtime, Java Technology JDK 1.6.0 (SR9FP1) - 64 bit
	• Apache Tomcat 7.0.19 pointing to IBM AIX Runtime, Java Technology JDK 1.6.0 (SR10)- 64 bit
	Note:
	Any one of the above mentioned web servers (WebSphere, Weblogic, or Apache Tomcat) installation is required based on the requirement.
Reporting Tool	Oracle Business Intelligence Enterprise Edition Suite – 11.1.1.7.1

Solaris 5.10 - Oracle 11g R2 (11.2.0.2.0) - Web logic 10.3.5.0 / Websphere 7.0.0.17 / Tomcat 7.0.19 (64 bit)

Type	Description
OS	Oracle Solaris v5.10 Update 9 (9/10 s10s_u9wos_14a) SPARC sun4v - 64 bit
Infrastructure Application Server	• Oracle Client 11g R2 (11.2.0.2.0) - 64 bit
	• Sun JRE Standard Edition 1.6.0_25 - 64 bit
	• Sun JDK Standard Edition 1.6.0_25 - 64 bit
Infrastructure Database Server	• Oracle Database Server 11g Release 2 (11.2.0.2.0)-64 bit with or without RAC [Enterprise edition with partitioning capability]

Type	Description
	- Sun JRE Standard Edition 1.6.0_25 - 64 bit - Sun JDK Standard Edition 1.6.0_25 - 64 bit
Infrastructure Web Server	- Oracle 11g R2 (11.2.0.2.0) JDBC driver (Oracle thin driver) - Sun JRE Standard Edition 1.6.0_25 - 64 bit - Sun JDK Standard Edition 1.6.0_25 - 64 bit - Web logic 10.3.5.0 with JDK Standard Edition 1.6.0_25 -64 bit - Websphere 7.0.0.17 with IBM Runtime, Java Technology JDK 1.6.0 (SR9 FP1) – 64 bit - Apache Tomcat 7.0.19 pointing to JDK Standard Edition 1.6.0_25 - 64 bit **Note:** Any one of the above mentioned web servers (WebSphere, weblogic, or Apache Tomcat) installation is required based on the requirement.
Reporting Tool	Oracle Business Intelligence Enterprise Edition Suite – 11.1.1.7.1

2.3   Generic Software

Type	Description

Other Software	OFSAAI is certified on both OPEN LDAP 2.2.29+ and Oracle Internet Directory v11.1.1.3.0. Ensure that you have installed any one of the following for OFSAAI authentication purposes.
	
	    Note:
	
	    OPEN LDAP needs to be installed on Microsoft Windows machine only.
	
	Hummingbird **Exceed** 7.0 has to be installed on a Microsoft Windows machine as a simulator for remote installation.
	
	    Note:
	
	    Hummingbird Exceed is required for GUI Mode of installation.

Front End Access	Microsoft Internet Explorer 8/9 Microsoft Office 2003/2007

Type	Description
	Client Machines – Windows XP SP3/Windows 7
	The screen resolutions supported are 1024*768 and 1280*1024
	Adobe Reader 8.0
	Java Plug-in 1.6.0_21
	Note:
	• Ensure that Java Plug-in is enabled in the browser settings.
	• Enable caching of static content (static files, images, CSS, etc) for browser client.
	• Cookies should be disabled.

2.4 Preinstallation Activities

The following is the preinstallation checklist to ensure the readiness to start installing Oracle Financial Services Analytical Applications:

Oracle Financial Services Analytical Applications Infrastructure Release 7.3.3.3.0 must be successfully installed on RHEL 5.3-5.8/OEL 5.3 to 5.8/ AIX 5.3-6.1/ Solaris 5.10, – Oracle 11g R2 (11.2.0.2.0) – Tomcat 7.0.19/ Websphere 7.0.0.17/ Web logic 10.3.5.0 – 64 bit environment.

NOTE:

Refer the *Appendix B section in the OFSAAI 7.3.3.0.0 Installation Guide* for customized memory settings for model upload, depending on the available hardware configuration. For guidance in altering the memory settings contact Oracle Support.

- If the infrastructure is installed on a multitier environment, then execute the following commands in the DB Layer terminal:

      chmod -R 777 < ftpshare folder >

- Navigate to the ftpshare folder and set the umask shown as follows to ensure that all the new files created have 666 file permissions.

      cd < ftpshare folder >
      umask 0000

- The config and atomic schemas (that is, production and sandbox) must be of three distinct oracle database users.

- Default and Temporary table space assigned to atomic schema user should be allocated with required space.

- The Information Domain schema makes use of the tables from the configuration schema.

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To create a new infodom, execute the file **<Infrastructure Database Layer Install Directory>/config_table_privileges_for_atomic_user.sql** from the Infrastructure config database before creating the new infodom. These Privileges should be given to Production Schema and Sandbox Schemas (essentially all the Atomic schemas).

NOTE:

Ensure that FIC Server is up before executing the file.

- Add an Atomic schema TNS entry (for both **production** & **atomic** schemas) to TNSNames.ora.

- In integrated environment installation, backup the DATE_TASK_MASTER and DATE_TASK_STEP_PRECEDENCE tables of config schema.

- The following grants must be given to atomic schema user (Both production and Sandbox)
    - grant create session to <<ATOMIC_USER>>
    - grant create view to <<ATOMIC_USER>>
    - grant create sequence to <<ATOMIC_USER>>
    - grant create table to <<ATOMIC_USER>>
    - grant create procedure to <<ATOMIC_USER>>
    - grant create any index to <<ATOMIC_USER>>
    - grant create trigger to <<ATOMIC_USER>>
    - grant create synonym to <<ATOMIC_USER>>
    - grant debug connect session to <<ATOMIC_USER>>
    - grant debug any procedure to <<ATOMIC_USER>>
    - grant create any materialized view to <<ATOMIC_USER>>

- The following grants must be given from Config User to Atomic User (Both production and Sandbox):
    - grant select on PR2_OBJECT_TL to <<ATOMIC_USER>>
    - grant select on PR2_OBJECT_TYPES to <<ATOMIC_USER>>
    - grant select on CSSMS_USR_PROFILE to <<ATOMIC_USER>>
    - grant select on CSSMS_ROLE_MAST to <<ATOMIC_USER>>
    - grant select on CSSMS_GROUP_MAST to <<ATOMIC_USER>>
    - grant select on CSSMS_FUNCTION_MAST to <<ATOMIC_USER>>
    - grant select on CSSMS_USR_GROUP_MAP to <<ATOMIC_USER>>
    - grant select on CSSMS_USR_GROUP_DSN_SEG_MAP to <<ATOMIC_USER>>
    - grant select on CSSMS_ROLE_FUNCTION_MAP to <<ATOMIC_USER>>
    - grant select on CSSMS_GROUP_ROLE_MAP to <<ATOMIC_USER>>
    - grant select on CSSMS_SEGMENT_MAST to <<ATOMIC_USER>>
    - grant select on BATCH_TASK to <<ATOMIC_USER>>

- grant select on CSSMS_USR_DSN_SEG_MAP to <<ATOMIC_USER>>
- grant select on CSSMS_USR_ROLE_MAP to <<ATOMIC_USER>>
- grant select on CSSMS_METADATA_SEGMENT_MAP to <<ATOMIC_USER>>
- grant select on BATCH_RUN to <<ATOMIC_USER>>
- grant select on PR2_FILTERS to <<ATOMIC_USER>>
- grant select on PR2_TASK_FILTER to <<ATOMIC_USER>>
- grant select on PR2_TASK_FILTER_DETAIL to <<ATOMIC_USER>>
- grant select on ST_STRESS_MASTER to <<ATOMIC_USER>>
- grant select on ST_SCENARIO_MASTER to <<ATOMIC_USER>>
- grant select on ST_SHOCK_MASTER to <<ATOMIC_USER>>
- grant select on BATCH_MASTER to <<ATOMIC_USER>>
- grant select on ICC_MESSAGELOG to <<ATOMIC_USER>>
- grant select on PR2_MASTER to <<ATOMIC_USER>>
- grant select on PR2_RUN_REQUEST to <<ATOMIC_USER>>
- grant select on pr2_rule_map to <<ATOMIC_USER>>
- grant select on pr2_rule_map_pr to <<ATOMIC_USER>>
- grant select on pr2_rule_map_pr_tmp to <<ATOMIC_USER>>
- grant select on pr2_rule_map_exclude to <<ATOMIC_USER>>
- grant select on pr2_rule_map_exclude_pr to <<ATOMIC_USER>>
- grant select on pr2_rule_map_exclude_pr_tmp to <<ATOMIC_USER>>
- grant select on pr2_run_object to <<ATOMIC_USER>>
- grant select on pr2_run_object_member to <<ATOMIC_USER>>
- grant select on pr2_run_map to <<ATOMIC_USER>>
- grant select on pr2_run_execution_b to <<ATOMIC_USER>>
- grant select on pr2_run_execution_filter to <<ATOMIC_USER>>
- grant select on pr2_firerun_filter to <<ATOMIC_USER>>
- grant select on pr2_filters to <<ATOMIC_USER>>
- grant select on configuration to <<ATOMIC_USER>>
- grant select on batch_parameter to <<ATOMIC_USER>>
- grant select on component_master to <<ATOMIC_USER>>
- grant select on FORMS_LOCALE_MASTER to <<ATOMIC_USER>>
- grant select on setupinfo to <<ATOMIC_USER>>
- grant select on LOCALEREPOSITORY to <<ATOMIC_USER>>

- Copy all the contents of the Oracle Financial Services Operational Risk Economic Capital Release 2.1.1.0.0 installer download directory to the server location (including the DataModel directory). Provide read, write and execute permission to all the files present in

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this directory.

- Specify the log file path and name in the log4j.xml. Update the value attribute highlighted in the following figure:

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

<log4j:configuration
xmlns:log4j="http://jakarta.apache.org/log4j/">

<appender name="ConfigReveleusFileAppender"
class="org.apache.log4j.RollingFileAppender">
<param name="file" value="/<installer components copied
directory>.installer log"/>

<param name="Append" value="true"/>
```

- Ensure the path given in the log4j.xml file has read, write or execute permission.

- Execute the **config_table_privileges_for_atomic_user.sql** script for production and sandbox user in configuration schema. This file is present in the $FIC_HOME directory.

- Ensure FICServer is up and running before proceeding for installation.

- From SYS DBA grant select permission to config and atomic user for 'V_$PARAMETER' table.
    - grant select on V_$PARAMETER to &config_db_user;
    - grant select on V_$PARAMETER to &production_db_user;
    - grant select on V_$PARAMETER to &sandbox_db_user;

- Check for `export LDR_CNTRL=MAXDATA=0x40000000` in the .profile. If present then comment it, execute the .profile and then trigger the Setup.sh.

- Following data model related information needs to be addressed, if any OFSAA application is installed on the existing infodom where already other OFSAA applications are installed.
    - You have the option either to do an incremental or a sliced model upload.
    - If you opt for sliced model upload then, you need to ensure that all the related child tables are part of the sliced model. If not, you need to merge the data model of application, which needs to be installed with the data model available in the environment, take a slice out of it and use.

- If you opt for incremental model upload, then you need to merge the data model of application, which needs to be installed with the data model available in the environment.

- For a multitier installation, check whether **Reveleus.SEC** file is present in **$FIC_HOME/conf in web layer**. If this file is not present in this path, then copy the file

from **$FIC_HOME/conf in app layer** to **$FIC_HOME/conf in web layer**.

- For a single tier installation, the installer is required to be loaded only once on the machine that hosts all the OFSAAI tiers.

- Execute the below insert scripts in the existing Configuration Schema (this is applicable only for an upgrade activity, Ignore this step if entry already present in configuration table).

NOTE:

Replace the ##PROD_INFODOM## to production information domain name and ##ORECSAND_INFODOM## to orecsandbox information domain name in the below query.

INSERT INTO CONFIGURATION (PARAMNAME, PARAMVALUE, DESCRIPTION)VALUES('OREC_##PROD_INFODOM##_ORECSAND','##ORECSAND_INFODOM##', ' Sandbox dsnid(ORECSAND) mapped to production infodom').

2.5 Pre-Upgrade Activities

This section is applicable only for users upgrading from OFS Operational Risk Economic Capital version 2.1.0.0.0 to OFS Operational Risk Economic Capital version 2.1.1.0.0.

Back-up of Database schema and Files

- Back-up the existing config and atomic schema of the information domain that is upgraded. This can be used to restore the application, in case of any failures during upgrade.

- Back-up FTPSHARE, $FIC_HOME and FIC_WEB_HOME webroot folders of the existing environment.

- Back-up OBIEE related objects (Repository, Images, and Catalog file) that are upgraded.

Pre-Model steps:

1) Delete scripts for specific metadata objects that have an impact on the columns being dropped by the application. This will be executed by the installer as a pre-model upload step.

2) Data backup scripts for the application related tables are executed as part of pre-model upload scripts. The data is deleted from the back up tables. The installer executes these scripts.

3) Drop all the tables which were created using scripts in Operational Risk Economic Capital version 2.1.0.0.0 and which are a part of the Operational Risk Economic Capital version 2.1.1.0.0 data model. Pre model scripts include drop statements for these tables.

4) Delete scripts for the metadata, which has been updated or deleted. This will be executed as part of the pre-model upload scripts.

5) Installer will ignore the ORA errors specific to "table already exists" and "table or view doesn't exist" while executing the Pre-Model Scripts.

Upgrade from OFS Operational Risk Economic Capital 2.1.0.0.0

The following steps are applicable for customers upgrading from OFS Operational Risk Economic Capital version 2.1.0.0.0. You need to perform these steps before proceeding with installation.

Database changes
1) Create a backup of the table rev_etl_mapping in the config schema.

    Create table rev_etl_mapping_11 as select * from rev_etl_mapping;

2) Execute the following scripts in the Config Schema. Data into this table is related to mapping information.

delete from rev_etl_mapping;
commit;

T2T changes
The existing T2Ts will be replaced during upgrade installation. Hence, take a backup of existing T2Ts.

The T2T definitions are present in the following folders:
<FTPSHARE_PATH>/STAGE
<FTPSHARE_PATH>/<INFODOM>/erwin/sources

NOTE:

No new T2Ts definition in Oracle Financial Services Operational Risk Economic Capital version 2.1.1.0.0.

If any customizations were done on the earlier T2T's, then it needs to be done again on these T2T definitions.

Data Model Changes

If Data model is not customized, following steps will be done by the upgrade installer. The new RPD and Catalog needs to be deployed manually:

1) OFS Operational Risk Economic Capital version 2.1.1.0.0 sliced data model is uploaded in "Sliced Model Upload" mode.

2) Execute the Config and atomic scripts.

3) Replace XMLs, executables and other components

If Data Model is customized, then it is suggested to:

1. Open customized and out of box models using ERwin Data Modeler tool.

2. Go to "**Tools**" and select "**Complete Compare**".

3. Select the existing OREC Data model on Left Model, in the Compare window.

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4. Select the extracted OREC Data model on Right Model.

5. In "**Type Selection**", check "**Subject Area**".

6. In "**Advanced**" option, un-check ALL except "**Auto Close Database/Script Models**" and click "**Compare**".

7. Resolve differences by applying all the changes mentioned in the Data_Model_Difference_v2.1.0.0.0_to_v2.1.1.0.0.xls file.

8. Click "**Finish**" and click "**Close**".

9. Save the file as XML in "**AllFusion Repository Format**".

   Example: OREC_Datamodel.xml

Data_Model_Differen
ce_v2.1.0.0.0_to_v2

The metadata and the PR2 objects that were available in OFS OPERATIONAL RISK ECONOMIC CAPITAL 2.1.0.0.0 and not used in any segments of OFS OPERATIONAL RISK ECONOMIC CAPITAL 2.1.1.0.0 are deleted during the pre upgrade process.

2.6   Key considerations to upgrade in a customized environment:

1) As part of pre-model scripts, if there is any column dropped in the new out of box model, the associated metadata will be deleted.

2) In cases of addition to primary key / not null column additions, data of the tables will be backed up and deleted.

3) As a part of upgrade process, if there is a change in out of box metadata / rule, it will be overwritten. If there are any customization done on top the out of box metadata / rule, changes will be lost during the upgrade

4) As part of upgrade process, any T2T modified in the new version, will over write the T2T xmls available in the T2T source. So, any customization done will be lost.

5) If there was any addition / change in the out of box seeded data, which clashes with the primary key of the new version, there will be conflict of the data due to unique constraints. This may lead to the application not working properly.

6) All DB objects modified will be over written with the new code. Any customization will be lost.

   As part of data migration, only the columns which are available as part of the out of box data model will be migrated. Others will not be restored.

3. Installing the Application

3.1 Oracle Financial Services Operational Risk Economic Capital Release 2.1.1.0.0 Installation

The OFSAAI comprises of components that are installed in Web, Application and Database layer. Hence, if you have installed Oracle Financial Services Analytical Applications Infrastructure Release 7.3.3.3.0 in a multitier architecture, the Oracle Financial Services OREC Release 2.1.1.0.0 installer must be loaded on each of the machines that host the Oracle Financial Services Analytical Applications Infrastructure tier.

For a single tier installation, the installer is required to be loaded only once on the machine that hosts all the Oracle Financial Services Analytical Applications Infrastructure tiers.

This section describes the installation process in which the three product setup components with the product are installed on separate machines as follows:

- Machine A is used to install the product Application Layer components
- Machine B is used to install product Database Layer components

NOTE:

This section holds applicable if Oracle Financial Services Analytical Applications Infrastructure Release 7.3.3.3.0 is installed on separate machines A and B respectively.

For Silent Installation, refer to the section Silent Installation.

3.1.1 Machine A – Product Application Layer

Step 1

To begin with the Oracle Financial Services Operational Risk Economic Capital Release 2.1.1.0.0 installation, execute **Setup.sh** with the parameter GUI (GUI Installation) or SILENT (for Silent installation).

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Step 2

Upon loading the installer, the **Introduction** screen displays the prerequisites for installation. Ensure that these prerequisites are met before you proceed.

Step 3

Choose the log mode for this installer. If **Debug** is selected then the debug information will be printed in the log file.

Step 4

Enter the 9 digit Customer Identification Number provided during the OFSAAI installation.
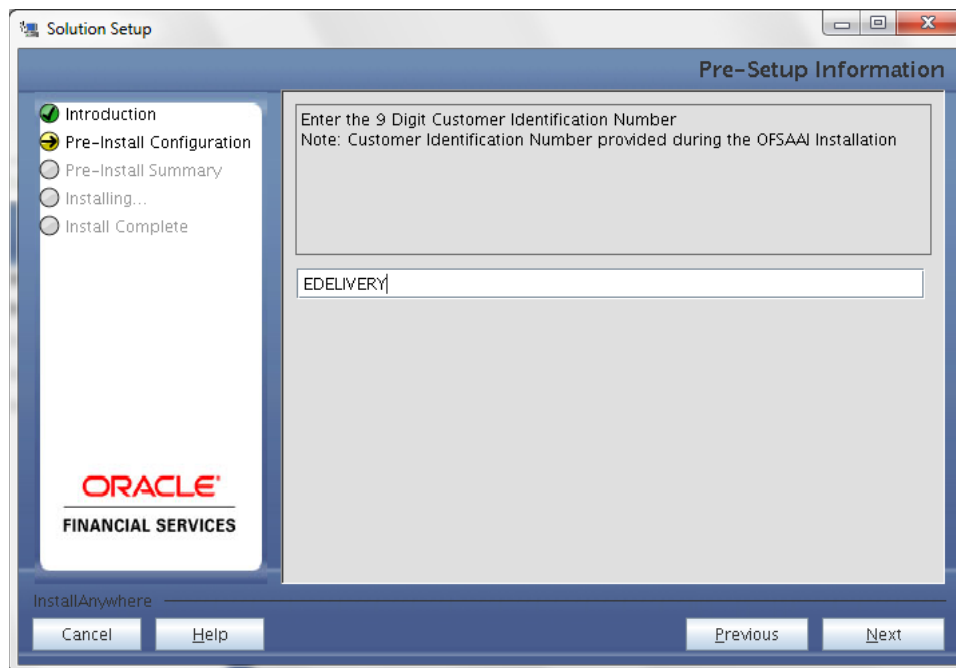
Click **Next** to continue.

Step 5

The **Pre Setup Information** screen requests for setup information.

Enter the OFSAAI User ID.

Select the appropriate Oracle Financial Services Analytical Applications Infrastructure layer that has been installed on the machine.

Example: **Application Layer**
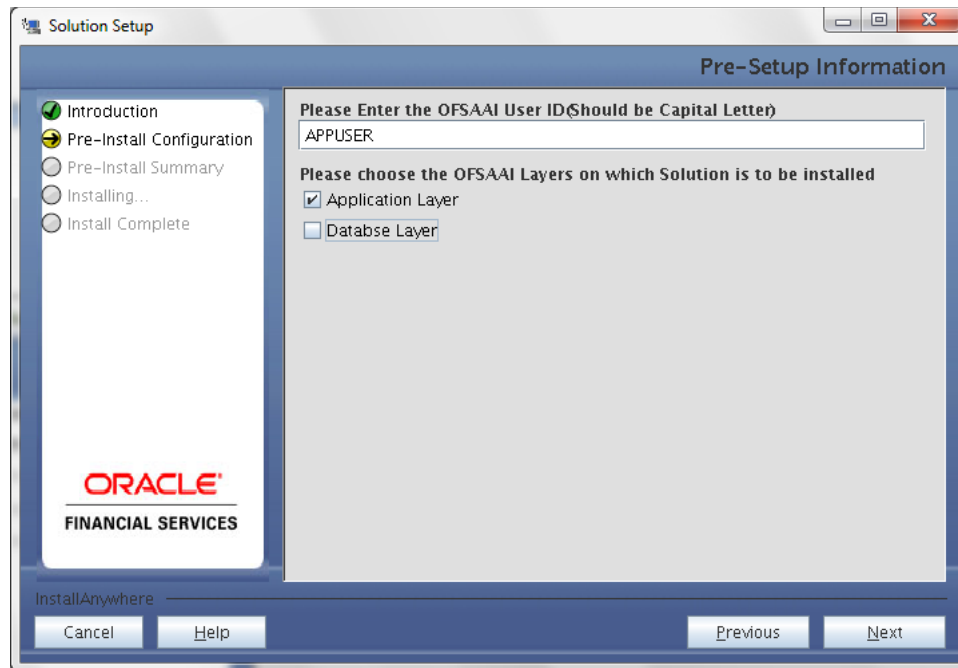
NOTE:

- Create the User in Infrastructure which was specified during installation process, if it does not exist.

- For a single-tier Oracle Financial Services Analytical Applications Infrastructure Release 7.3.3.3.0 installation, you must select Application Layer and Database Layer.

- For a multitier Oracle Financial Services Analytical Applications Infrastructure Release 7.3.3.3.0 installation, select the corresponding layer installed on the machine.

Step 6

This screen prompt seeks infromation on whether a new infodom has to be created or the existing infodom to be used for installation. Choose the desired option.
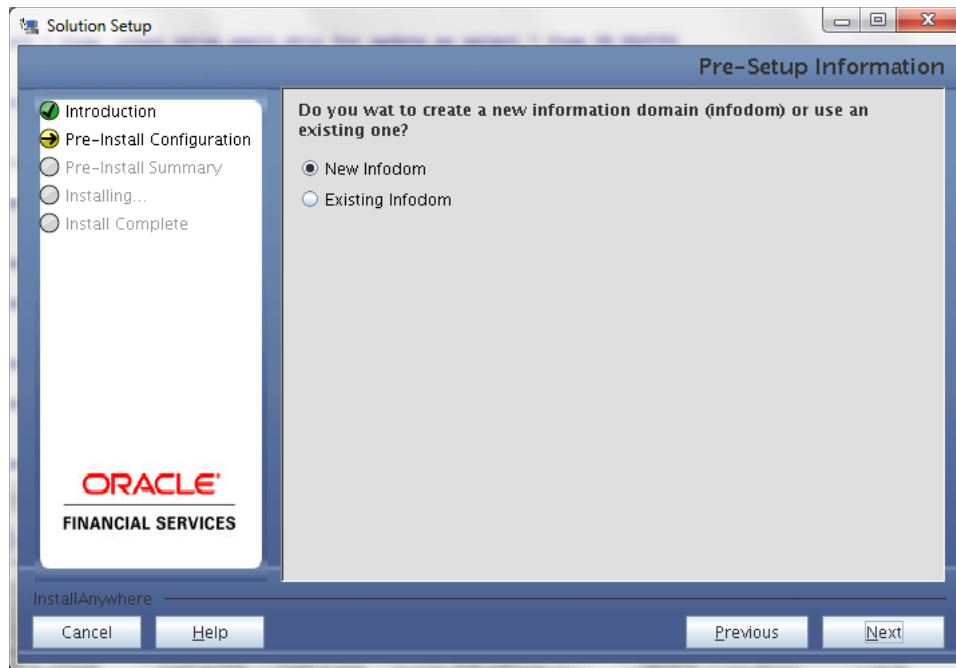
Pre Setup Information Screen – Infodom type

Click **Next** to continue. If **New Infodom** is selected then go to **Step 7** or else go to **Step 8**.

Step 7

If the option **New Infodom** is chosen then update the following to create infodom:

Step 7-i:

- Specify a DB name for the new infodom. Make a TNS entry with the DB name specified in the tnsname.ora file in the oracle server.

- Enter the newly created application schema's user name, password and JDBC url in relevant fields.

Click **Next** to continue.
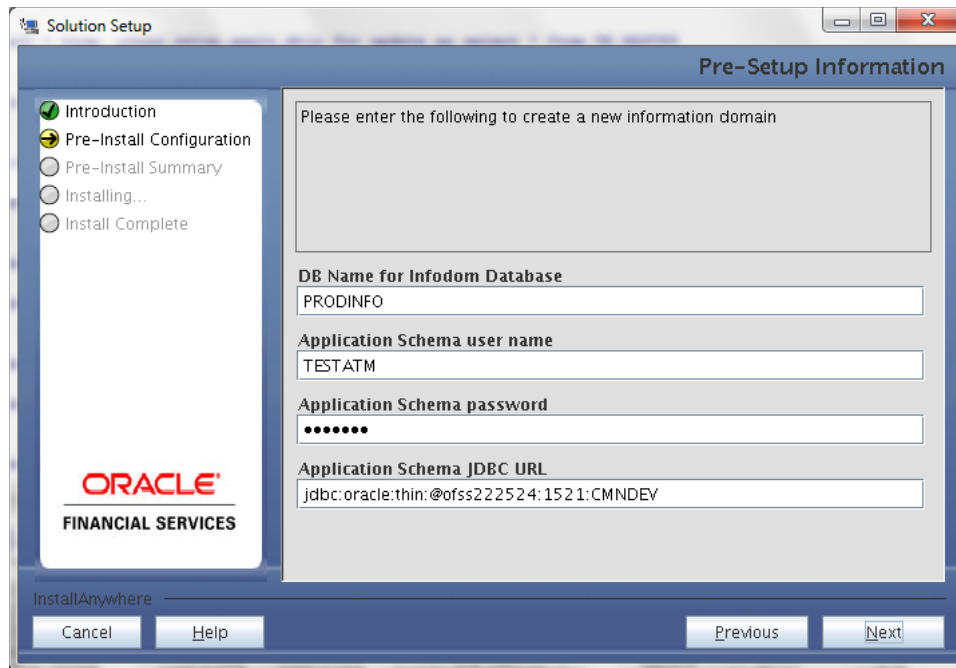
Step 7-ii

In the next screen prompt, enter the following details:

- Specify the name and description of the new infodom to be created.

- Specify a segment name to be created.

- Specify the application server and database server log path for infodom maintenance (to be created).
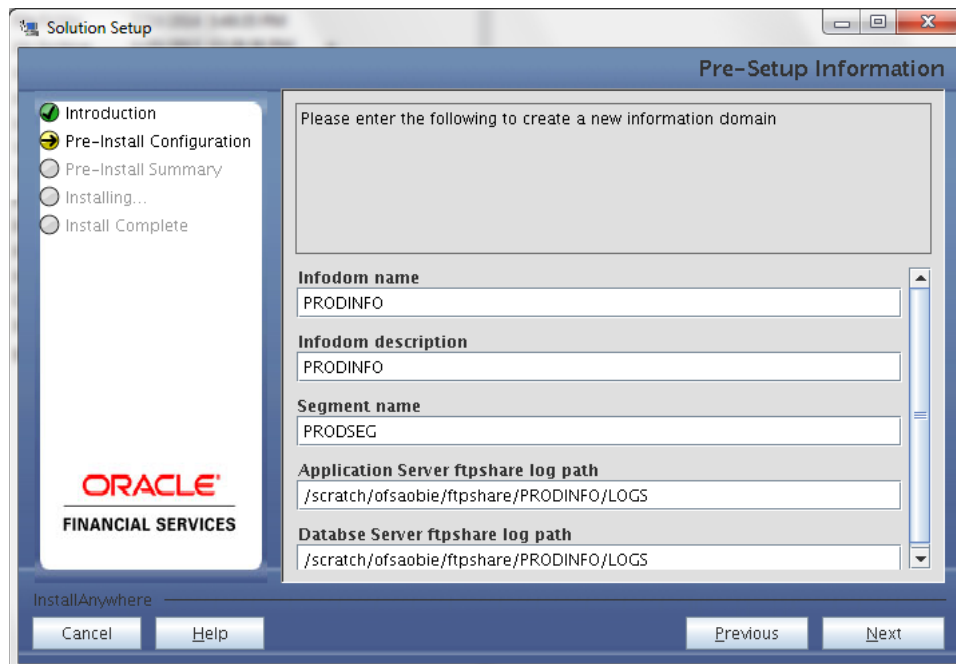
NOTE:

The OFSAAI user must have a role that is able to perform Add/Modify functions for OFS Operational Risk Economic Capital Framework metadata.

Click **Next,** to continue. Check and verify all the details before proceeding to Step 7- iii.

Step 7-iii

Click **Next** to continue with the creation of information domain.
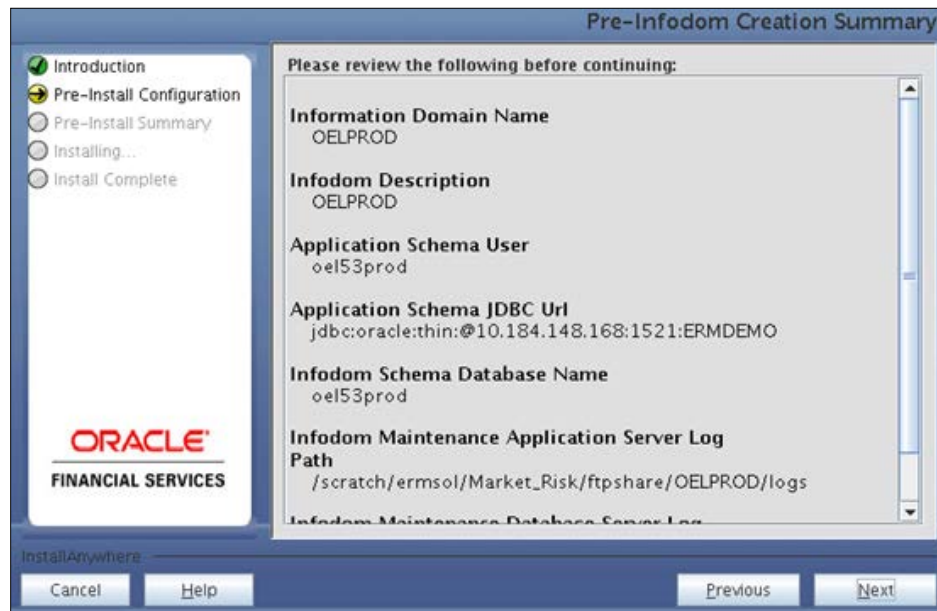
Step 8

If the option Existing Infodom was selected then update the following details in the screen prompt that is displayed:

Step 8-i

- Enter segment code.

- Enter the application schema's TNS name.
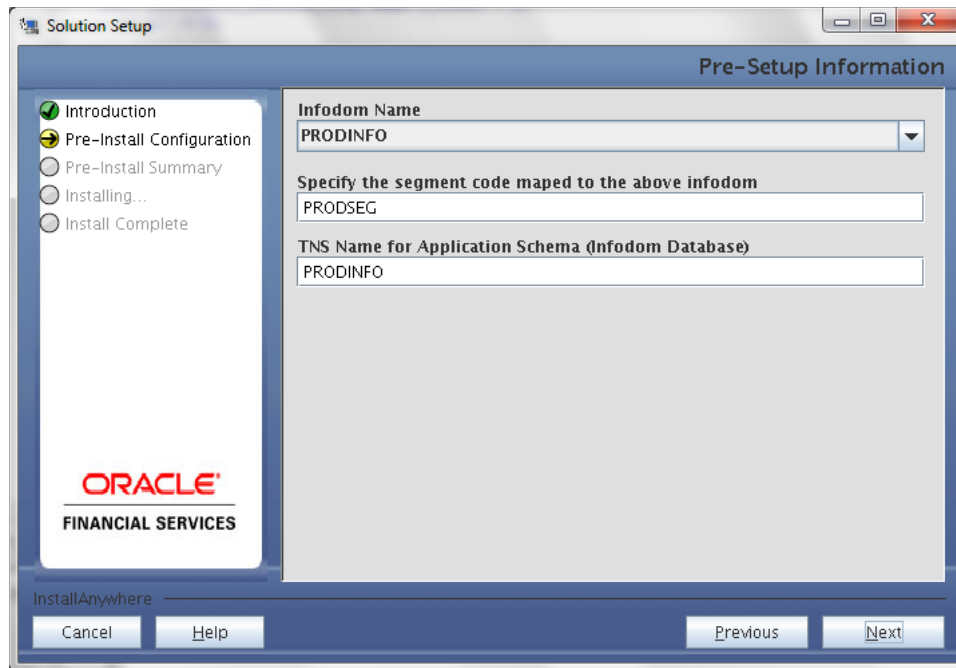
Step 9

Oracle Financial Services Operational Risk Economic Capital Release 2.1.1.0.0, Sandbox is packaged as part of the application installer and is installed as a part of the following steps, if required.

In the following screen prompt opt for Sandbox creation process through the installer.

- Click **Yes**, if you wish to configure the sandbox. The installer seeks details for new information domain creation for sandbox.

Step 9 -i:

- Specify a DB name for the new infodom. Make a TNS entry with the DB name specified in the tnsname.ora file in the oracle server.

- Enter the newly created application schema's user name, password and JDBC url in relevant fields.

Click **Next** to continue.

Step 9-ii

In the next screen prompt, enter the following details:

- Specify the name and description of the new information domain for sandbox to be created.

- Specify the application server and database server log path for infodom maintenance (to be created).
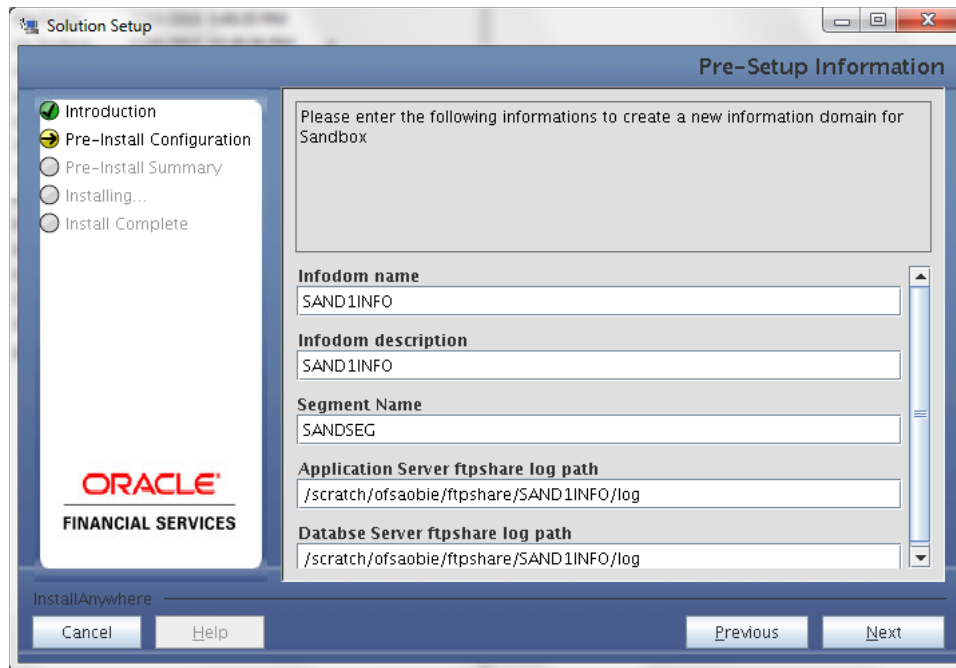
Step 9-iii

Click **Next** to continue with the creation of information domain.
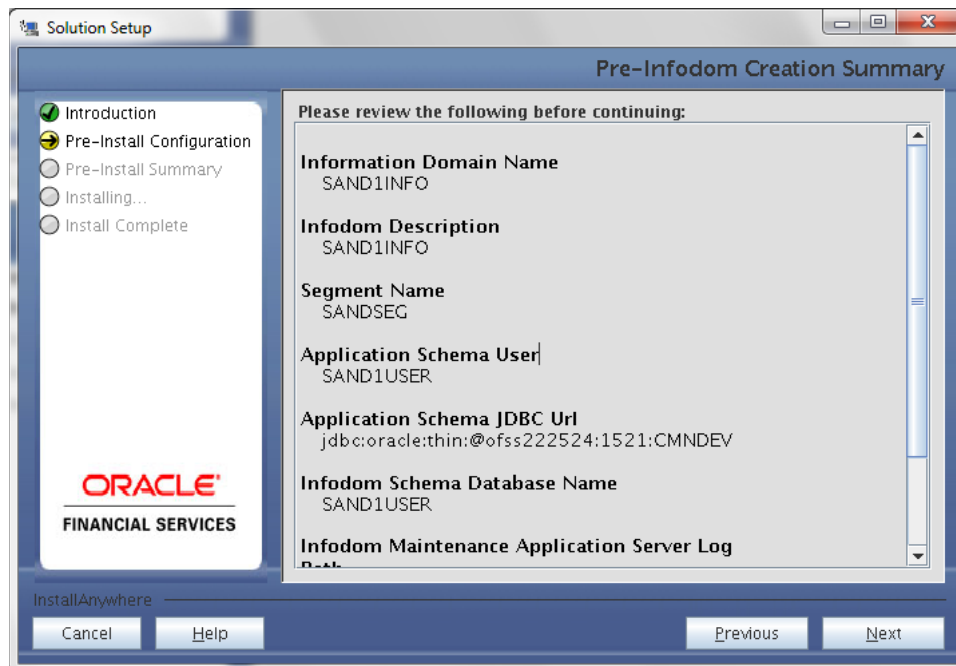
Step 10

Oracle Financial Services Operational Risk Economic Capital Release 2.1.1.0.0, data model is packaged as part of the application installer and is installed as a part of the following steps, if required.

In the following screen prompt opt for model upload process through the installer.
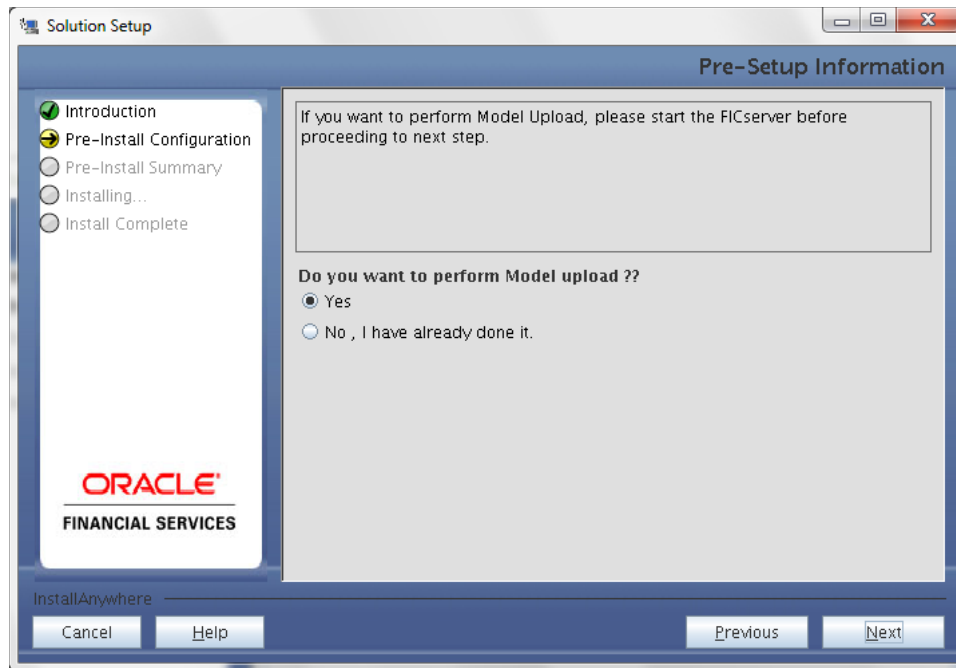
Pre-Setup Information

NOTE:

If **Yes** is selected for Data model upload then copy the .xml to a specific folder and rename the file.

Clicking **No** implies that the Oracle Financial Services Operational Risk Economic Capital Model is already uploaded. To proceed with the application model upload process as part of the installation click **Yes**. Click **Next** to proceed.

If you select **No** go to **Step 12** or else go to **Step 10**.

Step – 11

In the following screen prompt choose whether the released version of the datamodel or the customized datamodel is to be uploaded.
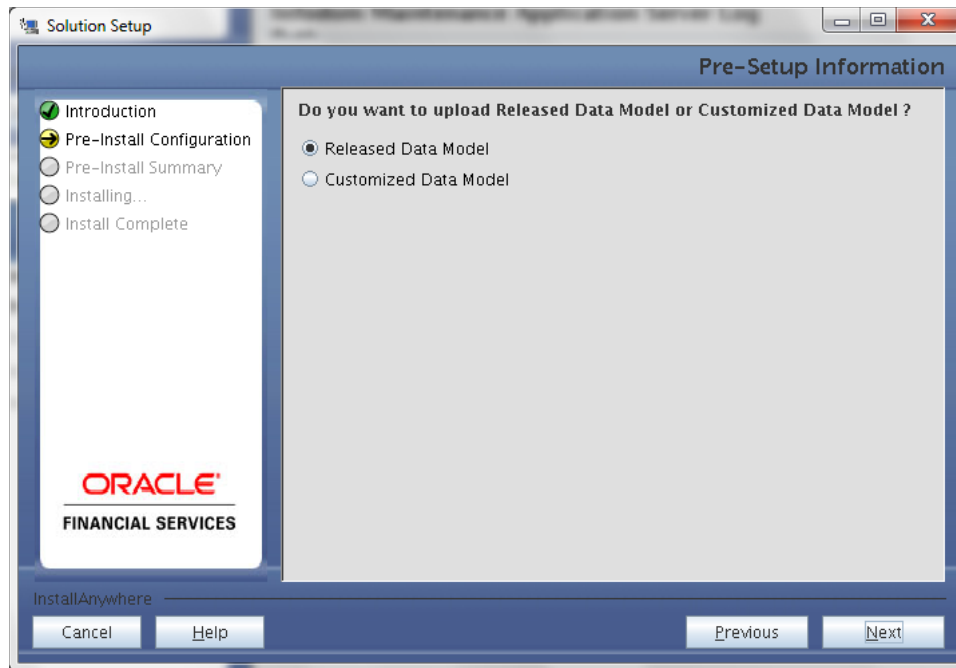
If **Released Data Model** option is selected, then the installer uploads the Oracle Financial Services Operational Risk Economic Capital Release 2.1.1.0.0 data model.

If **Customized Data Model** option is selected, then the installer allows you to select the data model. Choose the desired option.

If **Released Data Model** is selected go to **Step 12** or else go to **Step 11**.

Click **Next** to proceed.

Step – 12

If the **Customized Data Model** is selected then the following screen prompt is displayed where you can select the customized data model located in the machine.
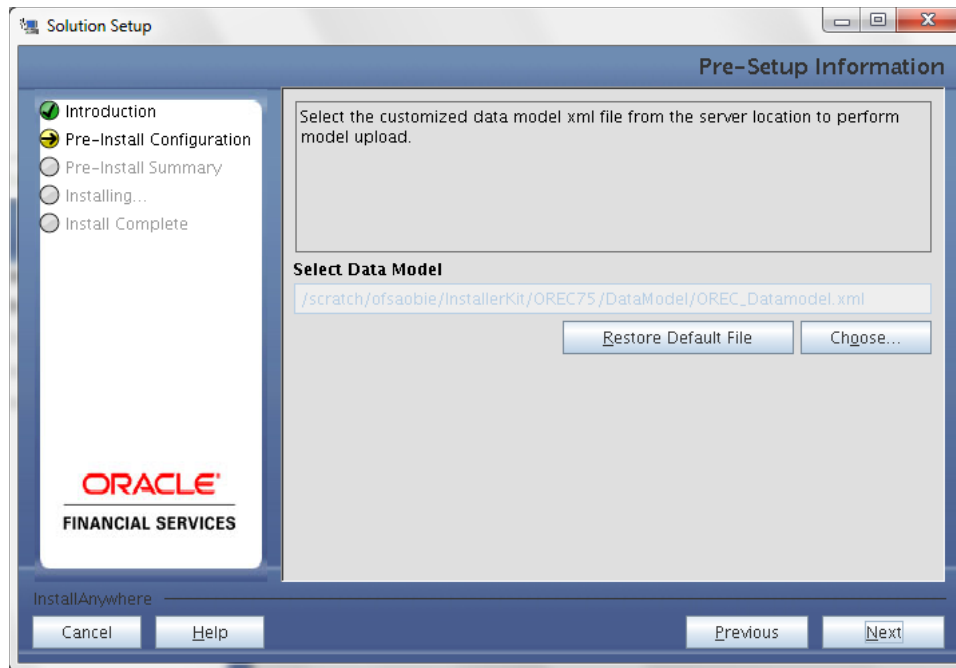
Pre – Setup information

NOTE:

- The data model .XML file should be available in the server. If the installation is being performed on an existing information domain, the data model to be selected in this screen prompt should be merged with the data model that was previously uploaded in the information domain.

- If the installation is performed on a new information domain, data model that is either customized or merged with other data models can be selected in this panel.

Step – 13

The following screen prompt displays the premodel upload details:
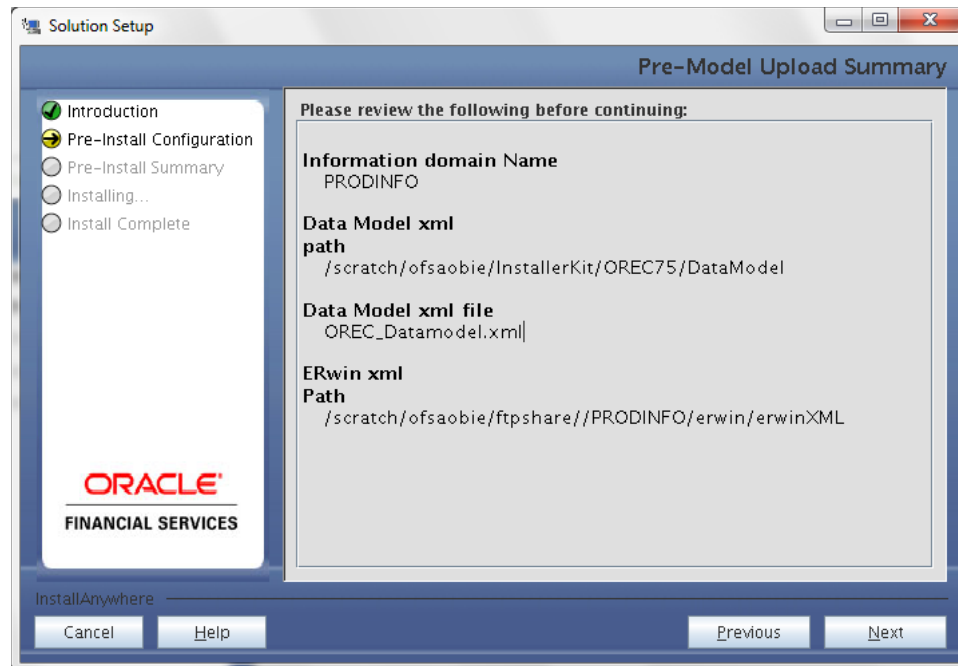
1. Verify the details before proceeding to the next step.

2. Click **Next** to proceed with model upload.

The time taken for the process of model upload is dependent on the size of the data model and available physical memory in the environment. Till the process is complete, no further action can be taken. In addition, this step cannot be rolled back.

If the model upload fails, then a pop-up message with relevant errors and the log file path is displayed. Review the errors and take relevant action. After resolution, navigate through to the previous screen and proceed with the steps mentioned above.

NOTE:

Some of the common errors are:

- Insufficient heap memory on the client machine.

  Possible reason/resolution:

  The java memory settings mentioned in .profile should be increased.

- Error while getting the Erwin File path.

  Possible reason/resolution:

  Restart the FICServer.

Step – 14

In the following screen select New application/source pair or select Existing application/source pair. If the option Existing application/source pair is selected then goto step 14-ii or else goto step 14-i.
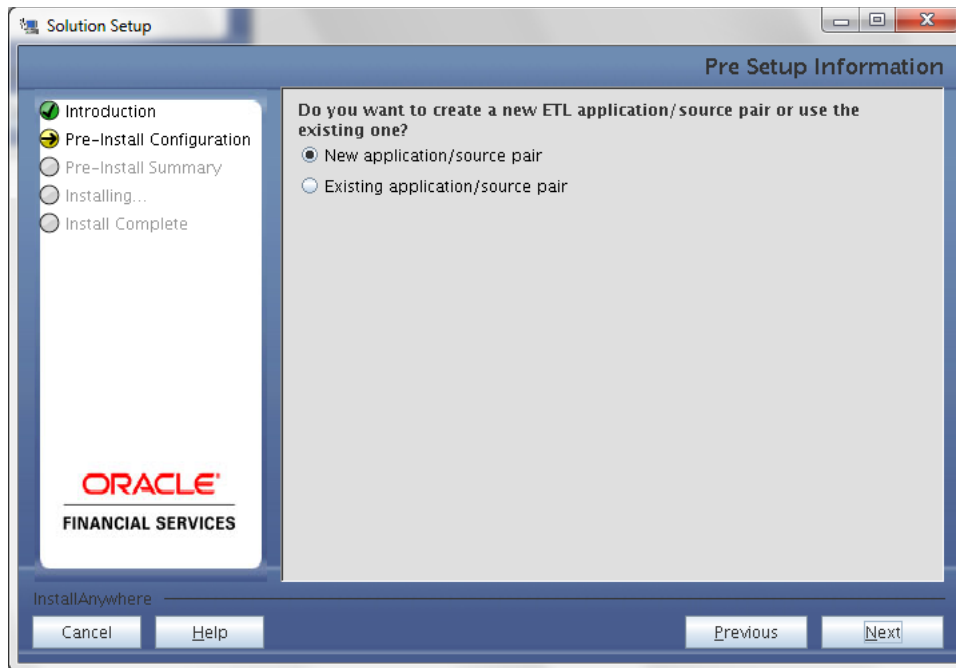
Step 14-i

In the next screen specify all the details required for application and source creation. Click **Next** to proceed. Clicking **Next** creates application and source within OFSAAI. Source model will also be generated. This process might take some time to process depending on the number of entities or attributes in the atomic schema. This step cannot be rolled back.
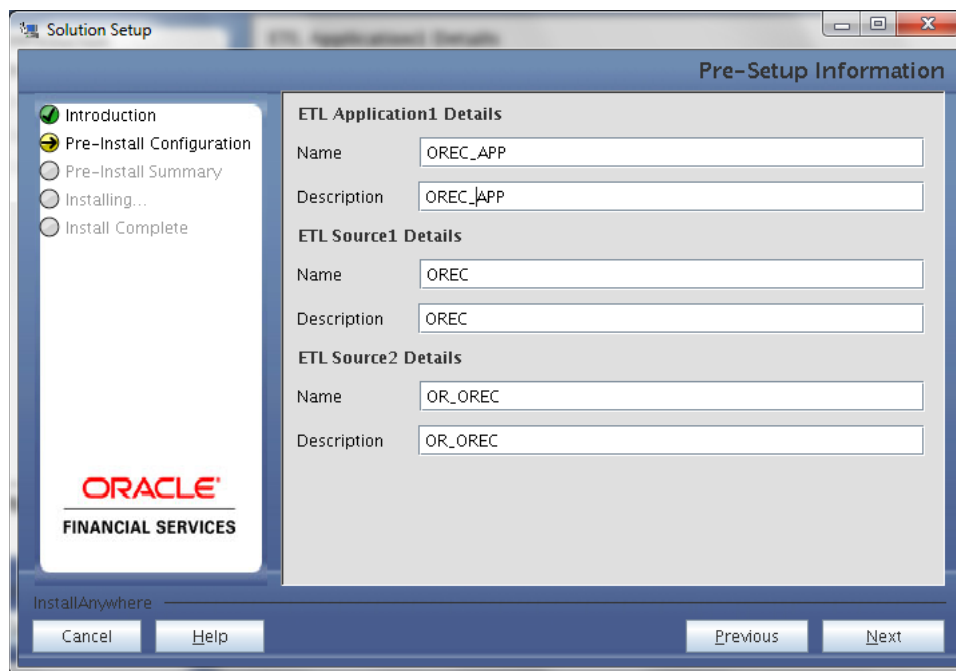
Note:

> ETL Source will be created pointing to the information domain (atomic schema) that is specified during the installation

Step 14-ii

If the option "Existing application/source pair" was chosen the following panel willl be displayed prompting user to select app/source pair from the list of pairs already present.

Choose the desired ETL application/source pair into which ETL definitions should be deployed.

Click **Next** to Process.
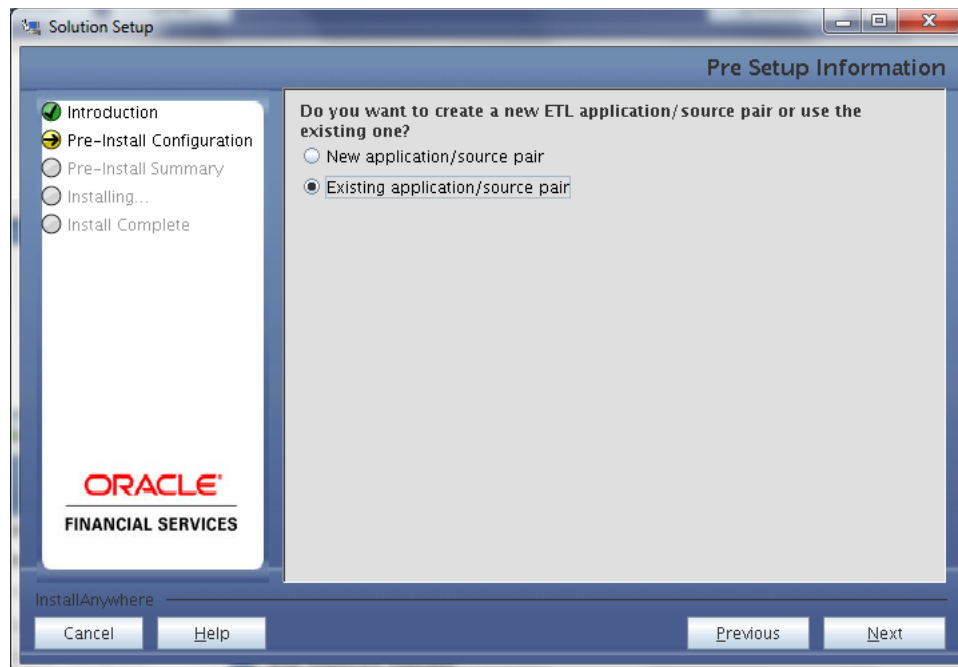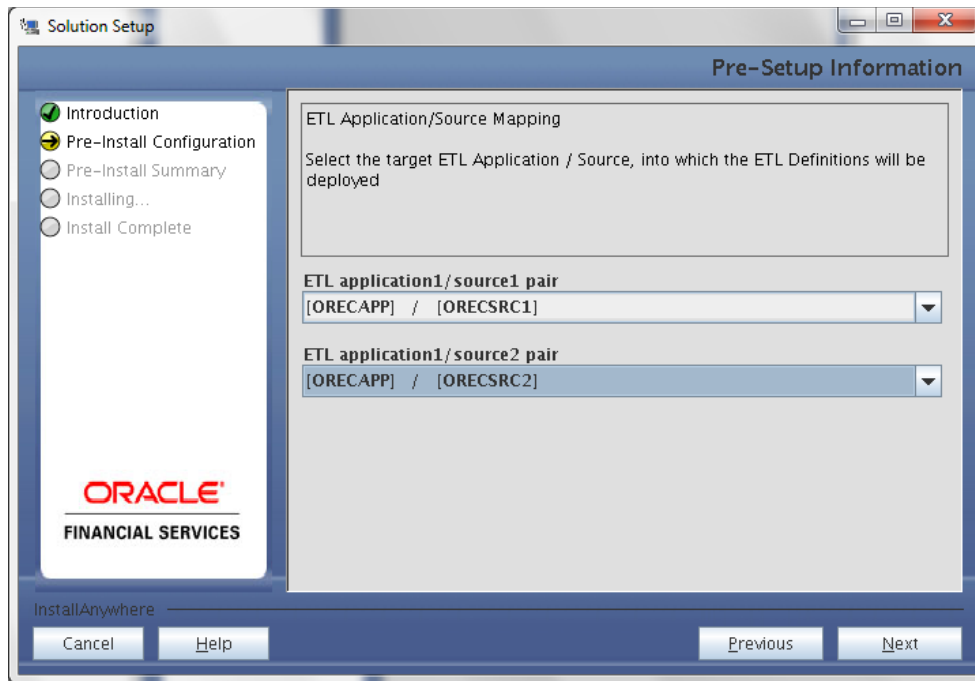
Step 15

This screen prompt displays all the preinstallation summary. Verify all details and click **Install** to proceed.
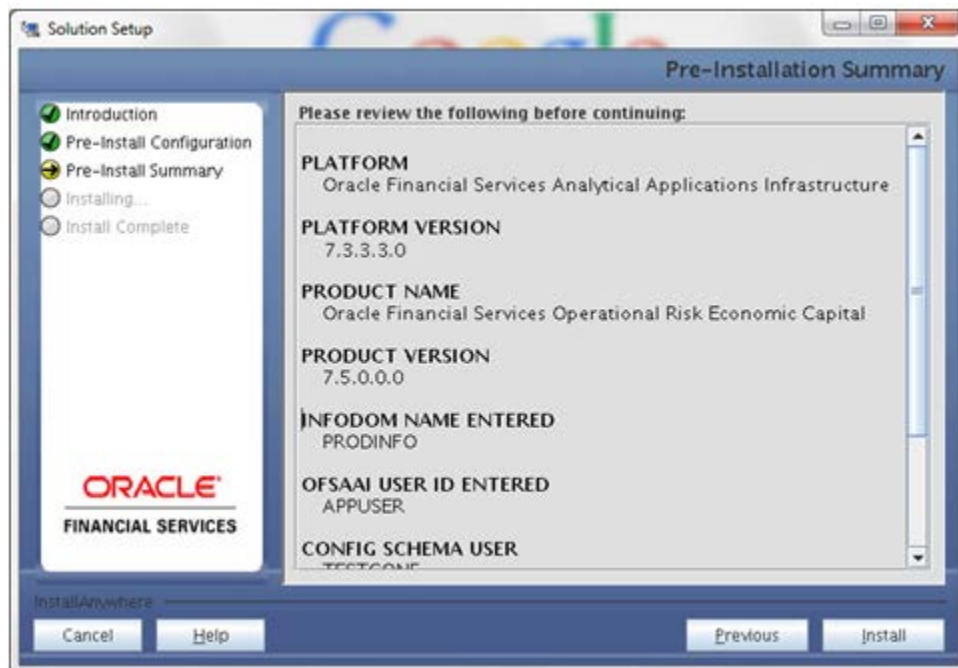
Step 16

This screen prompt displays the installation process. To proceed further, wait for the installation to be completed.
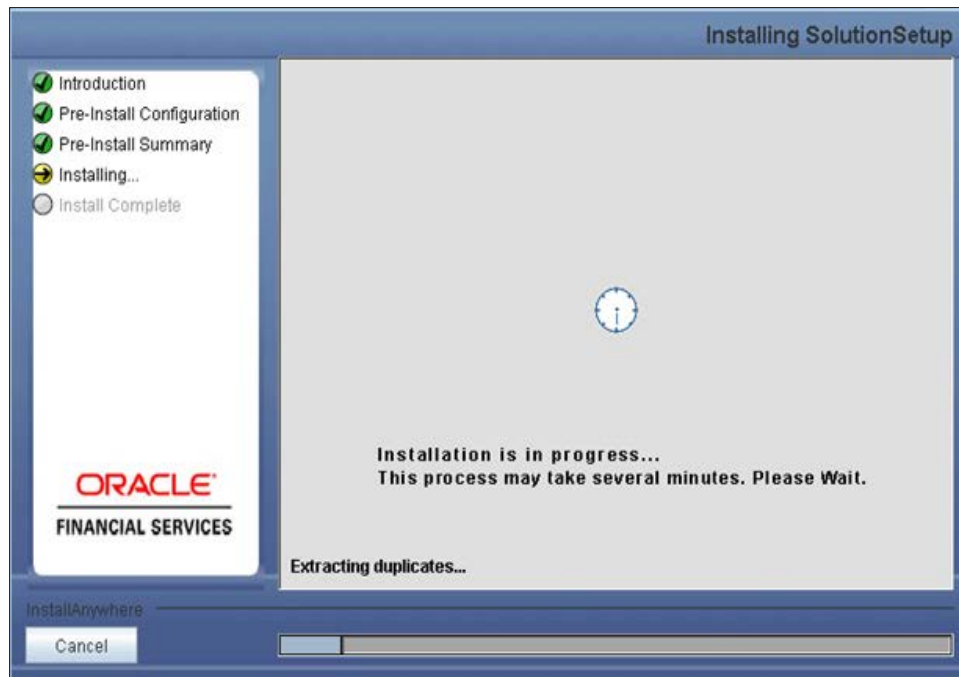
Step 17

The following screen prompt displays the completion of installation of the Oracle Financial Services Operational Risk Economic Capital Release 2.1.1.0.0 Setup. Click **Done** to exit.
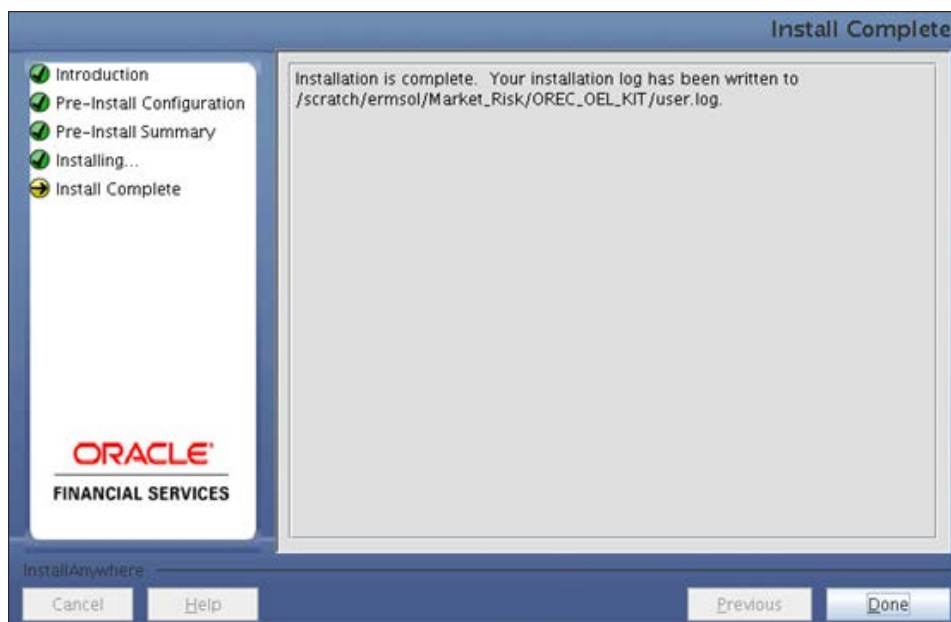
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3.1.2 Machine B – Product Database Layer

Step 1

To begin with the Oracle Financial Services Operational Risk Economic Capital Release 2.1.1.0.0 installation, execute **Setup.sh** with the parameter GUI (GUI Installation) or SILENT (for Silent installation).

Step 2

Upon loading the installer, the **Introduction** screen displays the prerequisites for installation. Ensure that these prerequisites are met before you proceed.
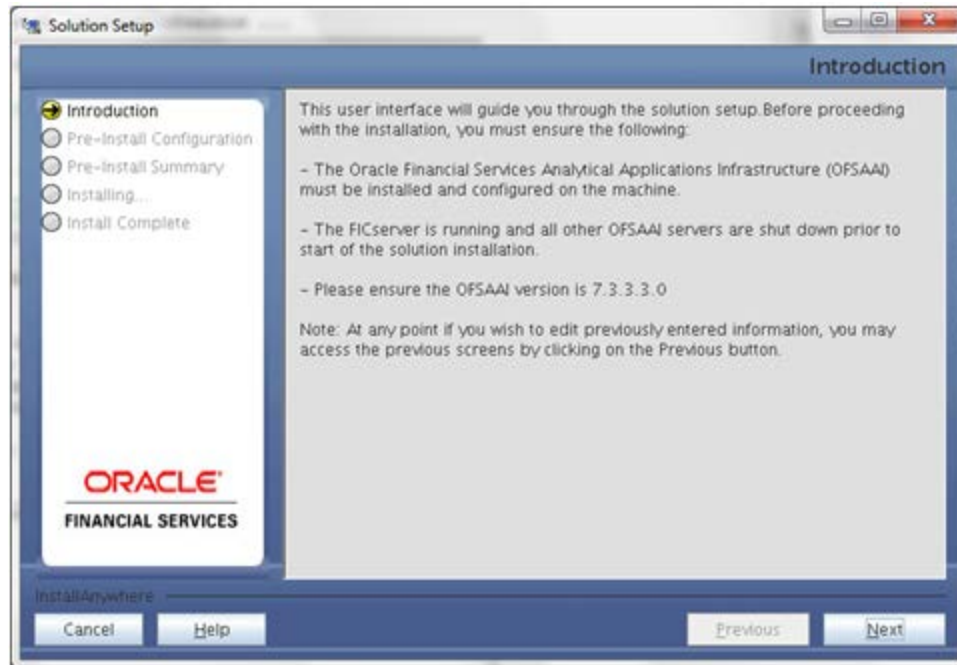
Step 3

Choose the log mode for this installer. If **Debug** is selected then the debug information will get printed in the log file.

Step 4

Enter the 9 digit Customer Identification number provided during the OFSAAI installation.
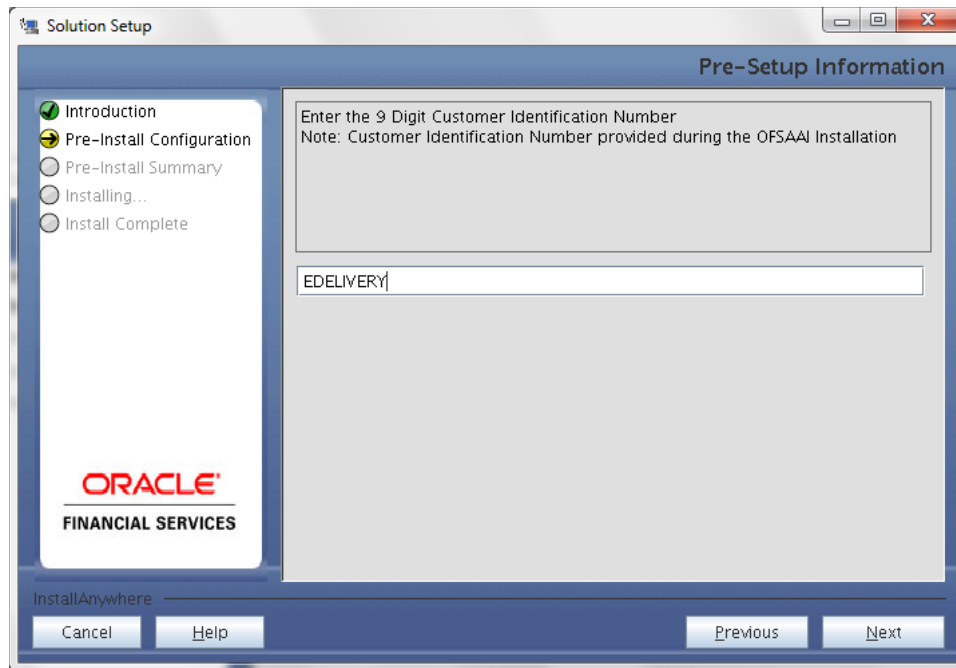
Click **Next** to continue.

Step 5

The **Pre Setup Information** screen requests for setup information.

Enter the OFSAAI User ID.

Select the appropriate Oracle Financial Services Analytical Applications Infrastructure layer that has been installed on the machine.

Example: **Database Layer**
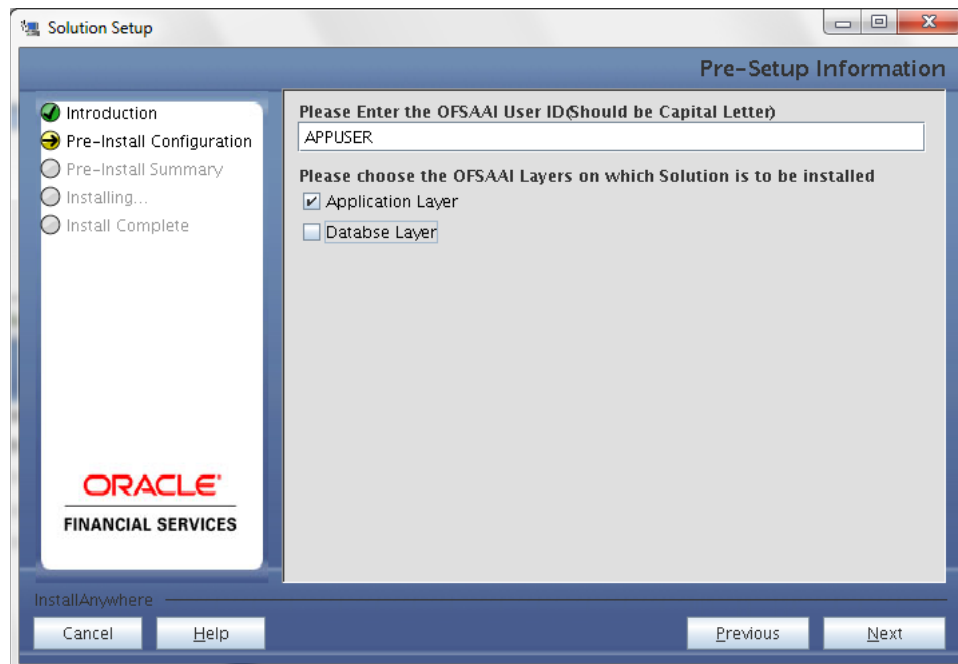
NOTE:

- For a single-tier Oracle Financial Services Analytical Applications Infrastructure Release 7.3.3.3.0 installation, you must select Application Layer and Database Layer.

- For a multitier Oracle Financial Services Analytical Applications Infrastructure Release 7.3.3.3.0 installation, select the corresponding layer installed on the machine.

Step 6

Select the infodom from list of infodoms present in the setup, enter segment code and enter the application schema's TNS name in the following screen prompt.
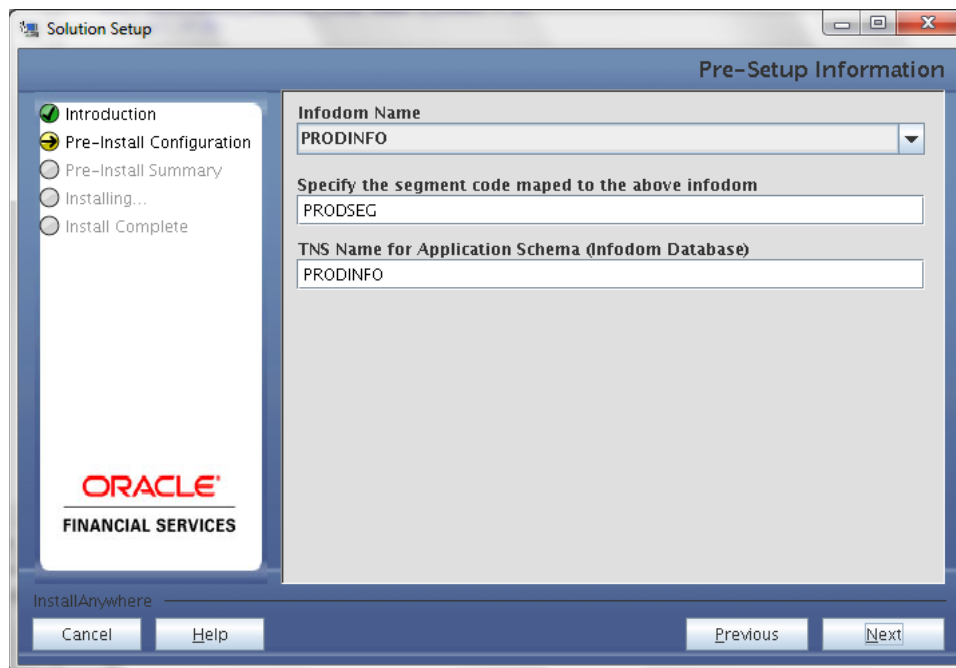
Step 7

This screen prompt summarizes the preinstallation details. Verify all the details and proceed.

Click **Install** to proceed.

Step 8

This screen prompt displays the installation process. Wait till the installation is complete.
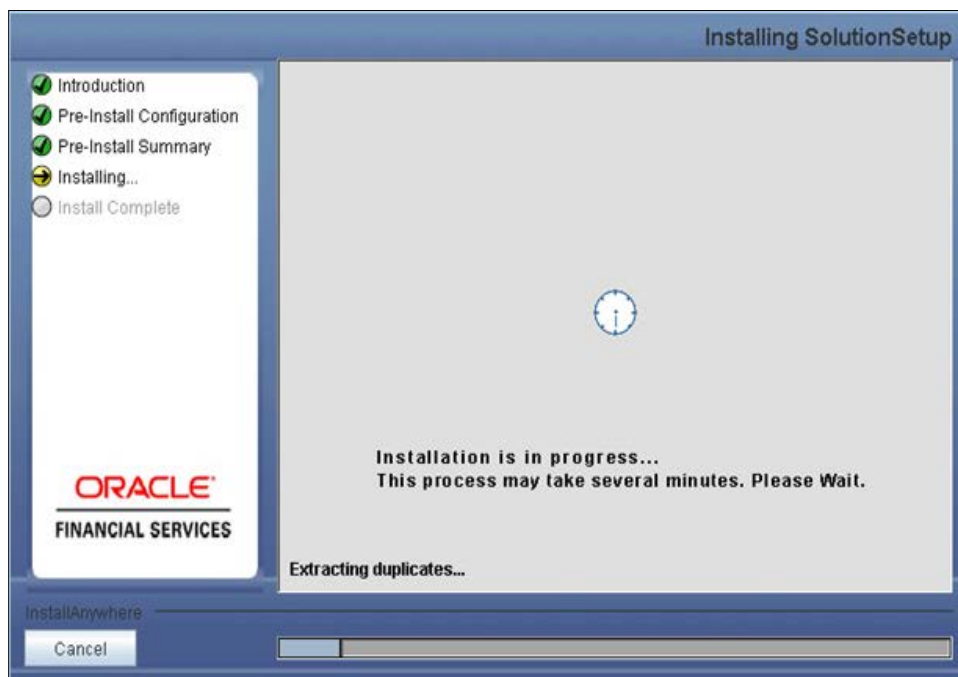
Step 9

The following screen prompt displays the completion of installation of the Oracle Financial Services Operational Risk Economic Capital Release 2.1.1.0.0 setup.

Click **Done** to exit.
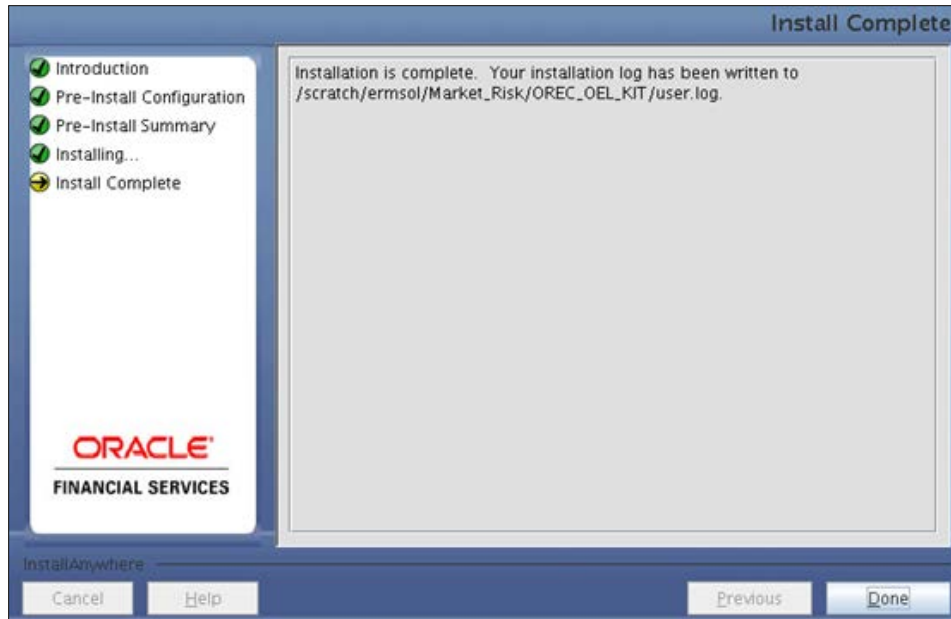
3.2 OFS Operational Risk Economic Capital Release 2.1.1.0.0 Installation-Silent Mode

Silent installation is achieved through a properties file [silent.properties] that must be updated with proper values, before attempting to install using the silent mode.

How to install in Silent Mode

The installer folder contains a template file **Silent.template**.

Create a copy of this file and rename the copy as **Silent.props**.

Edit the file **Silent.props** and specify the parameters as per the requirements.

On the UNIX Command prompt, execute the following command:

Setup.sh SILENT

Refer to the console log or the file **preinstall.log** for any error messages.

The following table lists all the properties that need to be specified:

Silent.Props.xlsx

3.3 Post Installation Activities

Once the installation of Oracle Financial Services Operational Risk Economic Capital Release 2.1.1.0.0 application is completed, refer to the following activities:

- The following tag should be added manually in web.xml if not already present in web.xml:

```
<resource-ref>
<description>DB Connection
<Production_Infodom_Name></description>
<res-ref-name>jdbc/<infodom_name></res-ref-name>
<res-type>javax.sql.DataSource</res-type>
<res-auth>Container</res-auth>
</resource-ref>

<resource-ref>
<description>DB Connection
<Sandbox_Infodom_Name></description>
<res-ref-name>jdbc/<infodom_name></res-ref-name>
<res-type>javax.sql.DataSource</res-type>
<res-auth>Container</res-auth>
</resource-ref>
```

- Create a connection pool for the production and sandbox infodoms. *For more information, refer to the OFSAAI 7.3.0.0.0 Installation manual.*

- Copy the dynamic Services.xml, Dynamic.dtd, Lookupservices.xml and lookup.dtd from the $FIC_HOME/conf of app layer to ficdb/conf of the db layer.

- Map the domain segment names to a User Group manually. To do so, click **Security Management** from the LHS of the OFSAAI front end, then click **User Group Domain Map** option and map the required Information Domain – segment to the User Group.

- Check for `export` **LDR_CNTRL=MAXDATA=0x40000000** in the .profile. If already commented as per pre-installation activity then uncomment it.

- Create and deploy the war file into webserver. For more information on deploying the war file, refer the *OFSAAI 7.3.0.0.0 Installation manual.*

- Start all OFSAAI Servers.

- Refer *Start Infrastructure* section in the *OFSAAI 7.3.0.0.0 Installation manual* for assistance in starting the servers.

- Recompile all the functions, procedures and views.

- If you are installing Oracle Financial Services Operational Risk Economic Capital Release 2.1.1.0.0 on OFSAAI 7.3.3.0.0 or higher versions, you need to run the MLS utility. See the Multiple Language Support (MLS) Utility section in *OFSAAI Administration Guide*.

- Re-save other metadata and all the Hierarchies after populating the set up data and executing the SCD batch.

The Oracle Financial Services Operational Risk Economic Capital Release 2.1.1.0.0 application is now ready to be used.

If you encounter any problems during setup, please contact OFSAA Support at Oracle Support.

4. **OFS Operational Risk Economic Capital v2.1.1.0.0 Analytics Configuration**

Assumptions

- The database schema will have proper privileges namely, `CONNECT, RESOURCE AND CREATE MATERIALIZED VIEW.`
- OBIEE 11.1.1.7.1 Server for the respective operating system is installed.
- Administrator knows how to start/shutdown the OBIEE servers namely;
  - Weblogic Server
  - Oracle BI Server
  - Oracle BI Presentation Server
 - Oracle BI Java Host
- Administrator knows the OBIEE installation path

Pre-requisites

a. Backup the following OBIEE folders (*This is recommended only for existing installation. It is not required for new installation.*) :

- *<Installation Path>\middleware\instances\instance1\bifoundation*

  OracleBIServerComponent\coreapplication_obis1\repository

- *<Installation Path>middleware\instances\instance1\bifoundation*

  OracleBIPresentationServicesComponent\coreapplication_obips1\catalog\<new folder created as part of Installation steps>

b. Server details that is, the URL of OBIEE must be kept ready.
c. Copy the following files from the release kit to the local system:

- *$FIC_HOME\ORECBI\Customer Deliverables\Answers & Dashboards\OFS Operational Risk Economic Capital 2.1.1.0.0 - Dashboards; this has the archive for dashboard related files. Do not unzip this file, as this file is not a zip file.*
- *$FIC_HOME\ORECBI\ Customer Deliverables\Answers & Dashboards\OFS Operational Risk Economic Capital Analytics 2.1.1.0.0 - Answers; this has the archive for Answer (report) related files. Do not unzip this file, as this file is not a zip file.*
- *$FIC_HOME\ORECBI\Customer Deliverables\OBIEE Repository\ OFS Operational Risk Economic Capital 2.1.1.0.0 - Repository.zip; this has the OREC.rpd file. Unzip this file in the local machine.*

Configuration Steps

Server Configuration steps (for each release confirm that the following has been setup):

Ensure that, the following has been setup for each release:

a. Stop the BI servers

    i.   Go to Business Intelligence menu located on the left hand side of the screen and then select **core application**.

    ii.   Click **Deployment** tab.

    iii.   Click **Lock and Edit Configuration**.

    iv.   Go to the section Upload BI Repository and browse to select the repository.

    v.   Enter the repository password and confirm the same. The repository password is "Administrator1".

    vi.   Click **Apply**.

    vii.   Go to BI Presentation Catalog section and then provide the path of the new catalog.

    viii.   Click **Activate Changes**.

    ix.   Click **Overview** tab.

    x.   Click **Restart** and confirm to restart all services.
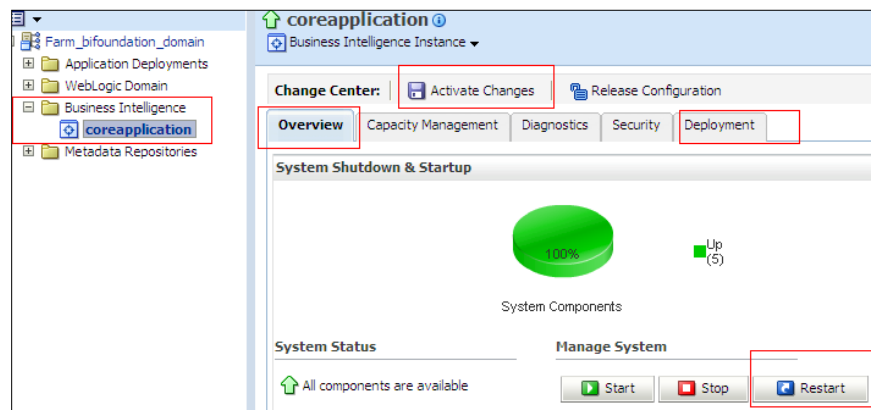
    xi.   Edit the **NQSConfig.INI** file, present in *<Installation Path>\instances\instance1\config\OracleBIServerComponent\coreapplicati*on_obis 1 to reset the FMW_UPDATE_ROLE_AND_USER_REF_GUIDS = NO to YES.

    xii.   Add the following tag:
<UpdateAccountGUIDs>UpdateAndExit</UpdateAccountGUIDs> in the instanceconfig.xml under the tag <Catalog>, present in <Installation

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Path>\instances\instance1\config\OracleBIPresentationServicesComponent and
restart all opmn services.

xiii. Check if all the servers are up and running (except Presentation Service).

xiv. Edit the NQSConfig.INI file, present in <Installation
Path>\instances\instance1\config\OracleBIServerComponent\coreapplication_obis
1 to reset the FMW_UPDATE_ROLE_AND_USER_REF_GUIDS = YES to NO
and update.

xv. SetEVALUATE_SUPPORT_LEVEL=2 from EVALUATE_SUPPORT_LEVEL=0
and save.

xvi. Remove the following tag:
<UpdateAccountGUIDs>UpdateAndExit</UpdateAccountGUIDs> in the
instanceconfig.xml under the tag <Catalog>, present in <Installation
Path>\instances\instance1\config\OracleBIPresentationServicesComponent and
restart all opmn services.

xvii. Restart all opmn services.

xviii. Disable the cache (cache can be enabled once the setup is moved to the
production mode and on the basis of bank's requirements).

xix. To disable the cache, click "Capacity Management" tab in Oracle Enterprise
Manager.

xx. Select "Performance" tab within it.

xxi. Click Lock and Edit Configuration button.

xxii. Clear the option "Cache enabled" and then click Activate Changes.

xxiii. Restart the servers to activate changes. Refer to the following image:
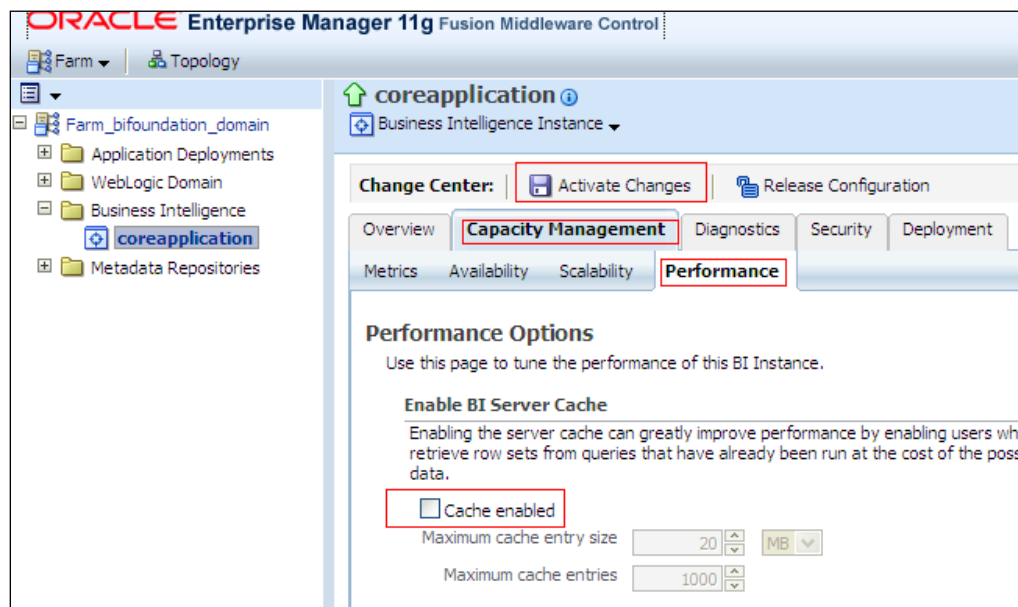
    b.   To open the RPD choose Start > All Programs > Oracle Business Intelligence > BI Administration.
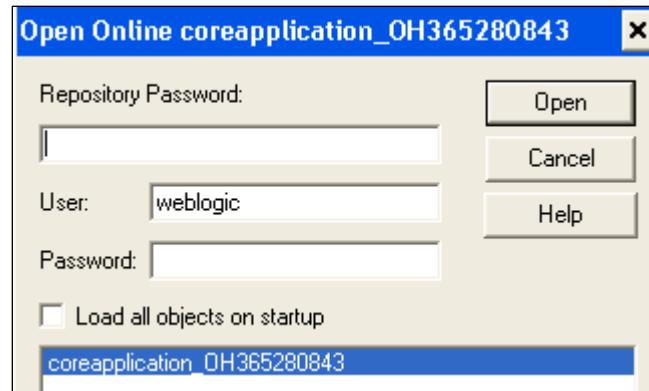
    c.   Enter the Repository Password as "Administrator1".

    d.   Enter User as "weblogic" and the password provided at the time of installing OBI 11g.

    e.   Double click "ConnectionPool" in the physical layer of the RPD as shown in the following image.
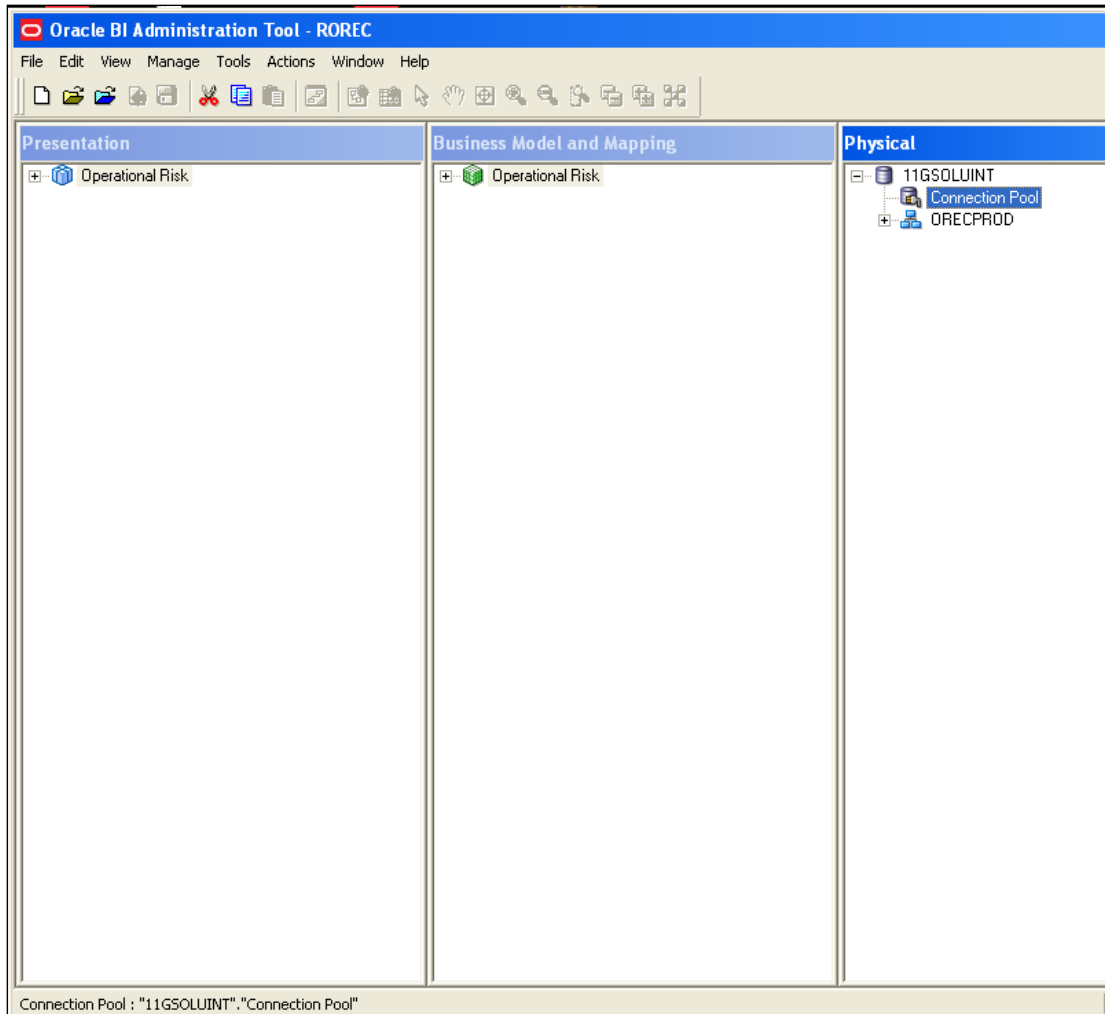
Note:

When the Oracle BI Server is running on Linux or UNIX and you need to update database object settings (such as the database type) or connection pool settings, you can copy the repository file to a Windows computer, make the changes using the Administration Tool on Windows, and then copy the repository file back to the Linux or UNIX computer.

f. Modify the Data source name, User name and password to the Oracle TNS Name, database schema name and password respectively, as shown in the following image.

Note:

If Oracle TNS Name is entered in **Data Source Name**, then TNS details must be also present under file - *<Installation Path>\Oracle_BI1\network\admin\tnsnames.ora.* Services must be restarted after addition of TNS details in the above mentioned path.
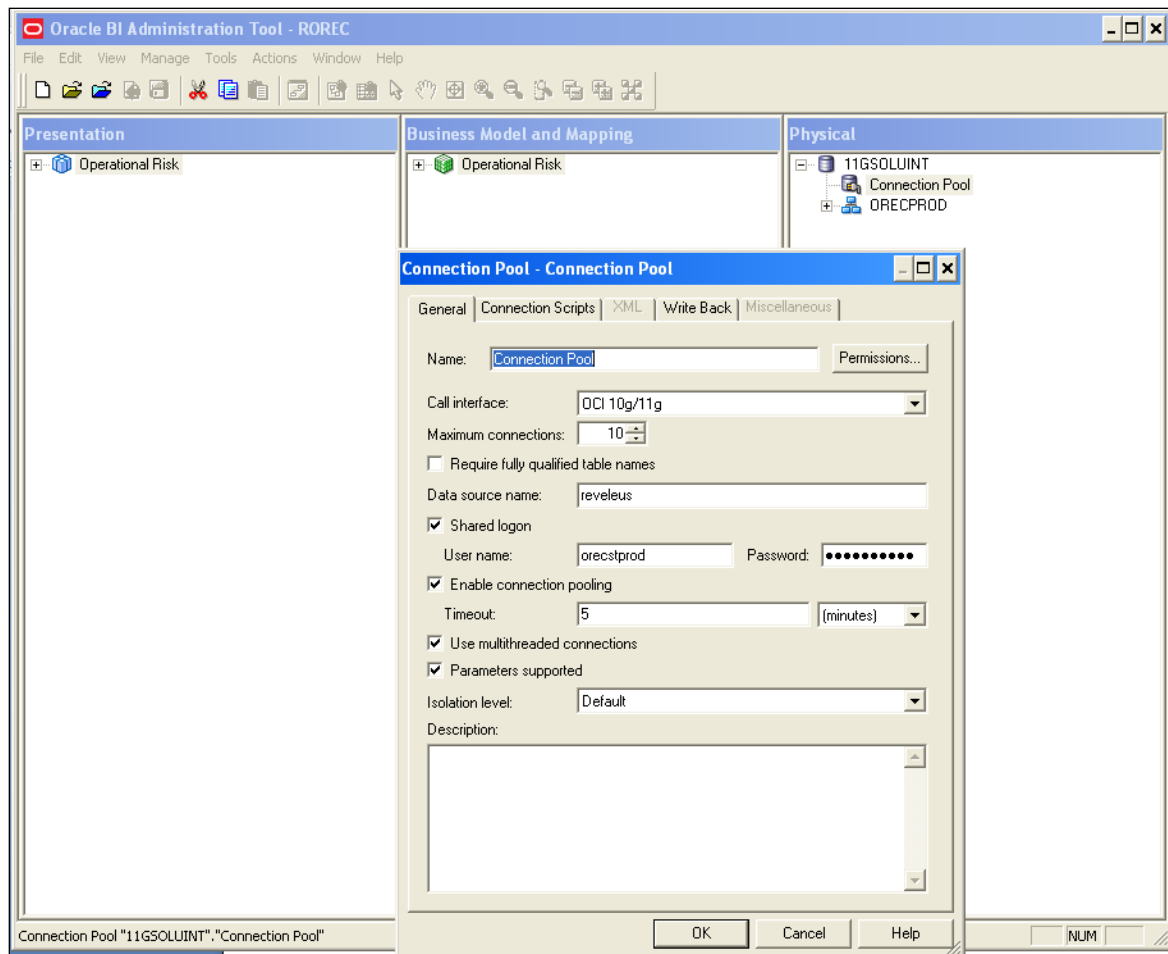
g. Close the RPD after saving it.

h. Create a folder named " Operational Risk" (if not created) in the following location

"*<OBIEE Installation Path>middleware\instances\instance1\bifoundation*

OracleBIPresentationServicesComponent\coreapplication_obips1\catalog\" **(Only in case of first time installation)**.

i. Start the following BI services (if not started).

Dashboard/Answer Reports

From any client system that is, windows system:

a. Start the BI services (if not started).

b. Start **OBIEE Catalog Manager**.

c. Choose **Start → Programs → Oracle Business Intelligence → Catalog Manager**.

d. Select "**Open Catalog**" from File menu.

e. Select the option "**Online**" for Type.

f. Type the link for presentation services that is, Oracle Interactive Dashboard link. For example (http://URL:9704/analytics/saw.dll.

g. Enter the Administrator User ID and Password, and then click **OK**.

h. Click "**shared folder**" on the left hand pane.

i. Select "**Un-archive option**" from File Menu.

j. Select the archive file "OFS Operational Risk Economic Capital *2.1.1.0.0* – Dashboards" from the path where it is copied onto the local machine as part of introduction pre-requisite step, and click **OK.**

k. Create a folder name as "Answers" (if not created) within "shared" folder.

l. Navigate to "Answers" folder.

m. Select the "**Un-archive**" option from File menu.

n. Select the archive files "OFS Operational Risk Economic Capital *2.1.1.0.0* - Answers" from the path where it is copied onto the local machine as part of introduction pre-requisite step, and click **OK.**

o. Re-Start (stop and start) the BI services.

Post Configuration verification steps

a. Log on to Analytics and verify if the screen looks like the following image:

b. Click each of the dashboard links, and verify if all the links are visible.

c. Open the RPD, and verify if the RPD can be accessed online with the Administrator user.