Installation Manual
Oracle Financial Services Basel Regulatory Capital Analytics
Release 6.1.0.0.0

October 2013

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1. Getting Started

1.1 Oracle Financial Services Analytical Applications Infrastructure Overview

Oracle Financial Services Analytical Application Infrastructure (OFSAAI) is an analytical application platform which has been architected to be multi-tiered and open-systems compliant. OFSAAI is fully web-enabled. It's a 100% thin-client, browser-based interface with zero foot print 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

Analytical Applications like Oracle Financial Services Basel Regulatory Capital Analytics Approach are pre-packaged on OFSAAI and are ready to install. With Oracle Financial Services(OFS) Basel Regulatory Capital Analytics application, Release 6.1.0.0.0, banks can now meet the requirements as stated in the Basel accord, by catering to multiple jurisdictions with a single application, thereby eliminating the need for multiple point applications from multiple software vendors.

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

The information contained in this document is intended to give you a quick exposure and an understanding of the installation procedures to:

- Install the Oracle Financial Services (OFS) Basel Regulatory Capital Analytics v6.1.0.0.0 for the first time, in the following environment:
    - With OFSAAI v7.3.2.2.0 and with OFS Basel Regulatory Capital v6.1.0.0.0.
    - With OFSAAI v7.3.2.2.0 and without OFS Basel Regulatory Capital v6.1.0.0.0.

The topics are designed in the order of priority with related procedures to assist, configure, and manage the administrative tasks effectively.

1.5 Organization of the Manual

The Installation Manual is organized into the following chapters:

- **Preinstallation Configuration** section consists of the pre-configuration activities that are to be completed successfully for proper installation and functioning of the application.

- **Installing the Analytical Application** section details the steps to be followed during the installation.
- **Post Installation Activities** section details the steps that are required to be performed after the successful installation of the Oracle Financial Services Basel Regulatory Capital Analytics Release 6.1.0.0.0.

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

- Notes are displayed as follows:

Note:

It is important that the password should be 6 characters long. If you do not adhere to this pre-requisite, you will see a system message that reads **Password must be at least 6 characters long**.

---

2. Pre-installation Configuration

The list of pre-configurations required to install and run the OFSAAI 7.3.2.2.0 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

2.1 Prerequisites

- Infrastructure version 7.3.2.2.0 should be installed.

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 / 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
Infrastructure Database Server	• Oracle Database Enterprise Edition Release 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 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 • Websphere 7.0.0.17 with IBM Runtime, Java Technology

Type	Description
	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 or Websphere) installation is required based on requirement.
Infrastructure Release version	OFSAAI 7.3.2.2.0
Reporting Tool	Oracle Business Intelligence Suite Enterprise Edition 11.1.1.6.10
Patch details (if any)	On the base OFSAAI platform version 7.3, apply the latest patch set to upgrade to release 7.3.2.2.0.

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 2007 • Client Machines – Windows XP SP3/Windows 7 • The screen resolutions supported are 1024*768 and 1280*1024 • Adobe Reader 8.0

Type	Description
	• 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 Pre-installation Activities

The following is the preinstallation checklist to ensure the readiness to start installing OFS Basel Regulatory Capital Analytics 6.1.0.0.0 Application:

- Customer should have an OFSAAI login user other than sysadmin or sysauth.
- 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 schema should be of two 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. To create a new information domain, execute the file **<Infrastructure Database Layer Install Directory>/config_table_privileges_for_atomic_user.sql** from the Infrastructure config database before creating the new information domain. These Privileges should be given to the Production Schema (essentially all the Atomic schemas).
- Add an Atomic schema TNS entry to TNSNames.ora.
- The following grants must be given to atomic schema user:
  - `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 DEBUG CONNECT SESSION to <ATOMIC_USER>;
- grant DEBUG ANY PROCEDURE to <ATOMIC_USER>;
- grant create any materialized view to <ATOMIC_USER>;
- grant create type to <ATOMIC_USER>;
- grant create synonym to <ATOMIC_USER>;

- The following grants must be given from Config User to Atomic User:
  - grant select on CSSMS_ROLE_MAST to ATOMIC_USER
  - grant select on PR2_MAP_ITEMS to ATOMIC_USER
  - grant select on PR2_MASTER to ATOMIC_USER
  - grant select on PR2_OBJECT_TRACE to ATOMIC_USER
  - grant select on PR2_OBJECT_TYPES to ATOMIC_USER
  - grant select on PR2_PROCESS_B to ATOMIC_USER
  - grant select on PR2_RULE_B to ATOMIC_USER
  - grant select on PR2_RUN_B to ATOMIC_USER
  - grant select on PR2_RUN_REQUEST to ATOMIC_USER
  - grant select on PR2_TASK_FILTER_DETAIL to ATOMIC_USER
  - grant select on DOCUMENT_MASTER to ATOMIC_USER
  - grant select on CSSMS_GROUP_ROLE_MAP to ATOMIC_USER
  - grant select on CSSMS_USR_GROUP_MAP to ATOMIC_USER
  - grant select on CSSMS_USR_PROFILE to ATOMIC_USER
  - grant select on MESSAGES_EN_US to ATOMIC_USER
  - grant select on WEB_SERVER_INFO to ATOMIC_USER

- Update the server details if you are installing an OFSAAI product for the first time. Click **Server Details** under **System Configuration** in the LHS menu of the OFSAAI User Interface and update the Database Server, Application Server, and Web Server.
- Copy all the contents of the OFS Basel Regulatory Capital Analytics Release 6.1.0.0.0 installer download directory to the server location (including the DataModel directory). Provide read, write and execute permission to all the files present in this directory.
- Specify the log file path and name in the log4j.xml. Update the value attribute highlighted in the following xml:

```
<?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.
- 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_USER;`
    - `grant select on V_$PARAMETER to ATOMIC_USER;`
- Check for **`export LDR_CNTRL=MAXDATA=0x40000000`** in the .profile. If present then comment it, execute the .profile and then trigger the Setup.sh.
- For a multitier installation, check if **Reveleus.SEC** file is present in **$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.

Note:

This release of OFS Basel Analytics cannot be installed on more than one Information Domain within the same OFSAA setup.

3. Installing the Analytical Application

3.1 OFS Basel Regulatory Capital Analytics Release 6.1.0.0.0 Installation

The OFSAAI Product comprises of components that are installed in Web, Application & Database layer. Hence if you have installed OFSAAI 7.3.2.2.0 in a multi-tier architecture, the OFS Basel Regulatory Capital Analytics (BASELBI) Product installer must be invoked on each of the machines that host the OFSAAI tier.

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

This section describes the installation process where the three product setup components are installed on separate machines. Machine A will be used to install Product Application Layer components, Machine B will be used to install Product Database Layer components, and Machine C will be used to install Product Web Layer components.

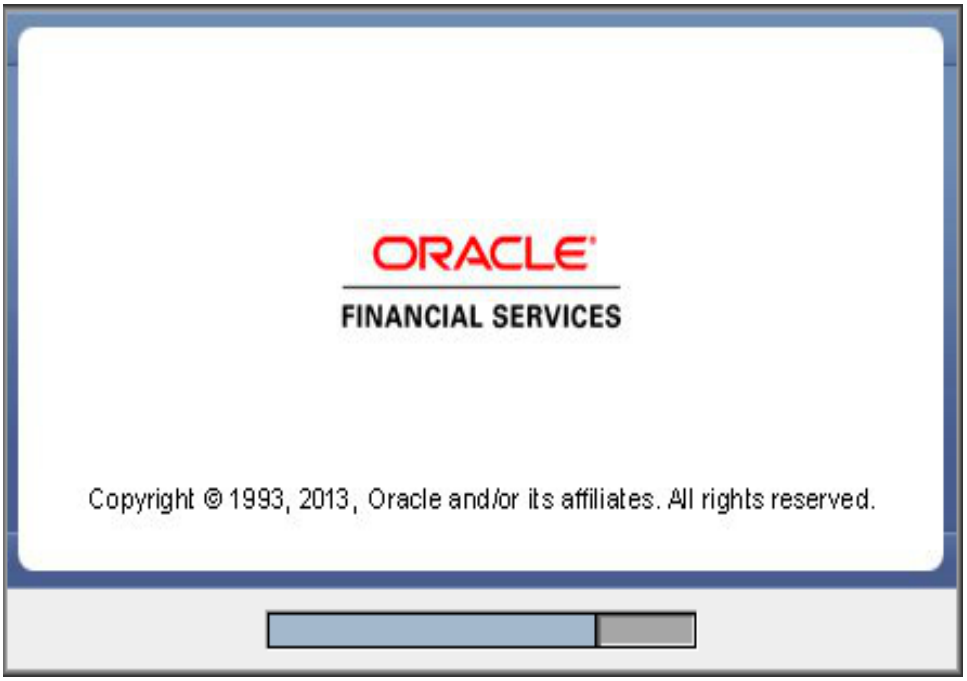
Note:

- This section holds applicable if OFSAAI v7.3.2.2.0 is installed on Oracle 11g on separate machines A and B respectively.
- Refer to section on “Silent Installation”, if a silent installation is required.

3.1.1 Machine A – Product Application Layer

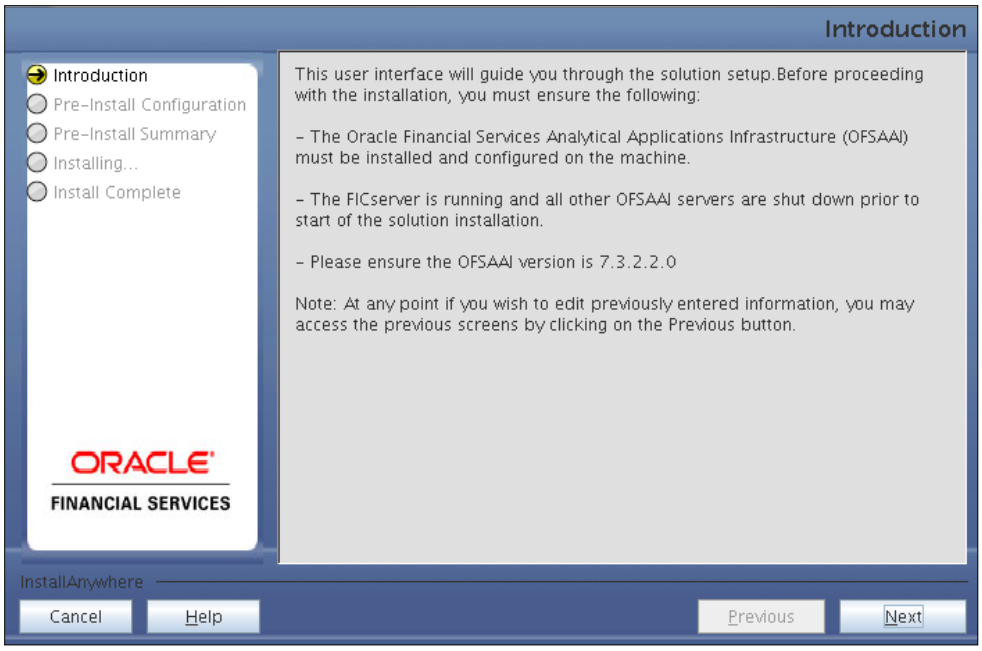
Step 1

To begin with the OFS Basel Regulatory Capital Analytics Release 6.1.0.0.0 installation, execute **Setup.sh** with the parameter GUI (GUI Installation) or SILENT (for Silent installation).



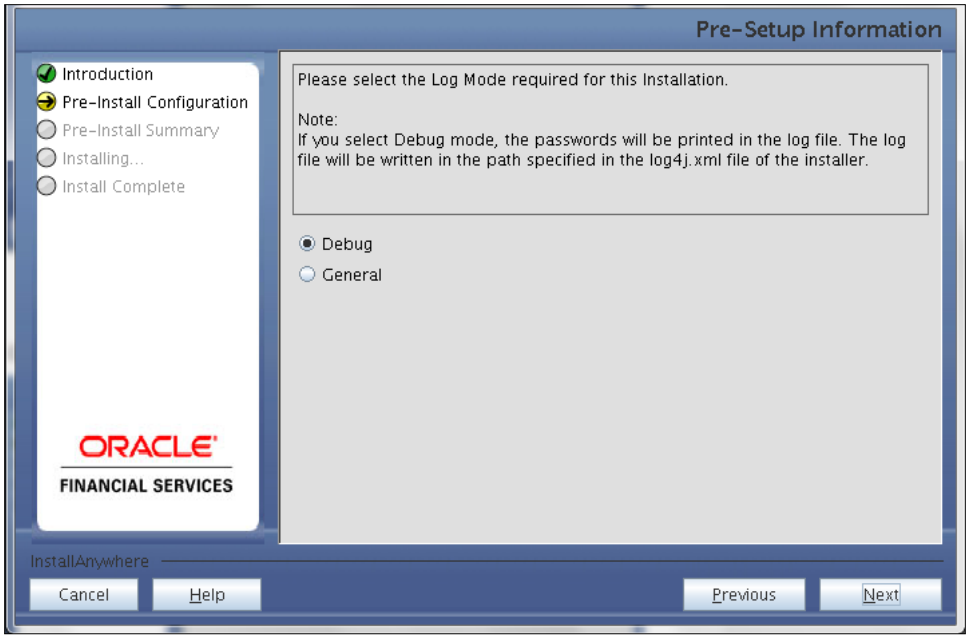
Step 2

On loading the installer, the **Introduction** screen displays the prerequisites for installation. Ensure that these prerequisites are met before proceeding.



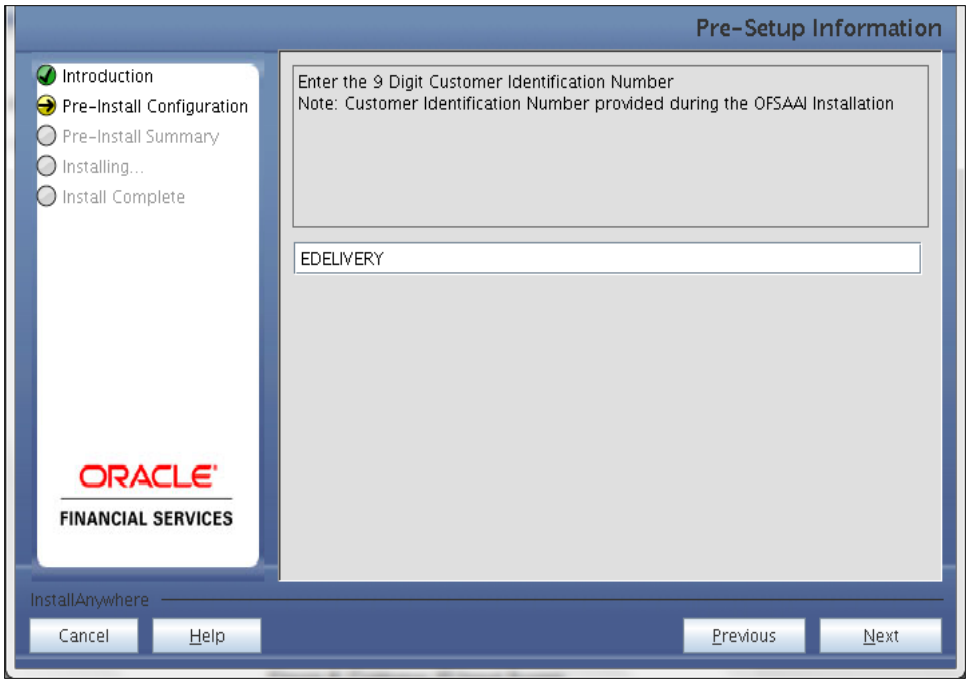
Step 3

Choose the log mode for this installer. The **Debug** and **General** mode information will be printed in the log file specified in the log4j.xml file of the installer.



Step 4

Enter the Customer Identification Number and click **Next** to continue.

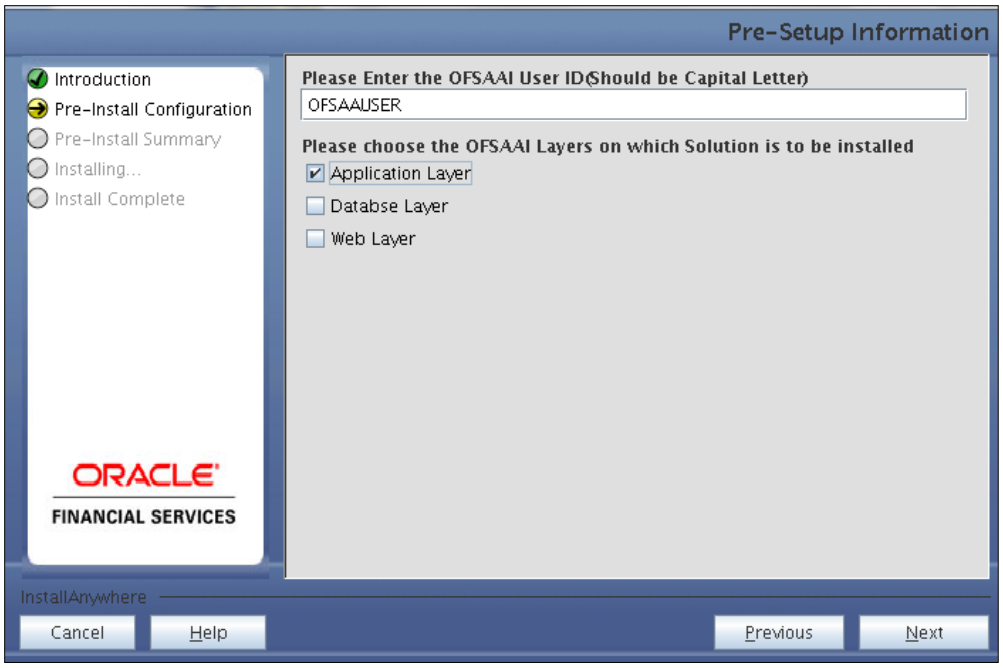


Step 5

In the next screen enter the OFSAAI User ID.

Select the appropriate OFSAAI layer that has been installed on the machine.

Example: **Application Layer**

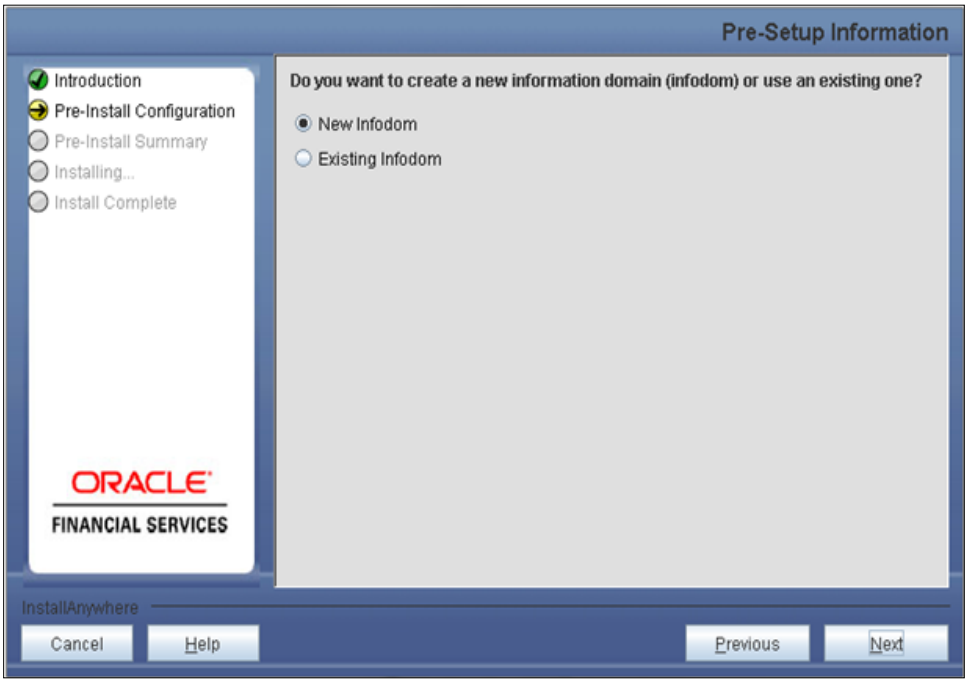


Note:

- Create the User in Infrastructure which was specified during installation process, if it does not exist.
- For a single-tier OFSAAI Release 7.3.2.2.0 installation, you must select Application Layer, Database Layer and Web layer.
- For a multitier OFSAAI Release 7.3.2.2.0 installation, select the corresponding layer installed on the machine.

Step 6

This screen seeks infromation on whether a new Information Domain has to be created, or the existing Information Domain is to be used for installation. Choose the required option.



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

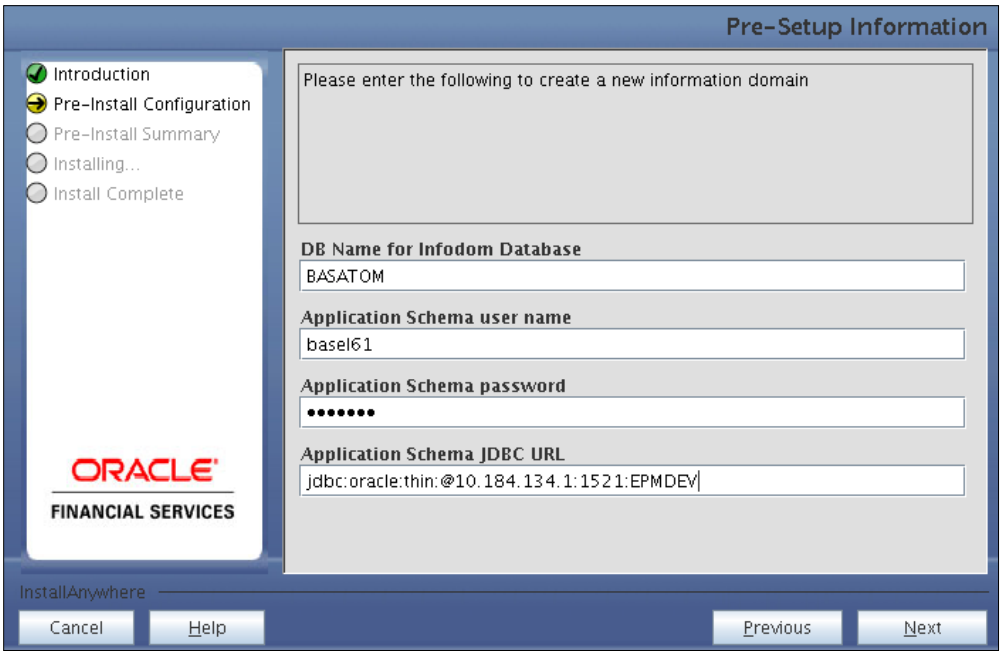
Step 7

If the option **New Information Domain** is selected then update the following to create information domain:

Step 7-i:

- Specify a Database Name for the new information domain. Make a TNS entry with the Database Name specified in the tnsname.ora file in the oracle server.
- Enter the newly created application schema user name, password, and JDBC URL in the relevant fields.

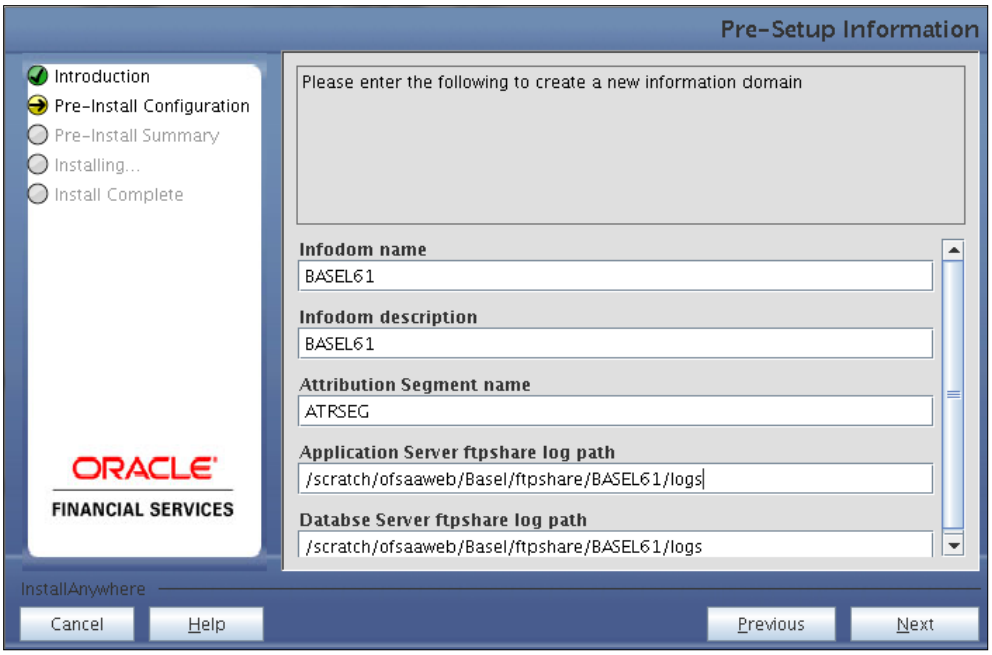
Click **Next** to continue.



Step 7-ii

If this screen, enter the following details:

- Specify the name and description of the new information domain to be created.
- Specify a segment name to be created.
- Specify the application server and database server log path for information domain maintenance (to be created).



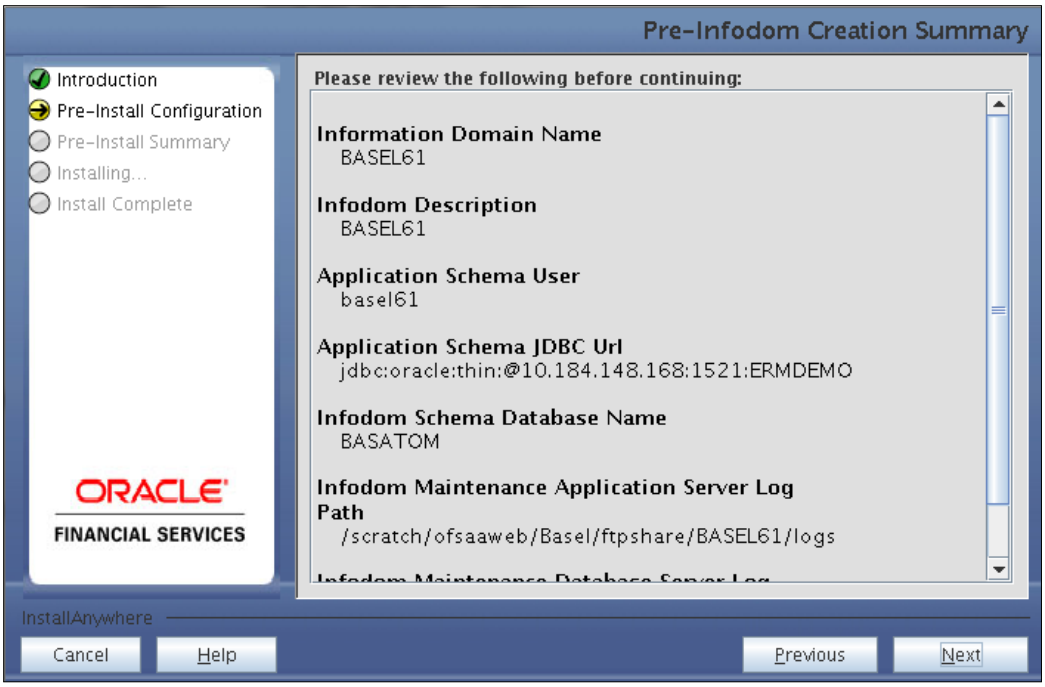
Note:

The OFSAAI user must have a role mapped to perform Add/Modify functions for OFS Basel Regulatory Capital Analytics 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.

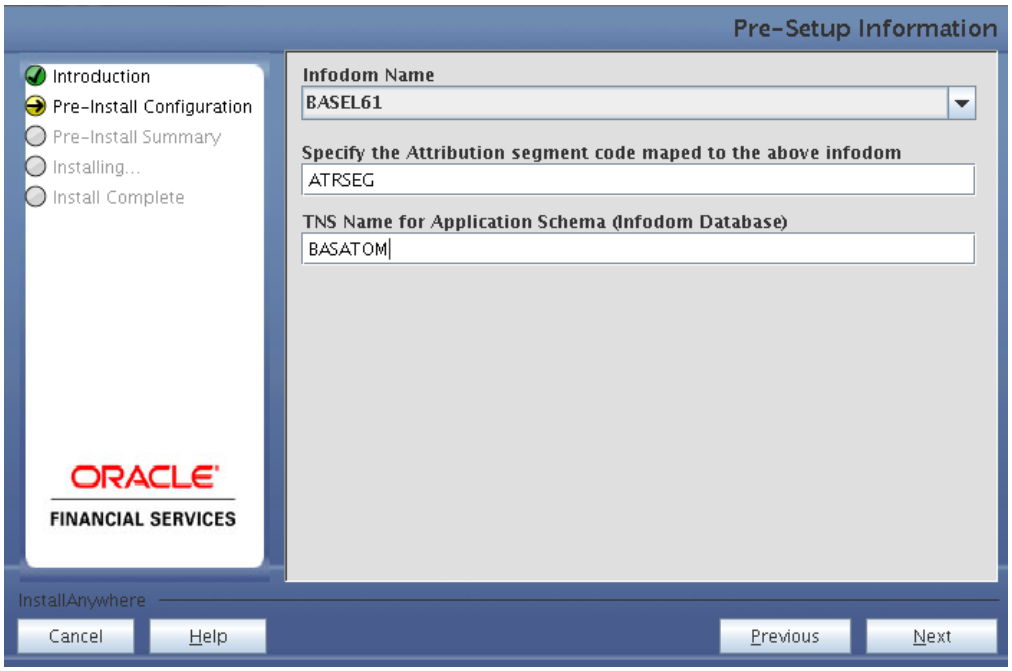


Step 8

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

Step 8-i

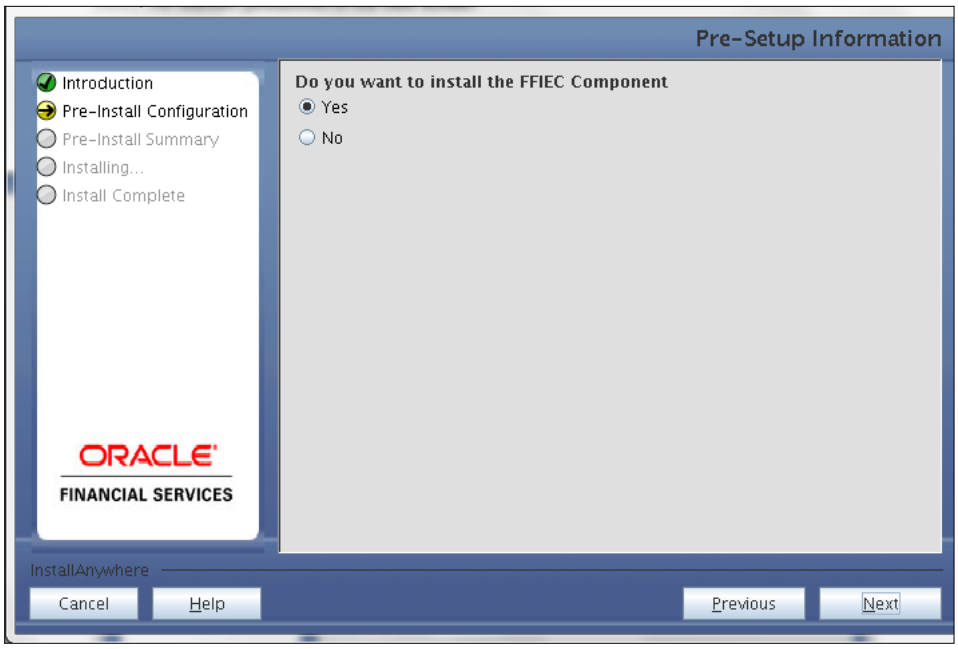
- Select the Information Domain name
- Enter segment code.
- Enter the application schema's TNS name.



Click **Next** to continue

Step 9

Select if you would want to install the FFIEC Component.



Note:

- This screen is available only during Application layer installation. If both Application

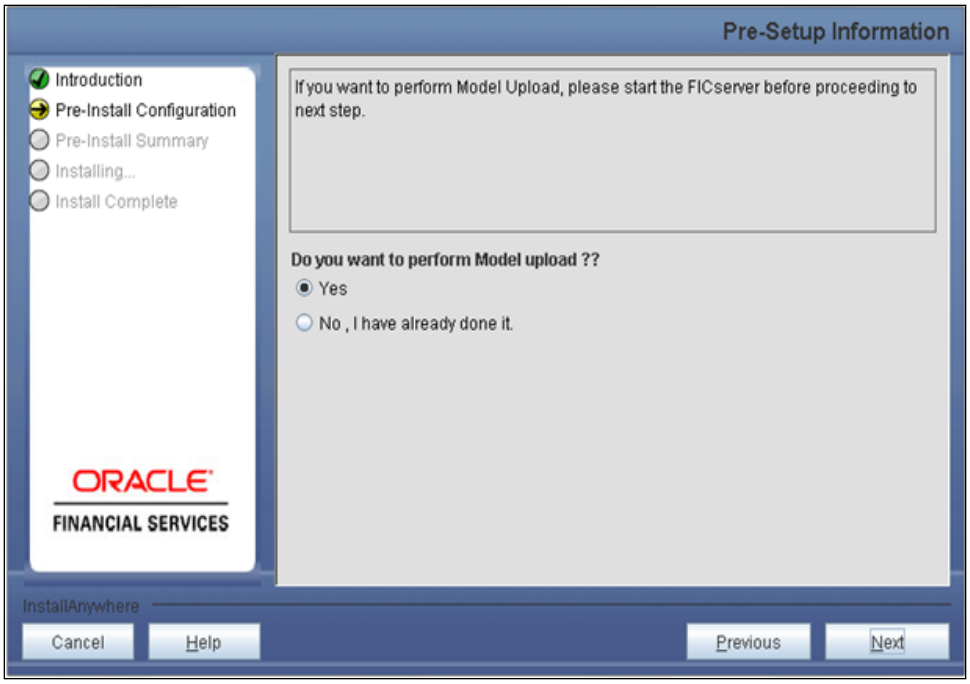
layer and DB layer are selected (irrespective of Web layer selection), the screen will not be displayed. For all other combination of installation, the screen would appear when Application layer is selected.

- If you wish to install the FFIEC Component, then, US jurisdiction should be selected in DB layer.

Step 10

OFS Basel Regulatory Capital Analytics Release 6.1.0.0.0 data model is packaged as part of the application installer and is installed as a part of the following steps, if required.

In the the following screen, opt for Model Upload process through the installer.



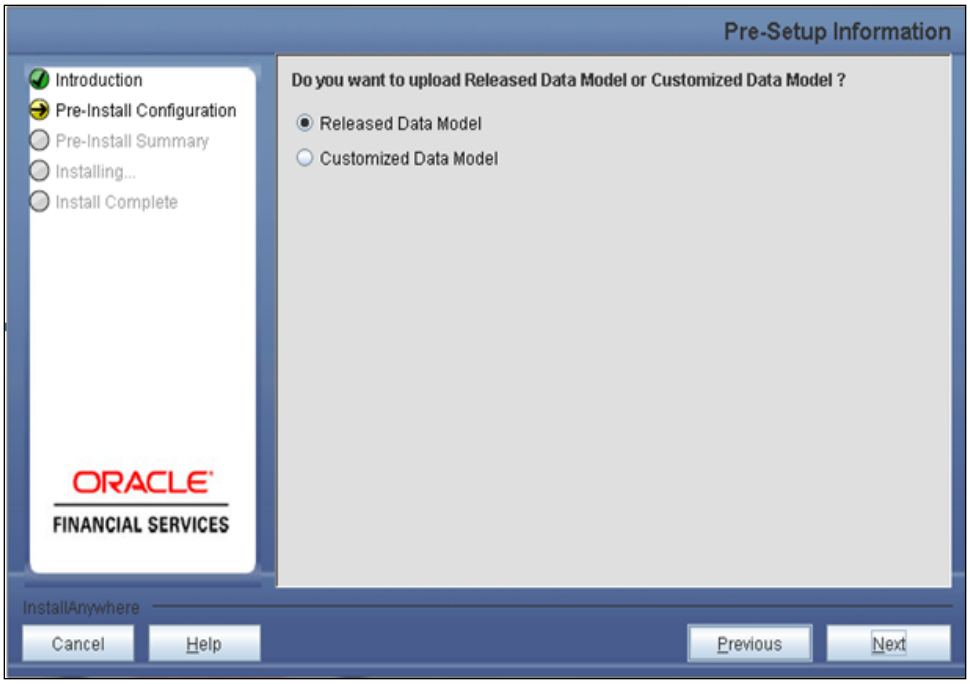
Note:

- If Basel Application is already installed in the respective infodom, then, Basel Analytics will skip the Datamodel upload option.
- Click **Yes** to perform Data Model upload.
- Clicking **No** implies that the OFS Basel Regulatory Capital Analytics model is already uploaded. Click **Next** to proceed further.

If you select **No,** go to **Step 13**. Else, go to **Step 11**.

Step 11

In the following screen, choose **Released Datamodel** or **Customized Datamodel** to be uploaded.



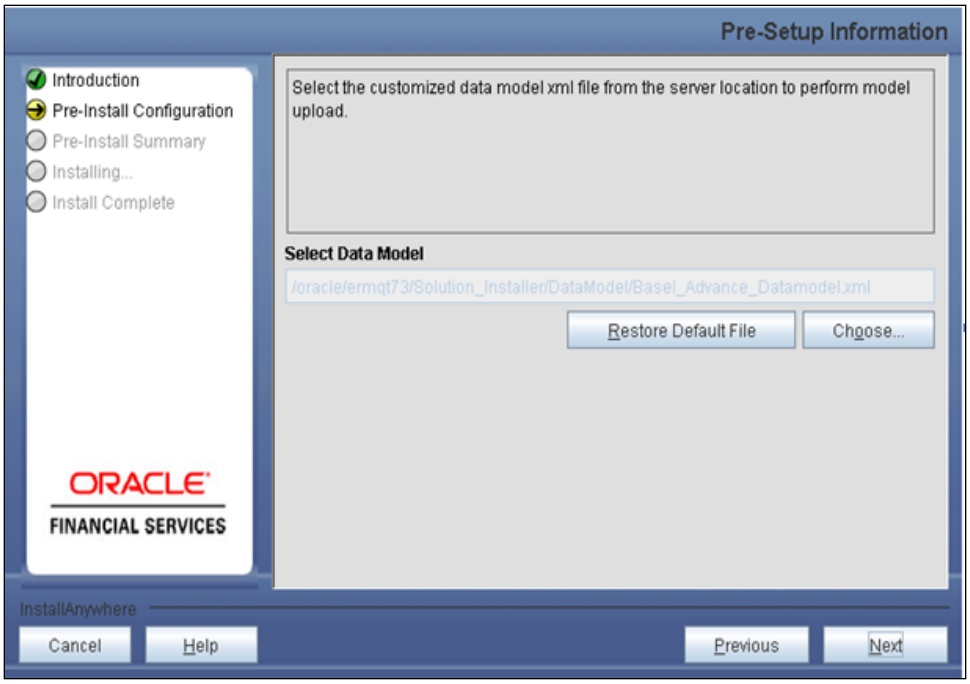
If **Released Data Model** option is selected, then the installer uploads the OFS Basel Regulatory Capital Analytics Release 6.1.0.0.0 data model. If **Released Data Model** is selected go to **Step 13**. Else, go to **Step 12**.

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

Click **Next** to proceed.

Step – 12

If the **Customized Data Model** is selected, then the following screen is displayed where you can select the customized data model located in your machine.



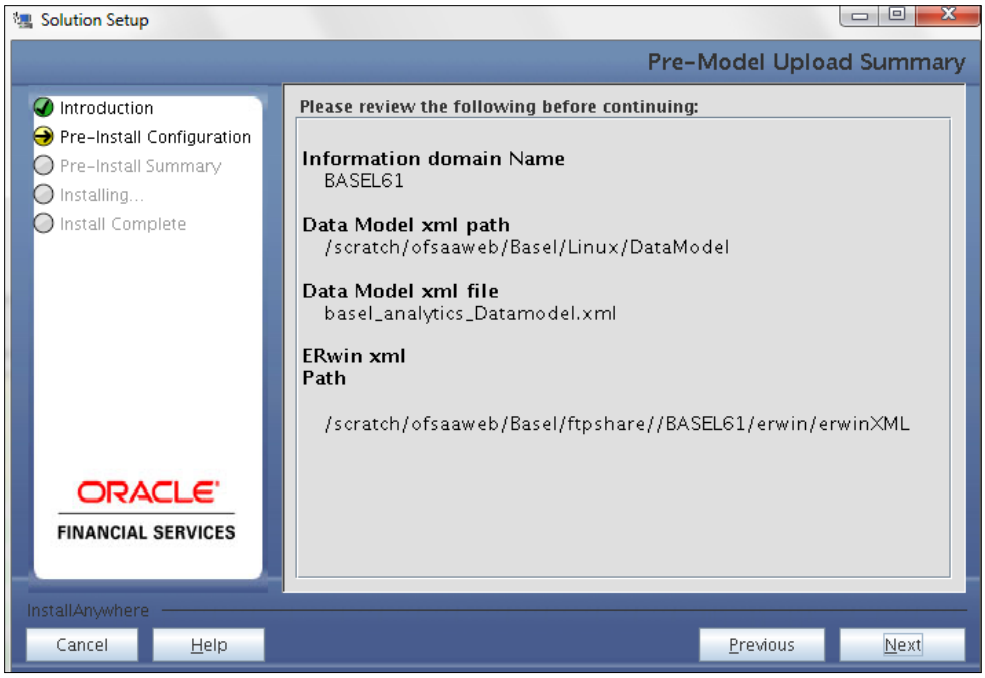
Note:

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 selected in this screen 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 screen prompt.

Step – 13

The following screen displays the summary of the uploaded data model:



1. Verify the details before proceeding to the next step.
2. Click **Next** to proceed with model upload.

The time taken to upload the data model is dependent on the size of the data model and available physical memory in the environment. You cannot proceed further without the successful completion of the data model upload. Also, 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 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.

- Error in Upload Operation

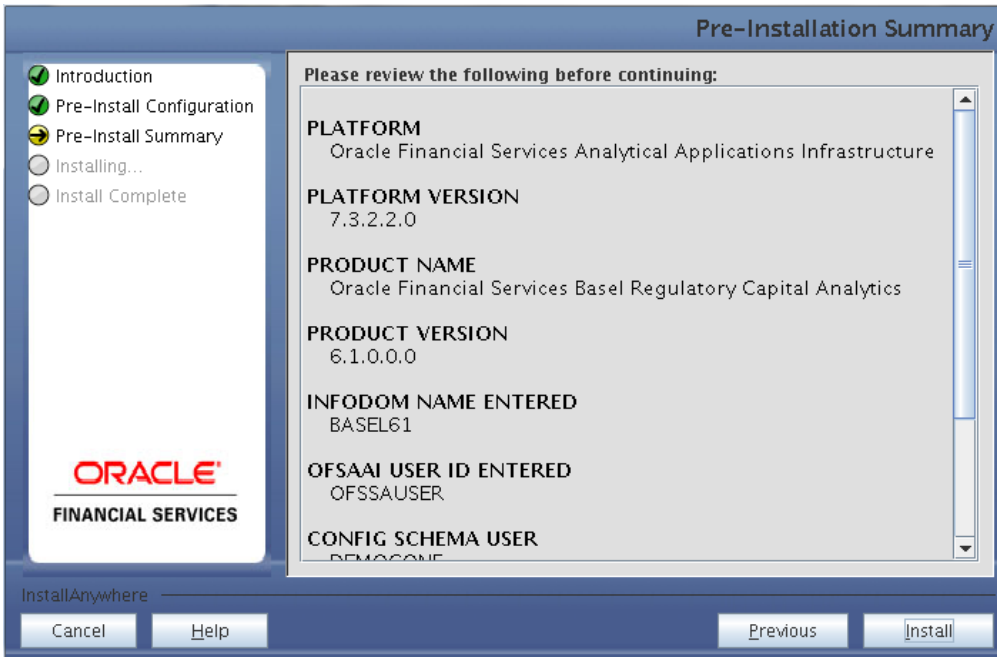
  Possible reason/resolution:

  FAILED WHILE SUPER CATEGORY - SUB CATEGORY RELATIONS HANDLINGDELETING.

Incorrect Erwin.xsl file version in $FIC_APP_HOME/common/FICServer/conf directory.

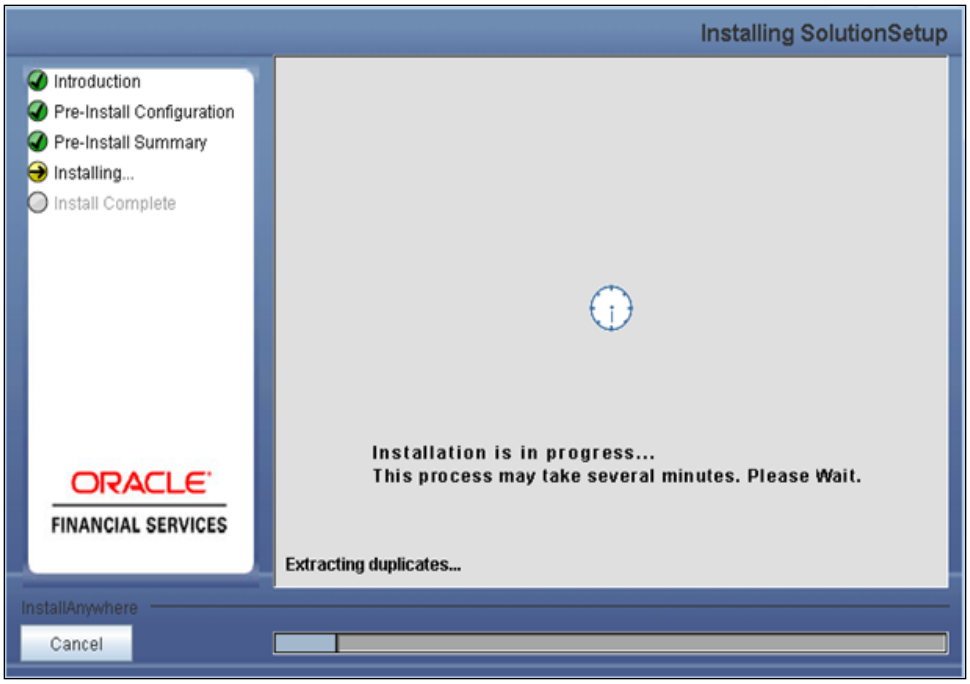
Step 14

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



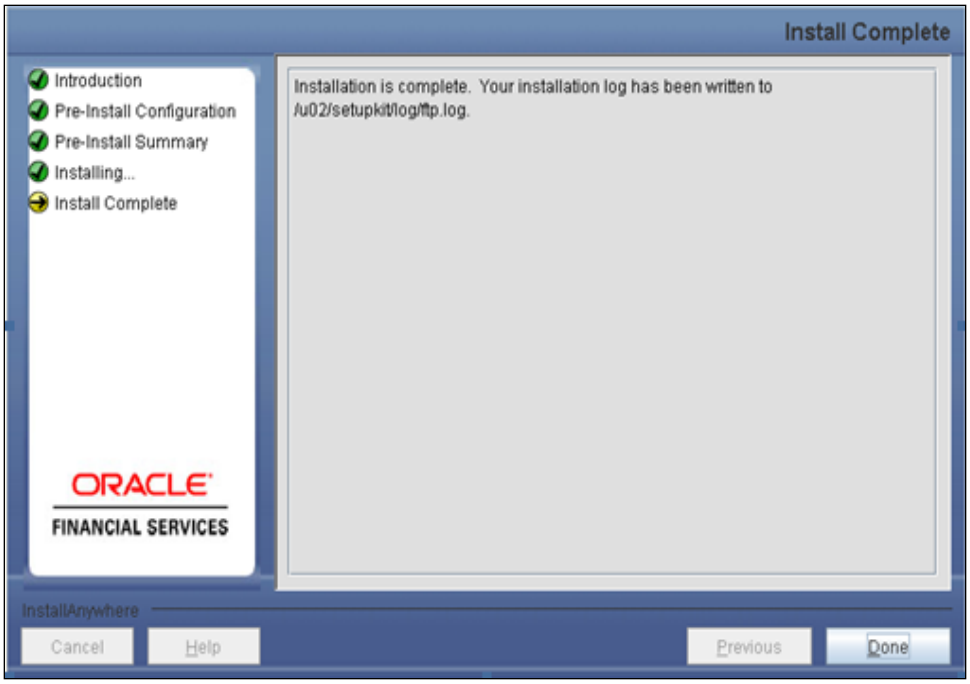
Step 15

This screen displays the installation process. The installation needs to be completed to proceed further.



Step 16

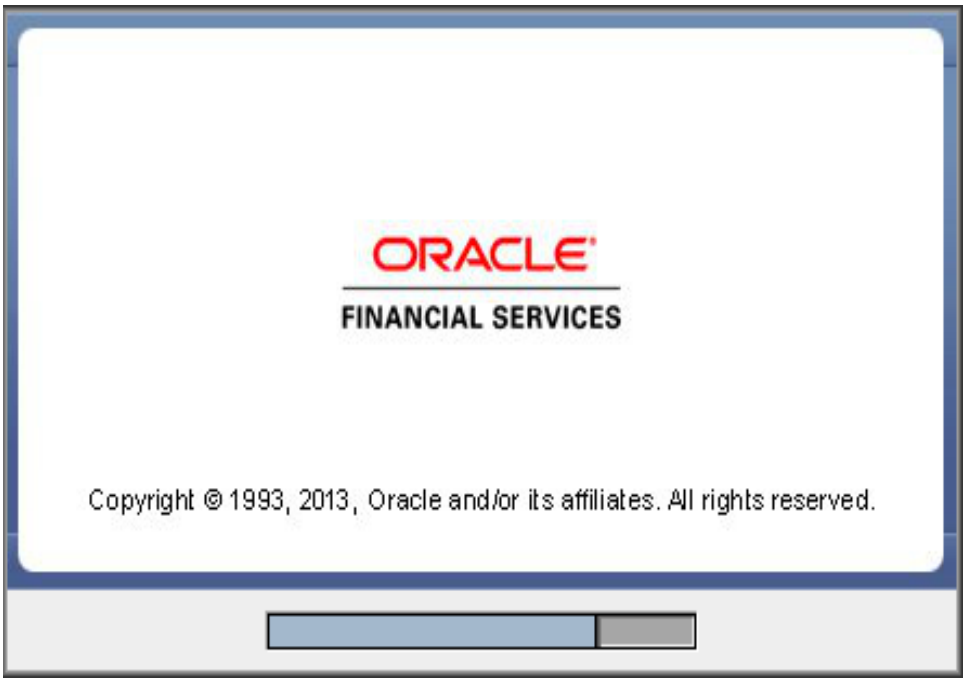
The following screen displays the completion of installation of the OFS Basel Regulatory Capital Analytics Release 6.1.0.0.0 Setup. Click **Done** to exit.



3.1.2 Machine B – Product Database Layer

Step 1

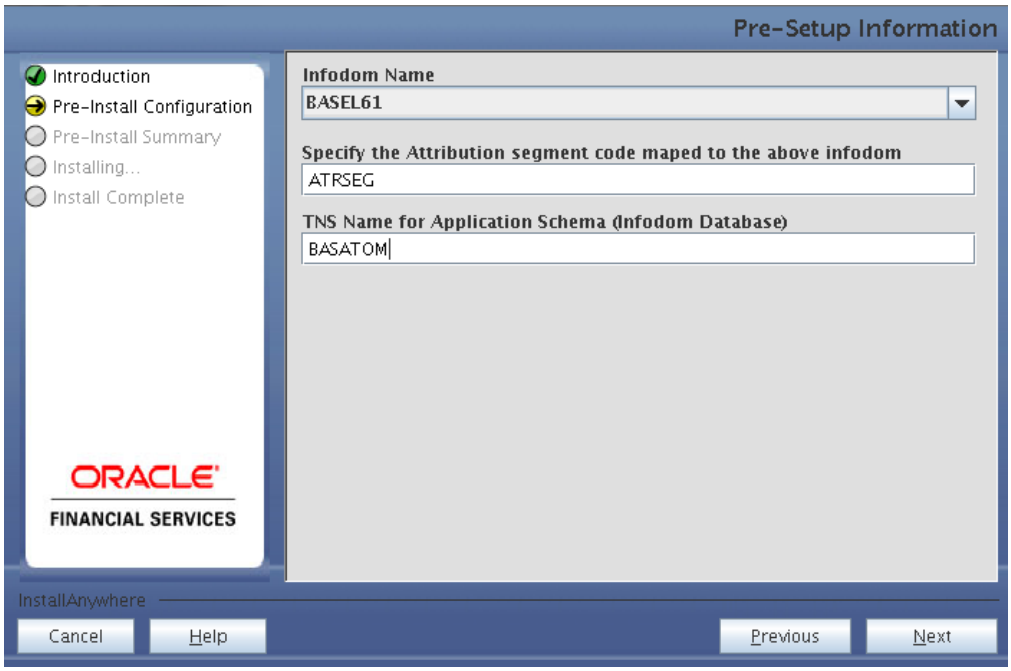
To begin with the Oracle Financial Services Basel Regulatory Capital Analytics Release 6.1.0.0.0 installation, execute **Setup.sh** with the parameter GUI (GUI Installation) or SILENT (for Silent installation).



Repeat **Step 2 - Step 5** as mentioned in Machine A – Product Application Layer.

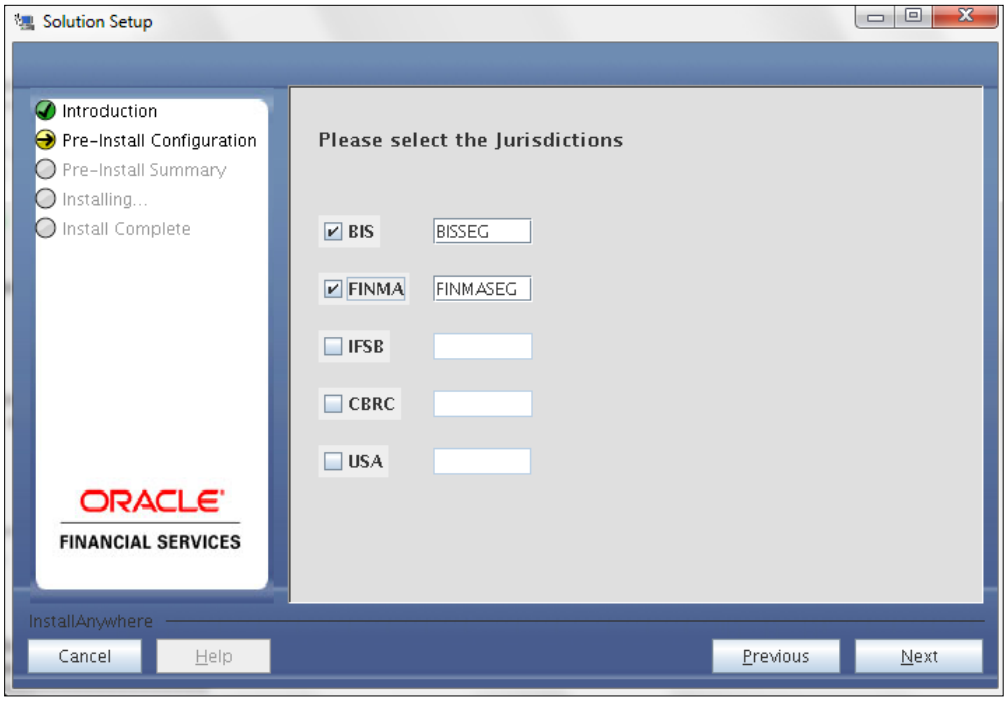
Step 6

Select the information domain from the drop down list present in the setup. Enter segment code and enter the application schema's TNS name in the following screen prompt.



Step 7

Select the relevant jurisdiction. The scripts will be executed for the selected jurisdiction(s) from the scripts list.



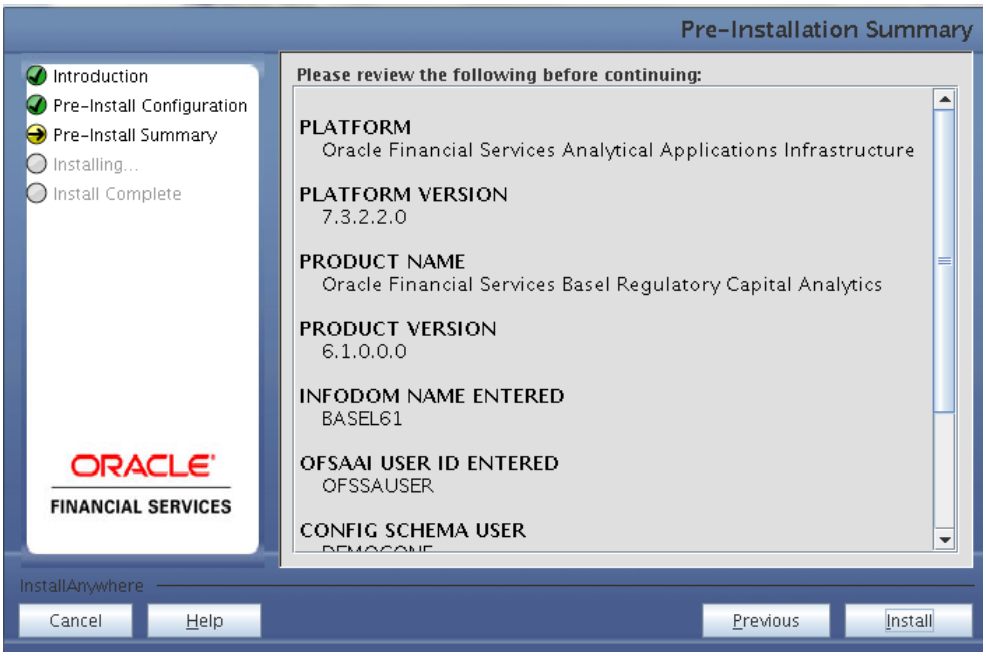
Note:

- You can select one or more jurisdiction(s) to install the respective scripts.
- If US jurisdiction is selected, FFIEC will be installed by default.

Step 8

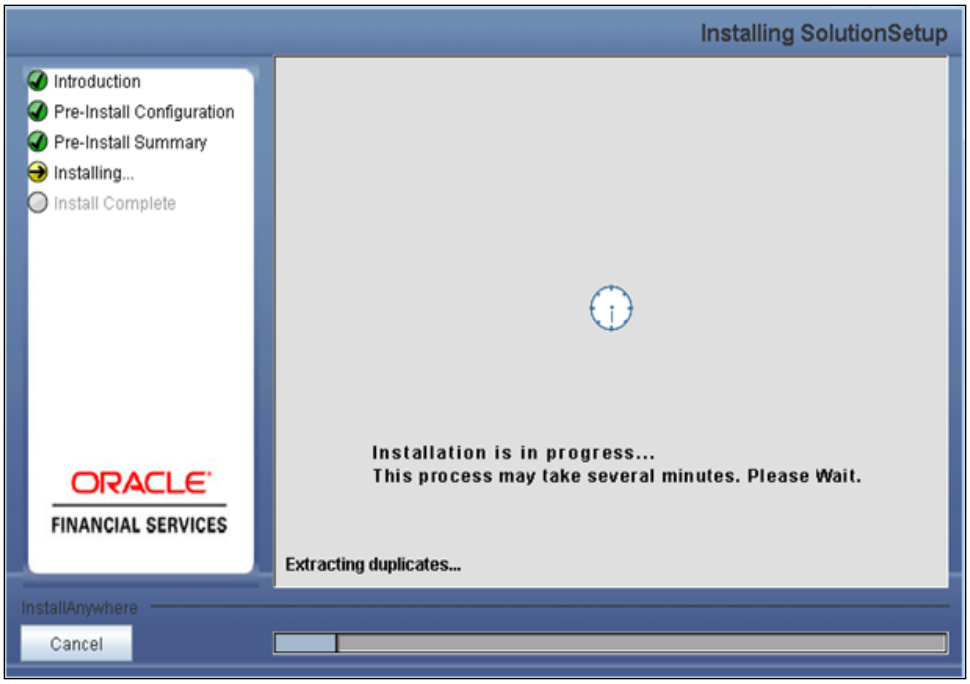
This screen summarizes the preinstallation details. Verify all the details and proceed.

Click **Install** to proceed.



Step 9

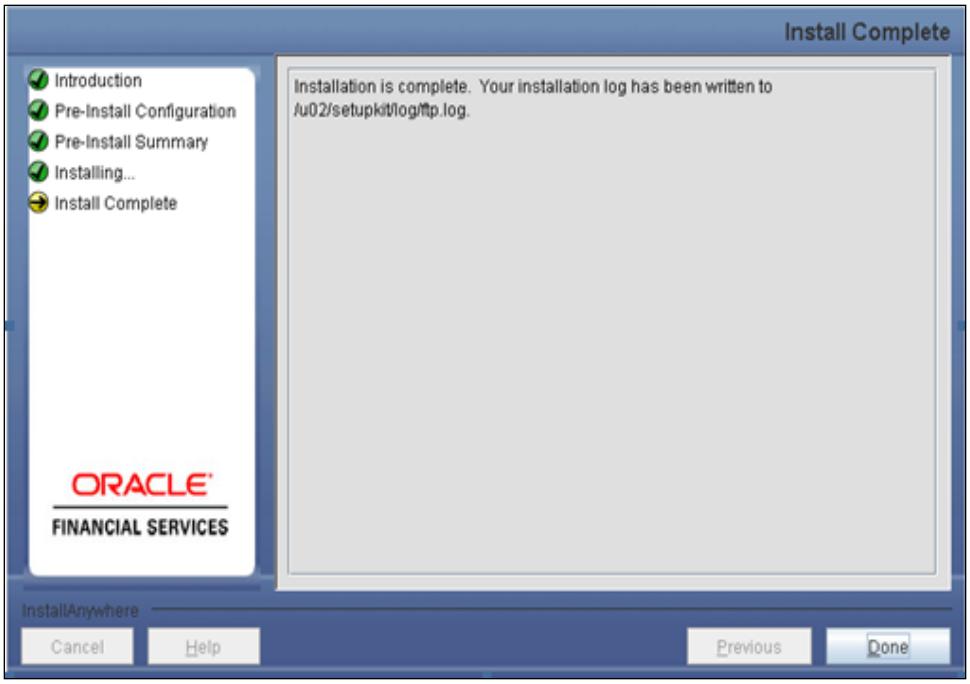
This screen prompt displays the installation process. Wait till the installation is complete.



Step 10

The following screen prompt displays the completion of installation of the OFS Basel Regulatory Capital Analytics Release 6.1.0.0.0 setup.

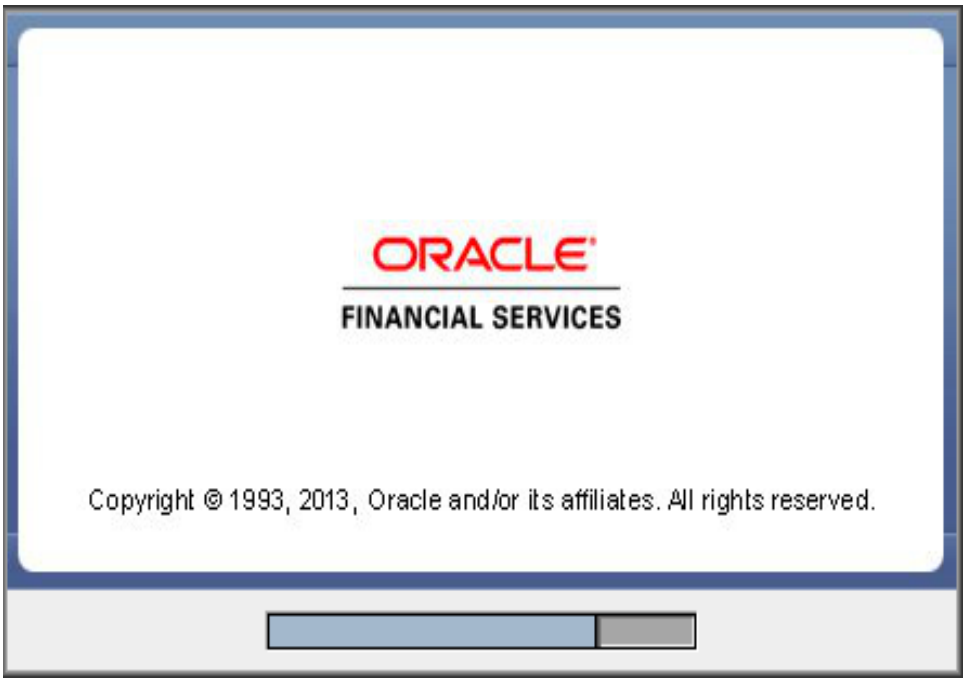
Click **Done** to exit.



3.1.3 Machine C – Product Web Layer

Step 1

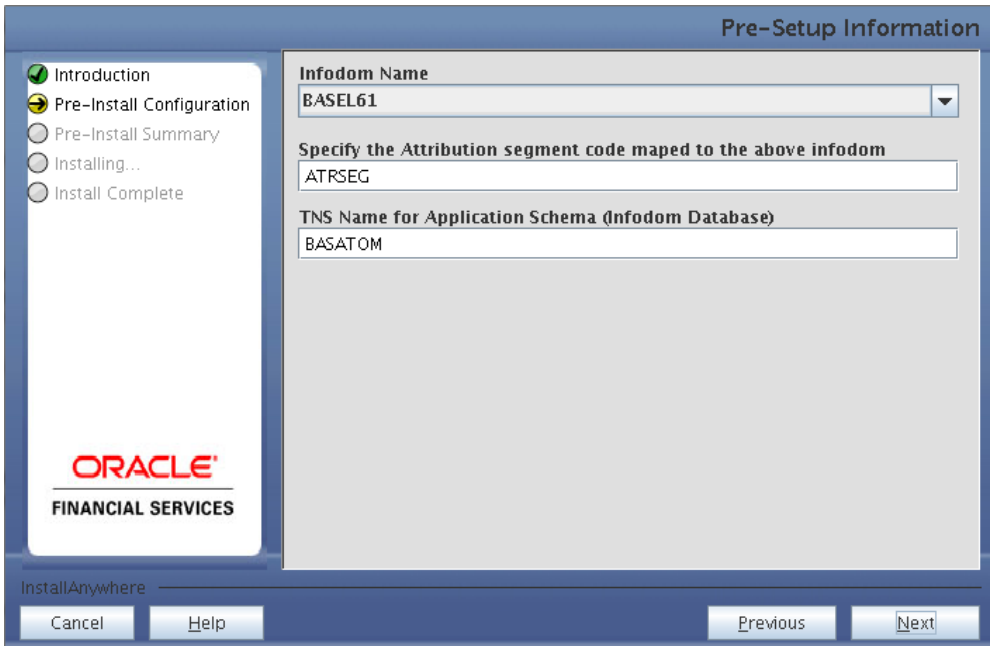
To begin with the Oracle Financial Services Basel Regulatory Capital Analytics Release 6.1.0.0.0 installation, execute **Setup.sh** with the parameter GUI (GUI Installation) or SILENT (for Silent installation).



Repeat **Step 2 - Step 5** as mentioned in Machine A – Product Application Layer

Step 6

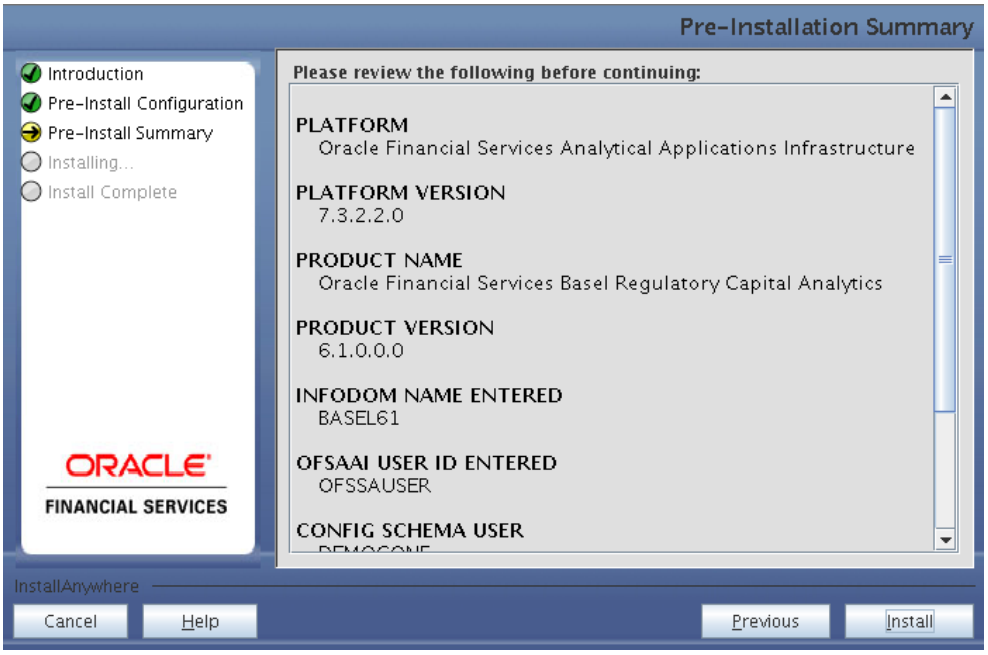
Select the Information Domain from list of Information Domains present in the setup. Enter segment code and the application schema's TNS name in the following screen prompt.



Step 7

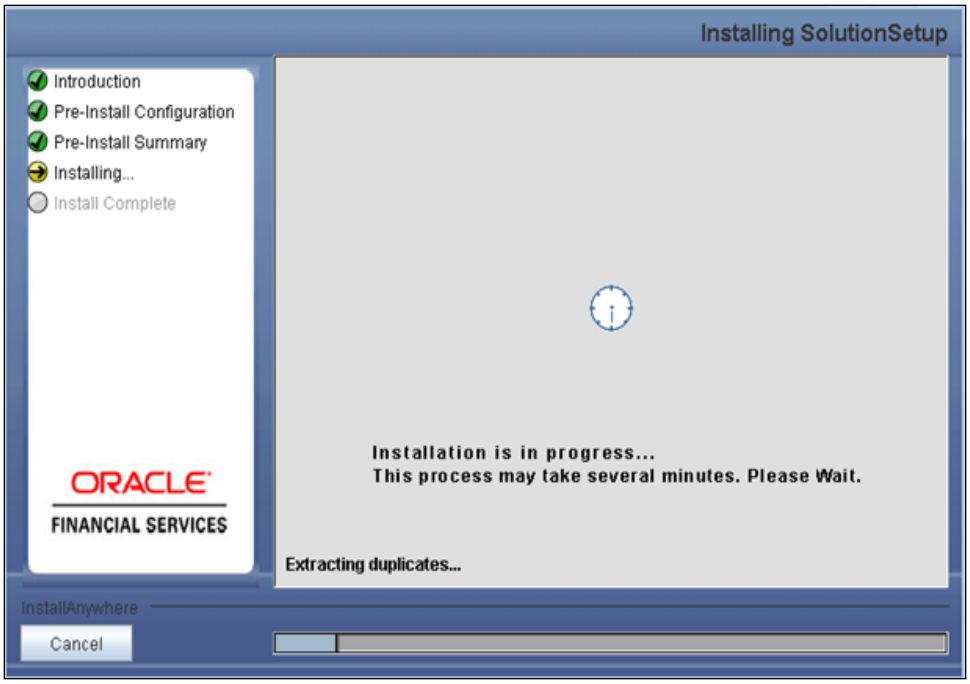
This screen prompt summarizes the preinstallation details. Verify all the details and proceed.

Click **Install** to proceed.



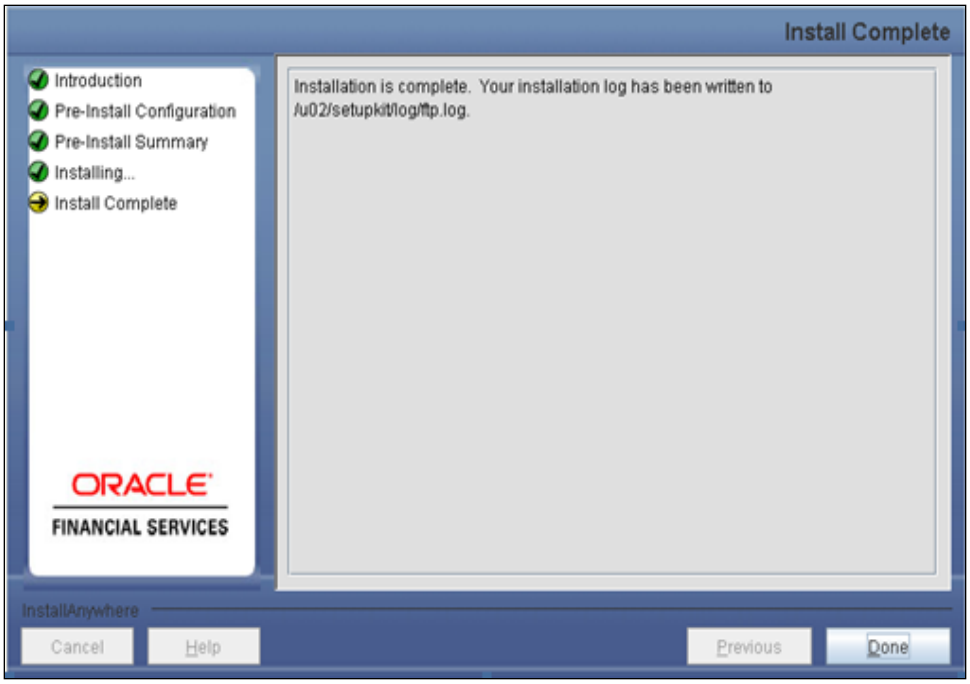
Step 8

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 OFS Basel Regulatory Capital Analytics, Release 6.1.0.0.0 setup. Click **Done** to exit.



3.2 OFS Basel Regulatory Capital Analytics Release 6.1.0.0.0 Installation-Silent Mode

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

- Copy the setup.sh, setup.bin, ValidatePropsFile.jar, Log4j.xml, DataModel directory and silent.props to the layer(s) to the location where the installation has to be done.
- Edit the file “silent.props” and specify the parameters as per the requirements.
- Execute Setup.sh with command line argument as SILENT, that is, **Setup.sh SILENT**, to start the installer.
- Refer to the console log [or the file preinstall.log] for any error messages.

The attached file, lists all the properties that need to be specified:

Silent.Properties.xlsx

Note:

- Ignore the following errors in the Installer log(either for GUI or Silent):
  - *ORA-00001: unique constraint violated*
  - *ORA-00955 name is already used by an existing object*

3.3 Post Installation Activities

OFSAAI Server Memory Configuration

The OFSAAI Application Server is started using reveleusstartup.sh. This file can be edited for setting customized memory settings, garbage collector settings depending on the available hardware configuration. You are requested to contact OFSAAI Support at https://flexsupp.oracle.com/ for guidance in altering the memory settings.

Once the installation of OFS Basel Regulatory Capital Analytics Release 6.1.0.0.0 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 <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 in the Information Domain. *For more information refer to the OFSAAI 7.3.2.2.0 platform installation manual.*

- Map the Roles to the User Group in the Front End manually. For more information refer to *OFS_Basel_Regulatory_Capital_Analytics_v6.1.0.0.0_Admin_Guide*.
- 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/ear file into webserver. For more information on deploying the war file refer to the OFSAAI v7.3.2.2.0 *Installation manual.*
- Start the web server after deployment.
- Refer *Starting OFSAAI Servers* in the Installation Guide for assistance in starting the servers.
- Recompile all the functions, procedures and views.
- Execute the following in <ATOMIC_USER>
    - delete from rev_bihier where hier_code in ('HREF0023','HREF0024');
    - delete from rev_locale_hier where metadata_key like 'HREF0023%';
    - delete from rev_locale_hier where metadata_key like 'HREF0024%';
- Re-save all the Hierarchies after populating the set up data and the other metadata in OFSAAI.
- The log for resaving hierarchies can be found under $FIC_APP_HOME/common/FICServer/logs/ResaveLog.log
- Copy the Repository, Images, and Catalog file from the $FIC_HOME/BASELBI/ and place it in the Repository folder where OBIEE is installed. For OBIEE Configuration refer *OFS_Basel_Regulatory_Capital_Analytics_v6.1.0.0.0_Admin_Guide*.

The Oracle Financial Services Basel Regulatory Capital Analytics Release 6.1.0.0.0 application is now ready to be used.

For any Forms Framework installation related information, refer to *OFSAAI Installation and Configuration manual (Versions7.3.0.0.0, 7.3.2.0.0 and 7.3.2.2.0).*

To view the FFIEC electronic submission link, refer to the *OFS_Basel_Regulatory_Capital_Analytics _v6.1.0.0.0_Admin Guide.*

Installation Manual
October 2013
Oracle Financial Services Basel Regulatory Capital Analytics V6.1.0.0.0

Oracle Corporation
World Headquarters
500 Oracle Parkway
Redwood Shores, CA 94065
U.S.A.

Worldwide Inquiries:
Phone: +1.650.506.7000
Fax: +1.650.506.7200
http://www.oracle.com/us/industries/financial-services/index.html
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