

Installation Manual  
Oracle Financial Services Loan Loss Forecasting and  
Provisioning  
Release 1.5.1.0.0  
May 2014



## Document Control

Version Number	Revision Date	Changes Done
Version 1.5.1	Revised on May 2014	Updated the Post Installation Activities section.
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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 1.5.1 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 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 Loan Loss Forecasting and Provisioning are pre-packaged on OFSAAI and are ready to install.

The **Oracle Financial Services Loan Loss Forecasting and Provisioning** Release 1.5.1.0.0 addresses the requirements of Phase II (Impairment) of IFRS 9. The exposure draft on Phase II requires institutions to adopt an Expected Loss approach for impairment provisions. Oracle Financial Services Loan Loss Forecasting and Provisioning supports two approaches (Incurred Loss and Expected Loss) to impairment provision calculations. LLF&P fills a key gap in bank's credit risk suite of applications.

### 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 Loan Loss Forecasting and Provisioning Release 1.5.1.0.0, in an existing OFSAAI v7.3.3.3.0 Platform hosted on AIX 5.3, AIX 6.1, OEL/RHEL 5.3 up to 5.8 and Solaris 5.10 - Oracle Business Intelligence Suite Enterprise Edition 11.1.1.7.1 - Oracle 11g R2 (11.2.0.2.0) – Tomcat 7.0.19, Web logic 10.3.5.0 and Websphere 7.0.0.17 – 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 Loan Loss Forecasting and Provisioning Release 1.5.1.0.0.

- Installing the Application section details the pre-installation activities followed by a step-by-step instruction on the various installation options.
- Post Installation Activities section details the steps that are required to be performed after the successful installation of the Oracle Financial Services Loan Loss Forecasting and Provisioning Release 1.5.1.0.0.

## 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 6 characters long. If you do not adhere to this prerequisite, 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 7.3.3.3.0 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.

- [Environment](#)
- [Generic Software](#)
- [Preinstallation Activities](#)
- [Pre-Upgrade Activities](#)

**Note:** LLFP 1.5.1.0.0 is not qualified on Solaris 5.11.

### 2.1 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
<b>OS</b>	<ul style="list-style-type: none"> <li>• Red hat Enterprise Linux Server release 5.8 (Tikanga) - 64 bit</li> <li>• Oracle Enterprise Linux Server release 5.8 (Carthage) - 64 bit</li> <li>• Red hat Enterprise Linux Server release 5.3 (Tikanga) - 64 bit</li> <li>• Oracle Enterprise Linux Server release 5.3 (Carthage) - 64 bit</li> </ul>
<b>Infrastructure Application Server</b>	<ul style="list-style-type: none"> <li>• Oracle Client 11g R2 (11.2.0.2.0) - 64 bit</li> <li>• Sun JRE Standard Edition 1.6.0_25 - 64 bit</li> <li>• Sun JDK Standard Edition 1.6.0_25 - 64 bit</li> </ul>
<b>Infrastructure Database Server</b>	<ul style="list-style-type: none"> <li>• Oracle Database Server 11g Release 2 (11.2.0.2.0)-64 bit with or without RAC [Enterprise edition with partitioning capability]</li> <li>• Sun JRE Standard Edition 1.6.0_25 - 64 bit</li> <li>• Sun JDK Standard Edition 1.6.0_25 - 64 bit</li> </ul>
<b>Infrastructure Web Server</b>	<ul style="list-style-type: none"> <li>• Oracle 11g R2 (11.2.0.2.0) JDBC driver (Oracle thin driver)</li> <li>• Sun JRE Standard Edition 1.6.0_25 – 64 bit</li> </ul>

Type	Description
	<ul style="list-style-type: none"> <li>• Sun JDK Standard Edition 1.6.0_25 – 64 bit</li> <li>• Web logic 10.3.5.0 with JDK Standard Edition 1.6.0_25 – 64 bit</li> <li>• Websphere 7.0.0.17 with IBM Runtime, Java technology JDK 1.6.0 (SR9 FP1) – 64 bit</li> <li>• Apache Tomcat 7.0.19 pointing to JDK Standard Edition 1.6.0_25 – (64 bit)</li> </ul> <p><b>Note:</b></p> <p>Any one of the above mentioned web servers (Tomcat, Websphere or Web logic) installation is required based on requirement.</p>
<b>Reporting Tool</b>	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
<b>OS</b>	<ul style="list-style-type: none"> <li>• AIX 5.3 (ML 12) - 64 bit</li> <li>• AIX 6.1 (ML 07) - 64 bit</li> </ul>
<b>Infrastructure Application Server</b>	<ul style="list-style-type: none"> <li>• Oracle Client 11g R2 (11.2.0.2.0) - 64 bit</li> <li>• IBM AIX Runtime, Java Technology JRE 1.6.0 (SR10) - 64 bit</li> <li>• IBM AIX Runtime, Java Technology JDK 1.6.0 (SR10) - 64 bit</li> </ul>
<b>Infrastructure Database Server</b>	<ul style="list-style-type: none"> <li>• Oracle Database Server 11g Release 2 (11.2.0.2.0)-64 bit with or without RAC [Enterprise edition with partitioning capability]</li> <li>• IBM AIX Runtime, Java Technology JRE 1.6.0 (SR10) - 64 bit</li> <li>• IBM AIX Runtime, Java Technology JDK 1.6.0 (SR10) - 64 bit</li> </ul>
<b>Infrastructure Web Server</b>	<ul style="list-style-type: none"> <li>• Oracle 11g R2 (11.2.0.2.0) JDBC driver (Oracle thin driver)</li> <li>• IBM AIX Runtime, Java Technology JRE 1.6.0 (SR10) - 64 bit</li> <li>• IBM AIX Runtime, Java Technology JDK 1.6.0 (SR10) - 64 bit</li> </ul>

Type	Description
	<ul style="list-style-type: none"> <li>• Web logic 10.3.5.0 pointing to IBM AIX Runtime, Java Technology JDK 1.6.0 (SR10)- 64 bit</li> <li>• Websphere 7.0.0.17 pointing to IBM Runtime, Java Technology JDK 1.6.0 (SR9FP1) - 64 bit</li> <li>• Apache Tomcat 7.0.19 pointing to IBM AIX Runtime, Java Technology JDK 1.6.0 (SR10)- 64 bit</li> </ul> <p><b>Note:</b> Any one of the above mentioned web servers (WebSphere, Weblogic, or Apache Tomcat) installation is required based on the requirement.</p>
<b>Reporting Tool</b>	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
<b>OS</b>	Oracle Solaris v5.10 Update 9 (9/10 s10s_u9wos_14a) SPARC sun4v - 64 bit
<b>Infrastructure Application Server</b>	<ul style="list-style-type: none"> <li>• Oracle Client 11g R2 (11.2.0.2.0) - 64 bit</li> <li>• Sun JRE Standard Edition 1.6.0_25 - 64 bit</li> <li>• Sun JDK Standard Edition 1.6.0_25 - 64 bit</li> </ul>
<b>Infrastructure Database Server</b>	<ul style="list-style-type: none"> <li>• Oracle Database Server 11g Release 2 (11.2.0.2.0)-64 bit with or without RAC [Enterprise edition with partitioning capability]</li> <li>• Sun JRE Standard Edition 1.6.0_25 - 64 bit</li> <li>• Sun JDK Standard Edition 1.6.0_25 - 64 bit</li> </ul>
<b>Infrastructure Web Server</b>	<ul style="list-style-type: none"> <li>• Oracle 11g R2 (11.2.0.2.0) JDBC driver (Oracle thin driver)</li> <li>• Sun JRE Standard Edition 1.6.0_25 - 64 bit</li> <li>• Sun JDK Standard Edition 1.6.0_25 - 64 bit</li> <li>• Web logic 10.3.5.0 with JDK Standard Edition 1.6.0_25 -64 bit</li> </ul>



Type	Description
	<ul style="list-style-type: none"> <li>• Websphere 7.0.0.17 with IBM Runtime, Java Technology JDK 1.6.0 (SR9 FP1) – 64 bit</li> <li>• Apache Tomcat 7.0.19 pointing to JDK Standard Edition 1.6.0_25 - 64 bit</li> </ul> <p><b>Note:</b></p> <p>Any one of the above mentioned web servers (WebSphere, weblogic, or Apache Tomcat) installation is required based on the requirement.</p>
<b>Reporting Tool</b>	Oracle Business Intelligence Enterprise Edition Suite – 11.1.1.7.1

## 2.2 Generic Software

Type	Description
<b>Other Software</b>	<p>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.</p> <p><b>Note:</b></p> <p>OPEN LDAP needs to be installed on Microsoft Windows machine only.</p> <p>Hummingbird <b>Exceed</b> 7.0 has to be installed on a Microsoft Windows machine as a simulator for remote installation.</p> <p><b>Note:</b></p> <p>Hummingbird Exceed is required for GUI Mode of installation.</p>
<b>Front End Access</b>	<p>Microsoft Internet Explorer 8/9</p> <p>Microsoft Office 2003/2007</p> <p>Client Machines – Windows XP SP3/Windows 7</p> <p>The screen resolutions supported are 1024*768 and 1280*1024</p> <p>Adobe Reader 8.0</p> <p>Java Plug-in 1.6.0_21</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• Ensure that Java Plug-in is enabled in the browser settings.</li> </ul>

Type	Description
	<ul style="list-style-type: none"> <li>• Enable caching of static content (static files, images, CSS, etc) for browser client.</li> <li>• Cookies should be disabled.</li> </ul>

## 2.3 Preinstallation Activities

The following is the preinstallation checklist to ensure the readiness to start installing Oracle Financial Services Loan Loss Forecasting and Provisioning 1.5.1.0.0 Application:

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

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**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](#).

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- 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
```

- Apply the one-off the patches for the following bug:
  - BUG 18157182 - UPGRADE OF STRUTS VERSION TO 2.3.16
- The config and atomic schema should be of two distinct oracle database users.
- The Information Domain schema makes use of the tables from the configuration schema. 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 (essentially all the Atomic schemas).
- Add an Atomic schema TNS entry to TNSNames.ora.

- Please execute “privileges\_atomic\_user.sql” from DBA user. This will provide required privileges for atomic schema.
- Copy all the contents of the Oracle Financial Services Loan Loss Forecasting and Provisioning Release 1.5.1.0.0 installer download directory to the server location (including the DataModel directory). Provide read, write and execute permission to all the files present in this directory.
- Specify the log file path and name in the log4j.xml. Update the value attribute highlighted in the following figure:

```
<log4j:configuration xmlns:log4j="http://jakarta.apache.org/log4j/">
<appender name="ConfigReveleusFileAppender" class="org.apache.log4j.RollingFileAppender">
  <param name="file" value="/scratch/ofsaobie/InstallerKit/LLFF/installer.log"/>
  <param name="Append" value="true"/>
  <param name="MaxFileSize" value="5000kb" />
  <param name="MaxBackIndex" value="5" />
</appender>
</log4j:configuration>
```

- 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\_db\_user;
  - grant select on V\_ \$PARAMETER to &atomic\_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.
- 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.

## 2.4 Pre-Upgrade Activities

This section is applicable only for the users who are upgrading Oracle Financial Services Loan Loss Forecasting and Provisioning from v1.5.0.0.0 to v1.5.1.0.0.

### Back-up of Database schema and Files

- Prior to the upgrade, take a back up of the existing Atomic Schema, Config Schema and related OBIEE objects (Repository, Images, and Catalog file) that are upgraded. This can be used to restore the application in case of any failures during the upgrade.
- Back-up FTPSHARE, \$FIC\_HOME and FIC\_WEB\_HOME webroot folders of the existing environment.

### T2T changes

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

The T2T definitions are present in the following folders:

**<FTP SHARE\_PATH>/STAGE  
<FTP SHARE\_PATH>/<INFODOM>/erwin/sources**

Any customizations performed on the existing T2T's have to be replicated post upgrade.

### **Data Model Changes**

If data model is customized:

1. Open both the models using ERwin Data Modeler tool.
2. From "**Tools**" menu, select "**Complete Compare**".
3. In the Compare window, select your existing LLFP Data model on left hand side.
4. Select extracted LLFP Data model on right hand side.
5. In "**Type Selection**" check "**Subject Area**".
6. Uncheck all except Auto Close Database/Script Models, in "**Advanced**" option.
7. Click "**Compare**".
8. Resolve Differences Screen by applying all the changes mentioned in the <LLFP Datamodel Changes>.xls file. Click "**Finish**" and click "**Close**".
9. Save the file as XML in "**AllFusion Repository Format**"  
Example:-LLFP\_Datamodel.xml
10. Copy the modified existing into the location **ftpshare/<INFODOM>/erwin/erwinXML**.
11. Perform Incremental/Sliced Model Upload in the information domain where LLFP application is installed.

---

### **NOTE:**

- Incremental/Sliced model upload might give errors if NOT NULL columns are added to a table that already has rows or if the columns that are being dropped have values. Check the data model changes excel file for any such cases. In such a case, take a backup of the table and truncate the table. Insert records back into the table with a default value for the NOT NULL column.
  - Follow the instructions mentioned in the *Merging Data Model Changes into Existing Model.doc* for merging the existing data model with 1.5.1.0.0 LLFP Data model.
- 

If data model is not customized:

1. Copy the extracted LLFP Data model into the location **ftpshare/<INFODOM>/erwin/erwinXML**.
2. Perform Incremental/Sliced Model Upload in the Information domain where LLFP application is installed.

If Metadata and the PR2 objects are customized:

In case certain customization was done to Metadata and the PR2 objects, backup the definitions of the same. You may redo the customization after the installation is completed.

If RPD and Web catalog files are customized:

In case certain customization was done to RPD and Web catalog files, backup RPD and Web catalog files. You may redo the customization after the installation is completed.

## 3. Installing the Application

### 3.1 OFS Loan Loss Forecasting and Provisioning Release 1.5.1.0.0 Installation

The Oracle Financial Services Analytical Applications Infrastructure 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 Loan Loss Forecasting and Provisioning Release 1.5.1.0.0 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
- Machine C is used to install product Web Layer components

#### NOTE:

This section holds applicable if Oracle Financial Services Analytical Applications Infrastructure Release 7.3.3.3.0 is installed on AIX 5.3, AIX 6.1, OEL/RHEL 5.3 upto 5.8 and Solaris 5.10 - Oracle 11g on separate machines A, B and C respectively.

For Silent Installation, refer to the section [Silent Installation](#).

#### 3.1.1 Machine A – Product Application Layer

##### Step 1

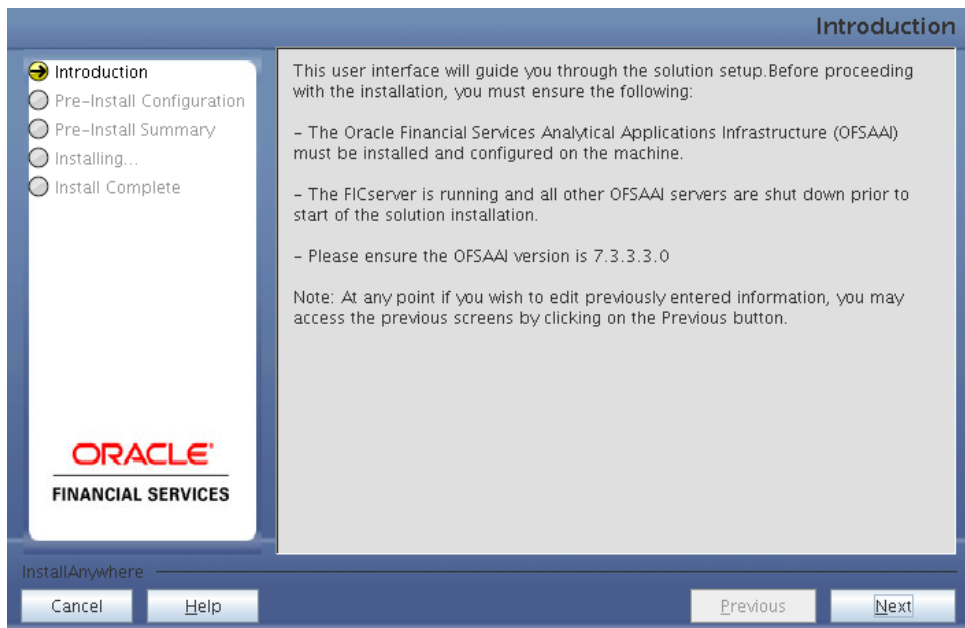
To begin with the Oracle Financial Services Loan Loss Forecasting and Provisioning Release 1.5.1.0.0 installation, execute **Setup.sh** with the parameter GUI (GUI Installation) or SILENT (for Silent installation).



Installation Splash Screen

**Step 2**

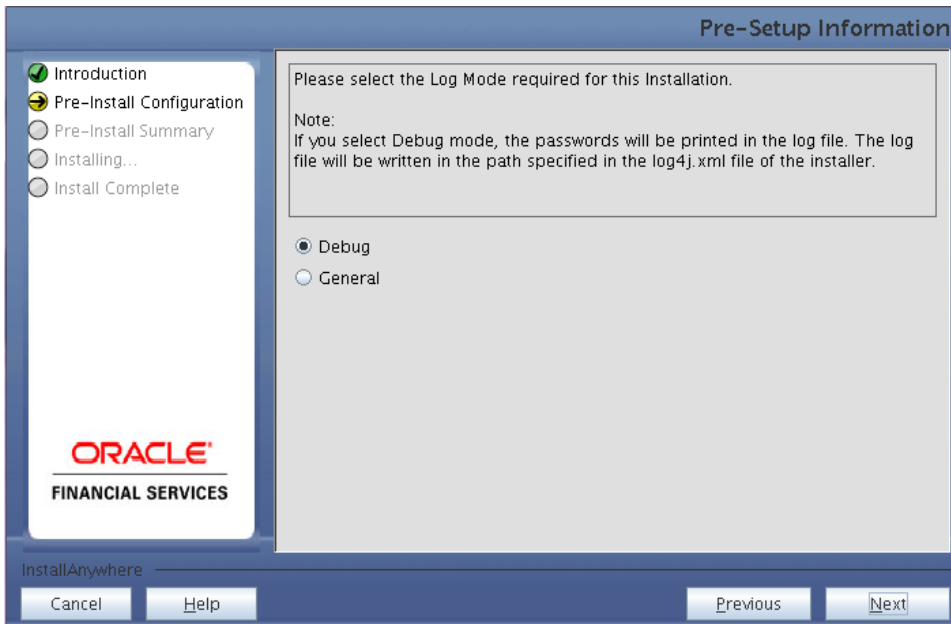
Upon loading the installer, the **Introduction** screen displays the prerequisites for installation. Ensure that these prerequisites are met before you proceed



Introduction Screen

**Step 3**

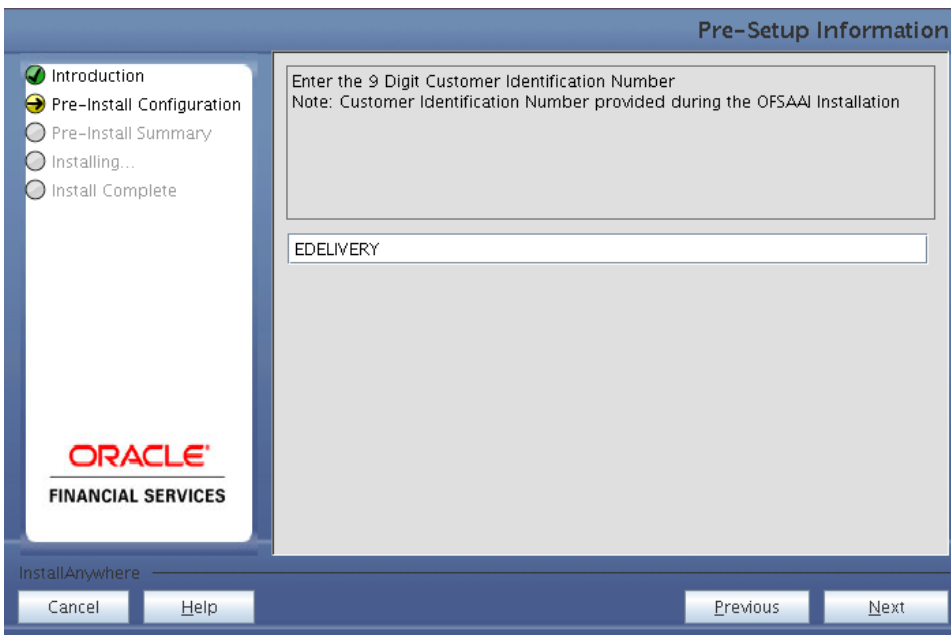
Choose the log mode for this installer. If **Debug** is selected, then the debug information will be printed in the Log File.



Log Mode Option Screen

**Step 4**

Enter the nine digit Customer Identification Number provided during the OFSAAI installation.



Customer ID Input Screen

Click **Next** to continue.

**Step 5**

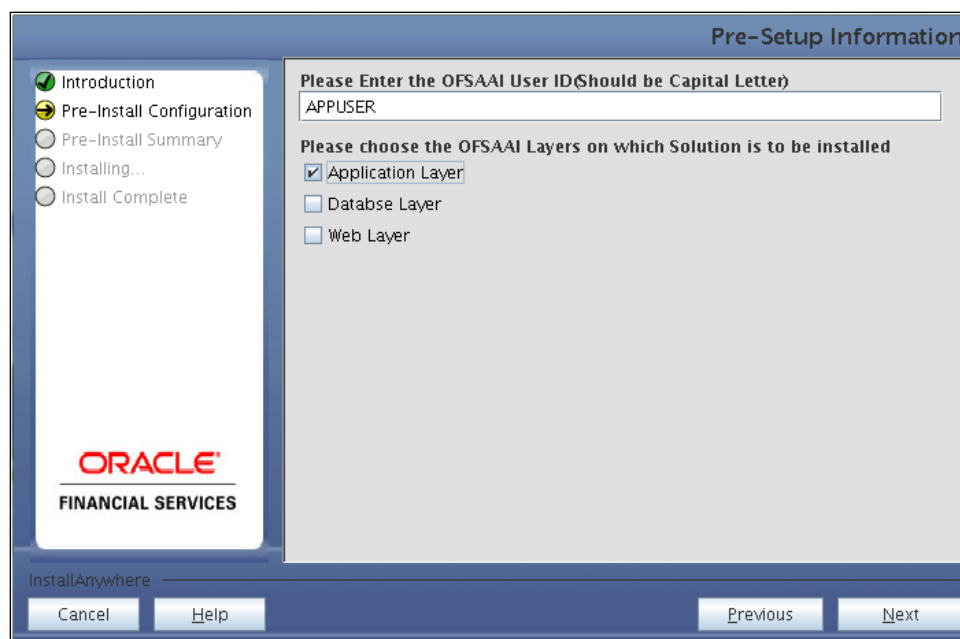
The **Pre Setup Information** screen requests for setup information.



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**



**Pre Setup Information Screen – Choose Layer to Install**

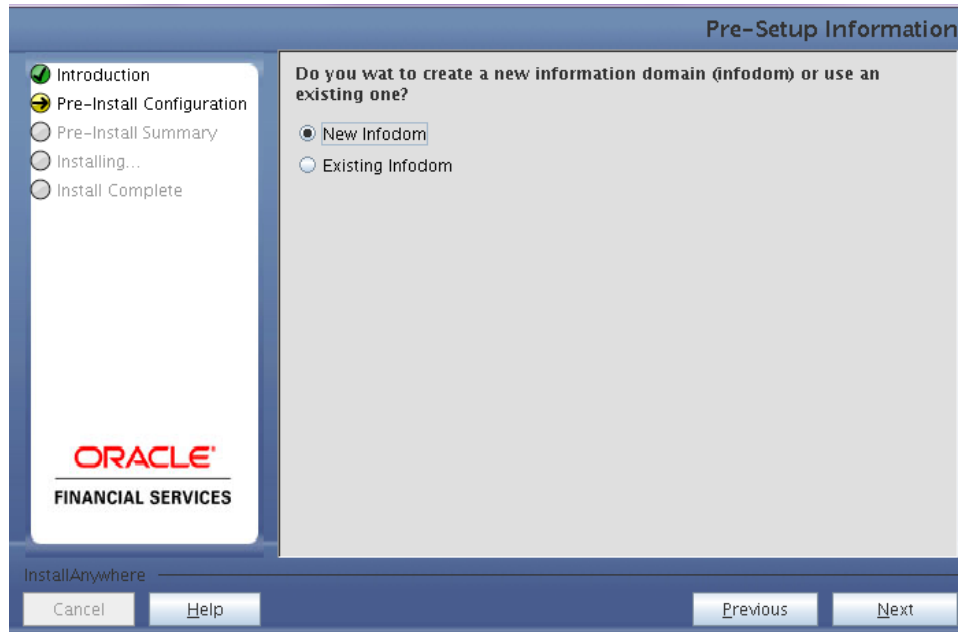
**NOTE:**

For a single-tier Oracle Financial Services Analytical Applications Infrastructure Release 7.3.3.3.0 installation, you must select Application Layer, Database Layer and Web 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 information on whether a new infodomain has to be created or the existing infodomain 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 user name, password and JDBC url in relevant fields.

Click **Next** to continue.

The screenshot shows a 'Pre-Setup Information' dialog box. On the left, a navigation pane lists: Introduction (checked), Pre-Install Configuration (selected), Pre-Install Summary, Installing..., and Install Complete. The Oracle Financial Services logo is at the bottom left. The main area contains the following fields:

- DB Name for Infodom Database: LLFPAPP
- Application Schema user name: LLFPAPP
- Application Schema password: masked with dots
- Application Schema JDBC URL: jdbc:oracle:thin:@10.184.151.231:1521:QAERM

Buttons at the bottom include Cancel, Help, Previous, and Next.

**Database details for the new Infodom**

**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).

This screenshot shows the same 'Pre-Setup Information' dialog box, but with additional fields for infodom creation:

- Infodom name: LLFPAPP
- Infodom description: LLFPAPP
- Enter the Loan Loss Forecasting and Provisioning segment Name: LLFPAPP
- Enter the Historical Transition Matrix segment Name: LLFPTMX
- Application Server ftpshare log path: /scratch/ofsaaapp/ftpshare/LLFPAPP/logs

The navigation pane and Oracle logo remain the same as in the previous screenshot.

**Infodom details for creation of new Infodom**

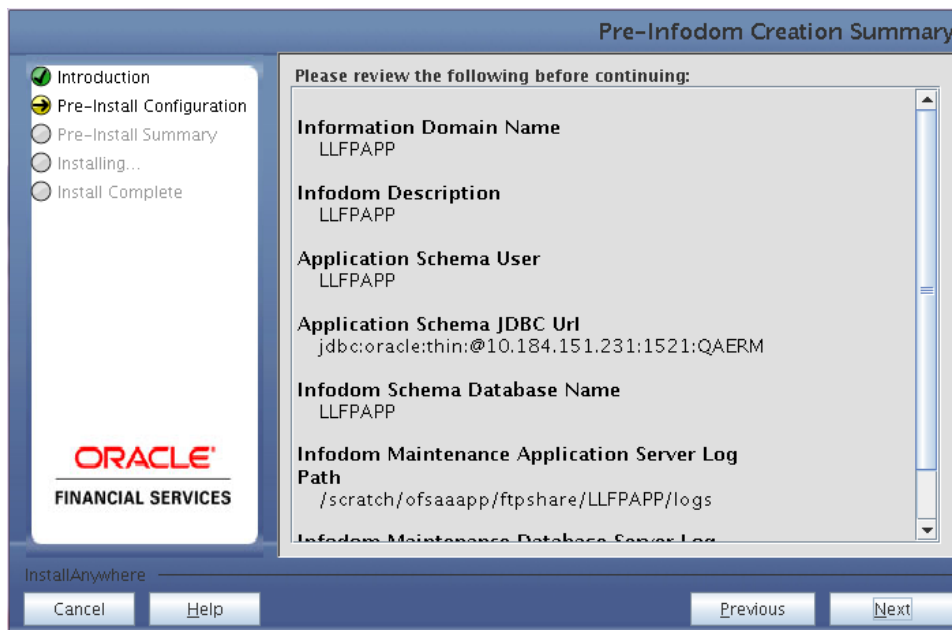
**NOTE:**

The Oracle Financial Services Analytical Applications Infrastructure user must have a role that is able to perform Add/Modify functions for Loan Loss Forecasting and Provisioning 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.



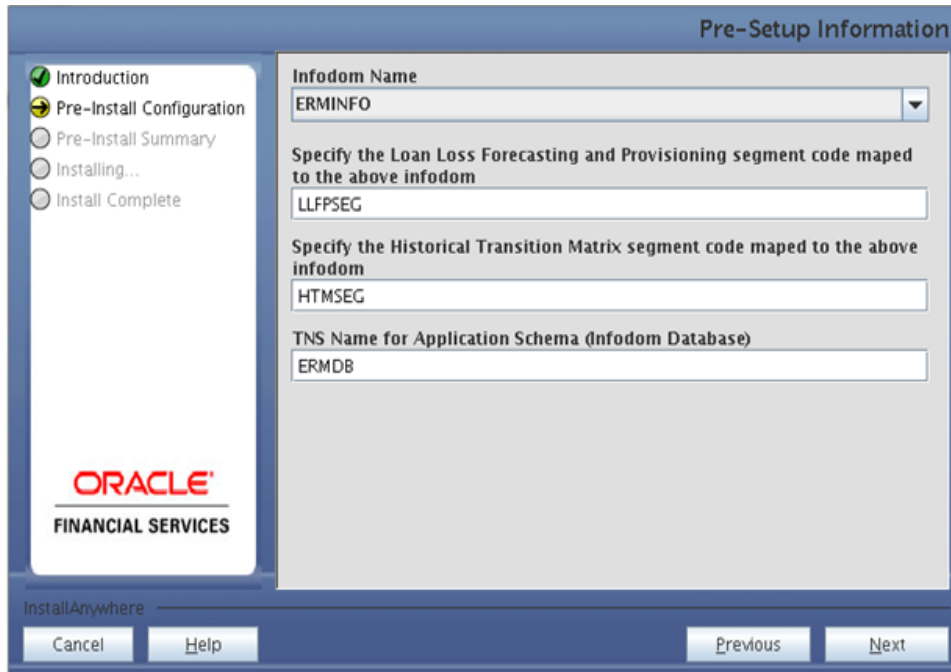
**Pre-infodom Creation Summary**

**Step 8**

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

**Step 8-i**

- Select the infodom name in the dropdown list.
- Enter segment code.
- Enter the application schema's TNS name.

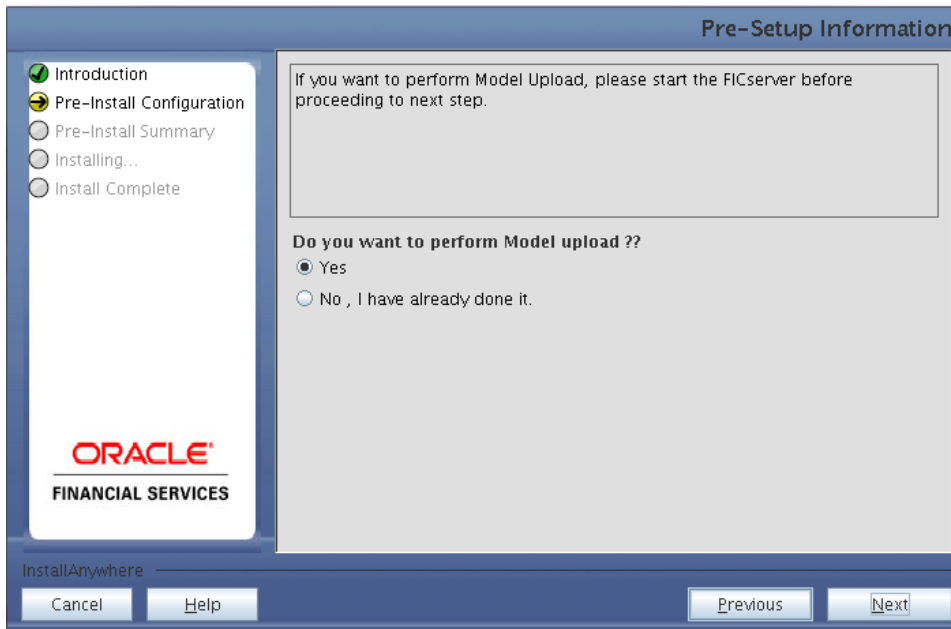


### Installation in Progress

#### Step 9

Oracle Financial Services Loan Loss Forecasting and Provisioning Release 1.5.1.0.0, 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:**

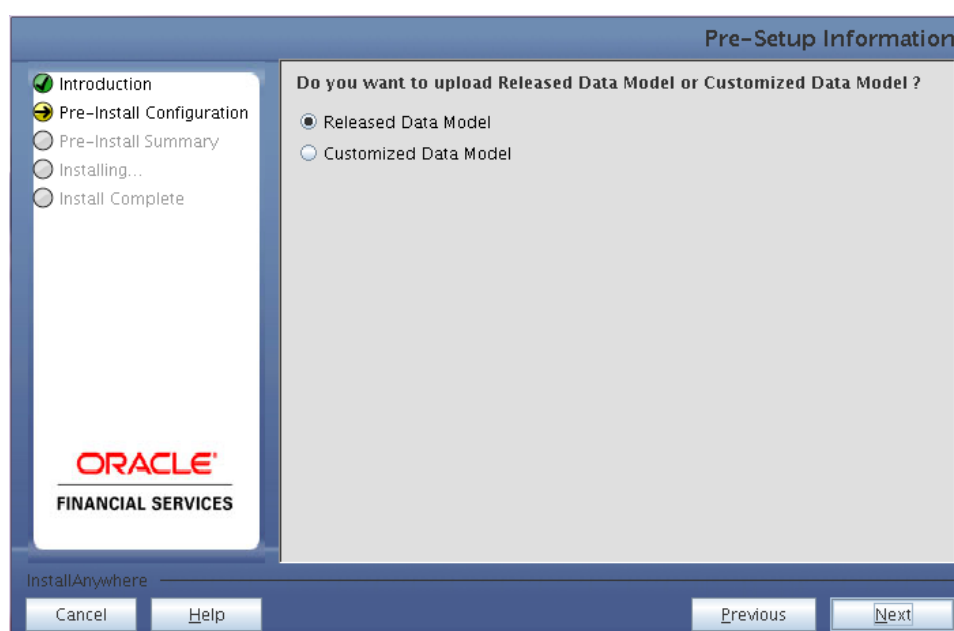
If **Yes** is selected for Data model upload then copy the .xml to a specific folder and rename the file.

Clicking **No** implies that the Oracle Financial Services Loan Loss Forecasting and Provisioning 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 – 10**

In the following screen prompt choose whether the released version of the datamodel or the customized datamodel is to be uploaded.



**Pre – Setup information**

If **Released Data Model** option is selected, then the installer uploads the Oracle Financial Services Loan Loss Forecasting and Provisioning Release 1.0 data model.

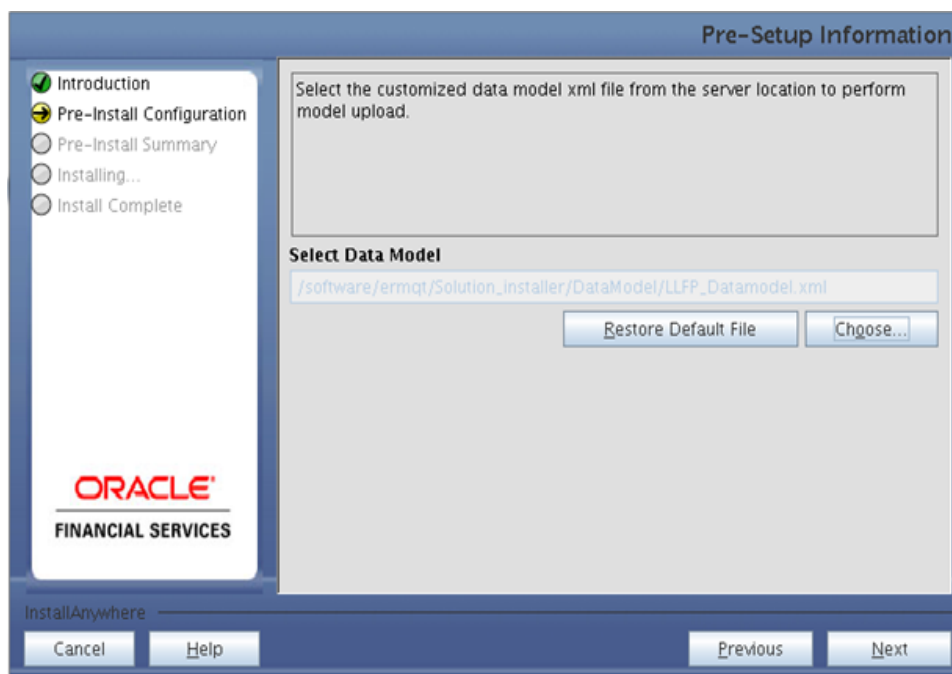
If **Customized Data Model** option is selected, then the installer allows you to select the data model. Choose the desired option.

If **Released Data Model** is selected go to [Step 12](#) or else go to **Step 11**.

Click **Next** to proceed.

**Step – 11**

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

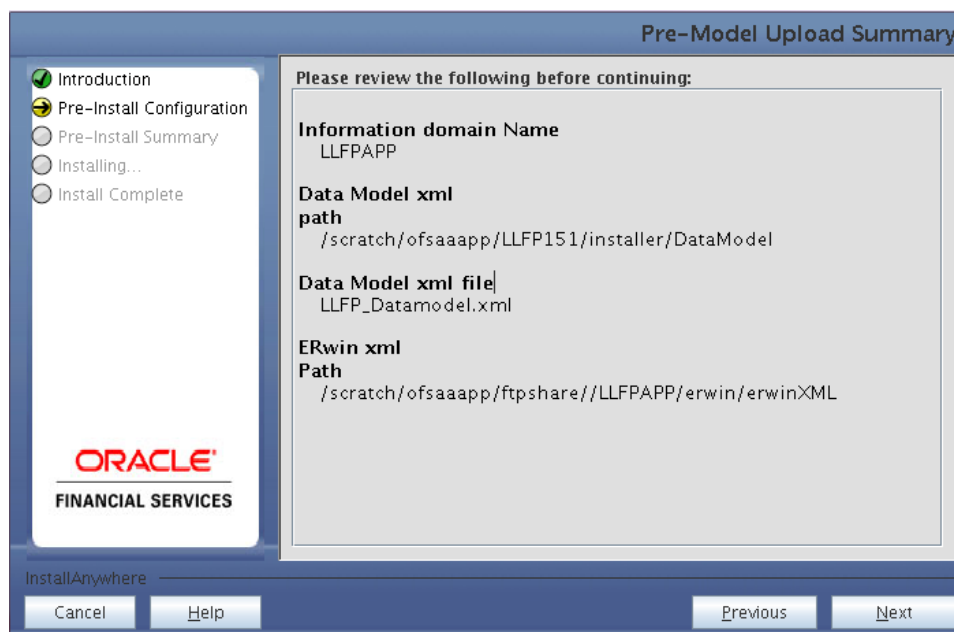
**NOTE:**

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 – 12**

The following screen prompt displays the premodel upload details:



### Pre – Model Upload Summary

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. 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 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.

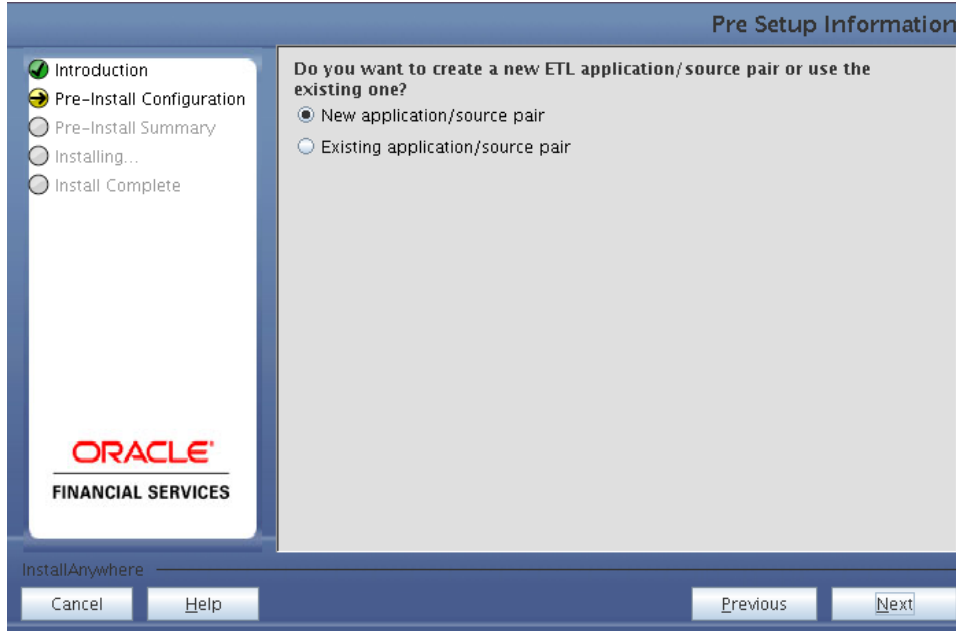
**Possible reason/resolution:**

Restart the FICServer.

#### Step – 13

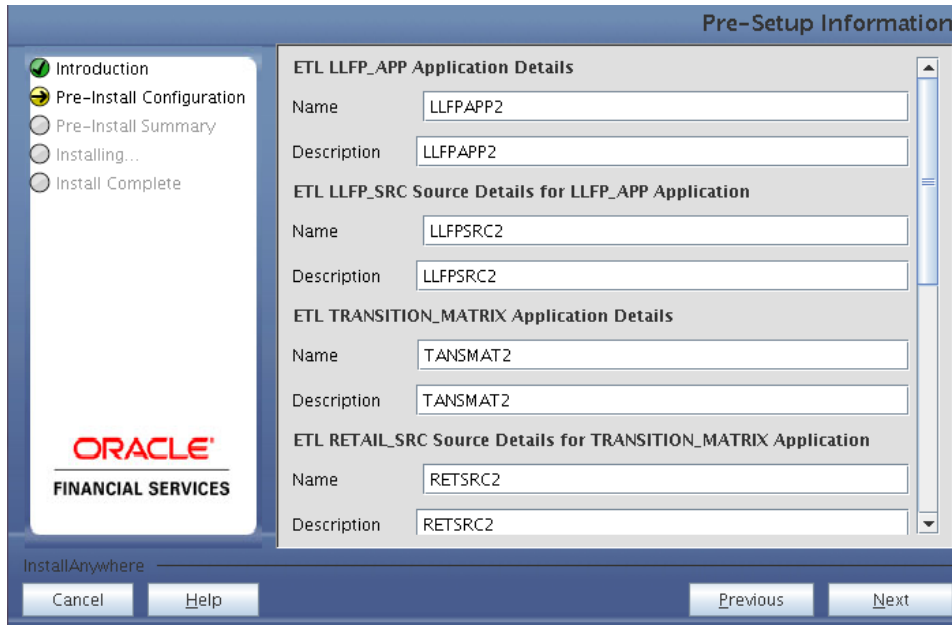
In the following screen select New application/source pair or select Existing application/source pair. If the option Existing application/source pair is selected then goto step [13-ii](#) or else goto step [13-i](#).





**Step 13-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:**

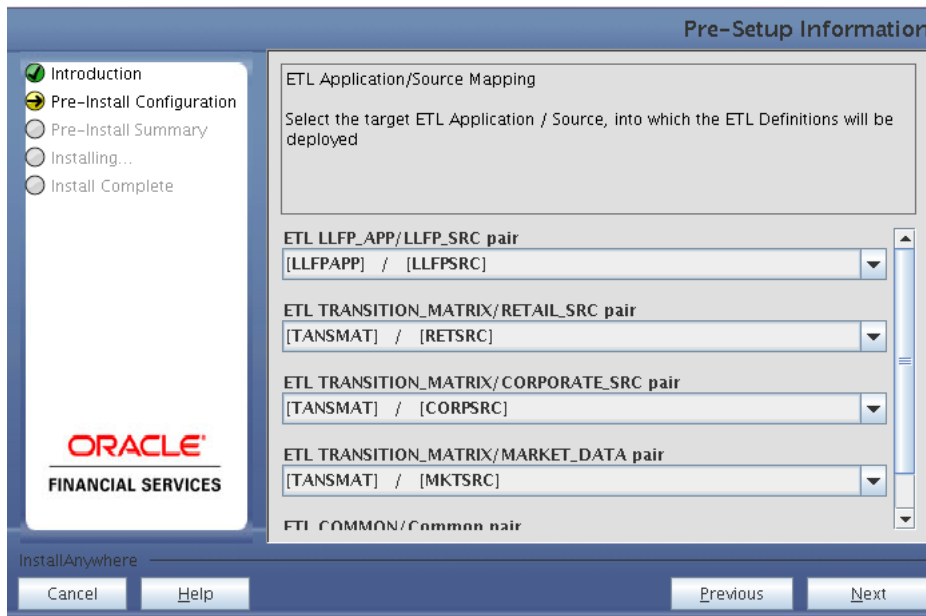
ETL Source will be created pointing to the information domain (atomic schema) that is specified during the installation

**Step 13-ii**

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

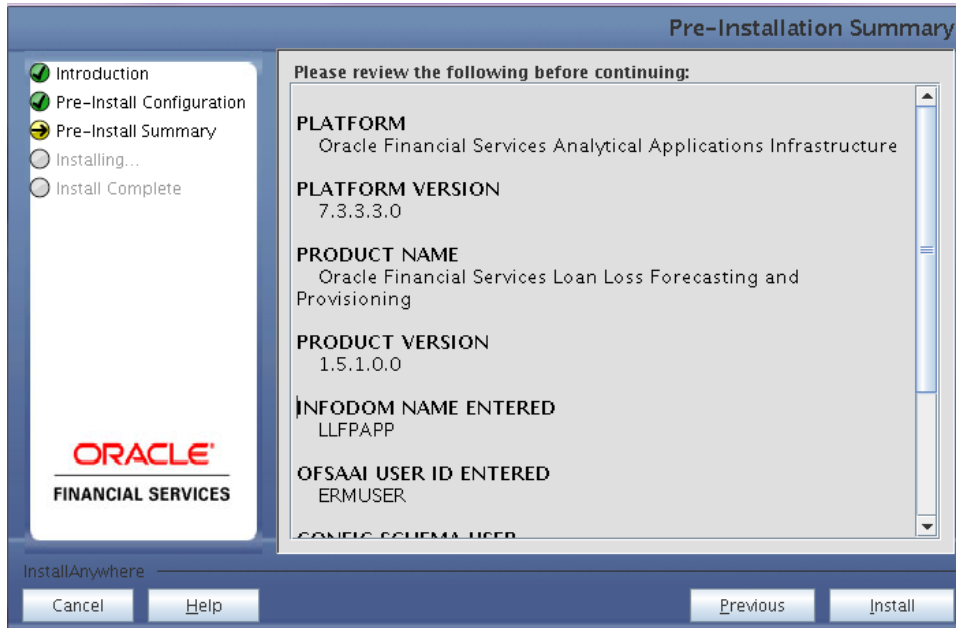
Choose the desired ETL application/source pair into which ETL definitions should be deployed.

Click **Next** to Process.



**Step 14**

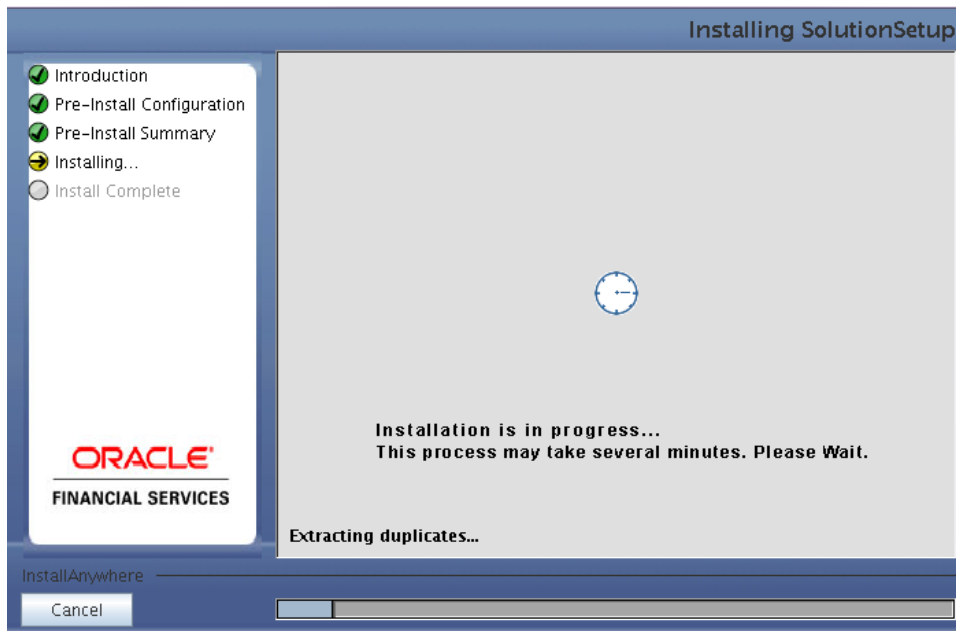
This screen prompt displays all the preinstallation summary. Verify all details and click **Install** to proceed.



**Pre – Install Summary**

**Step 15**

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



## Installation is in progress

### Step 16

The following screen prompt displays the completion of installation of the Oracle Financial Services Loan Loss Forecasting and Provisioning Release 1.5.1.0.0 Setup. Click **Done** to exit.



### Installation Complete

## 3.1.2 Machine B – Product Database Layer

### Step 1

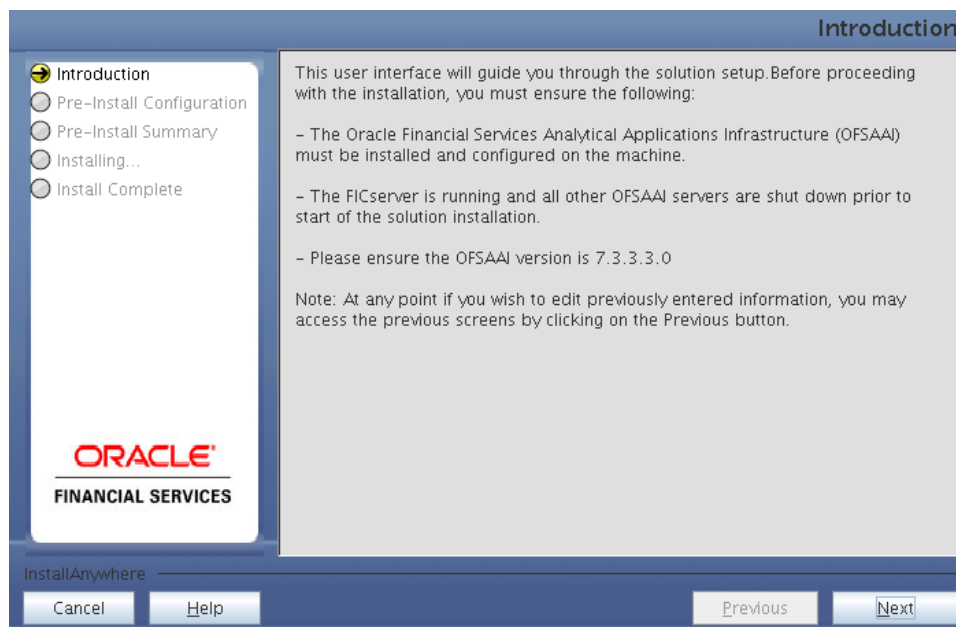
To begin with the Oracle Financial Services Loan Loss Forecasting and Provisioning Release 1.5.1.0.0 installation, execute **Setup.sh** with the parameter GUI (GUI Installation) or SILENT (for Silent installation).



**Installation Splash Screen**

**Step 2**

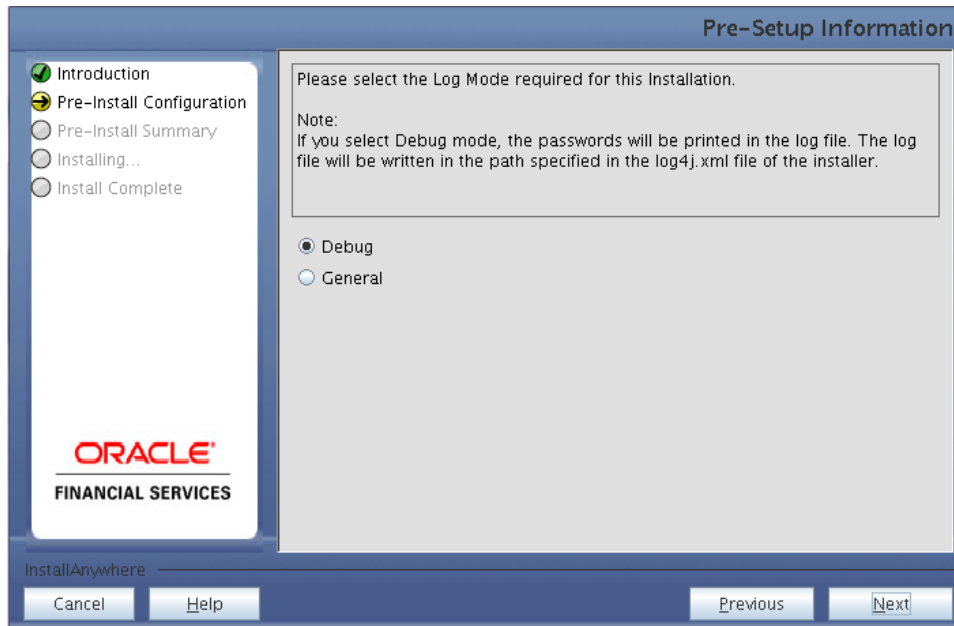
Upon loading the installer, the **Introduction** screen displays the prerequisites for installation. Ensure that these prerequisites are met before you proceed.



**Introduction Screen**

**Step 3**

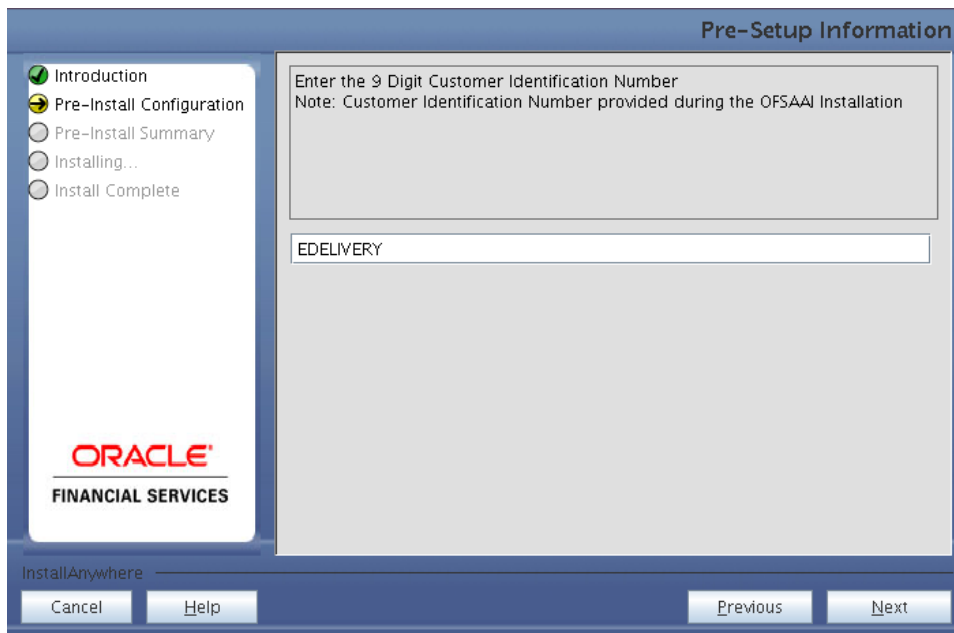
Choose the log mode for this installer. If **Debug** is selected, the debug information will be printed in the Log File.



Log Mode Option Screen

**Step 4**

Enter the nine digit Customer Identification number provided during the OFSAAI installation.



Customer ID Input Screen

Click **Next** to continue.

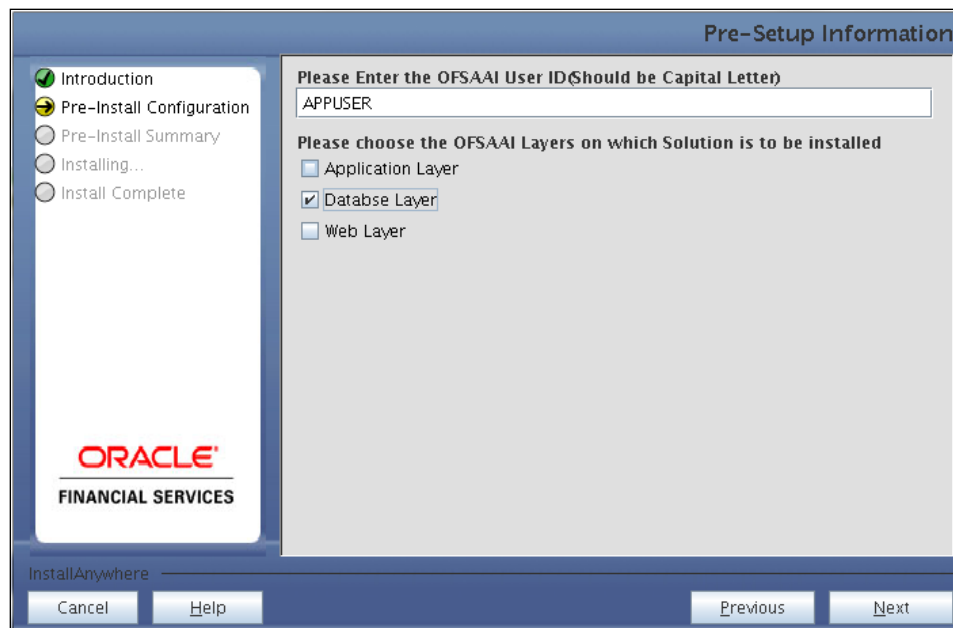
**Step 5**

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**



**Pre Setup Information Screen – Choose Layer to Install**

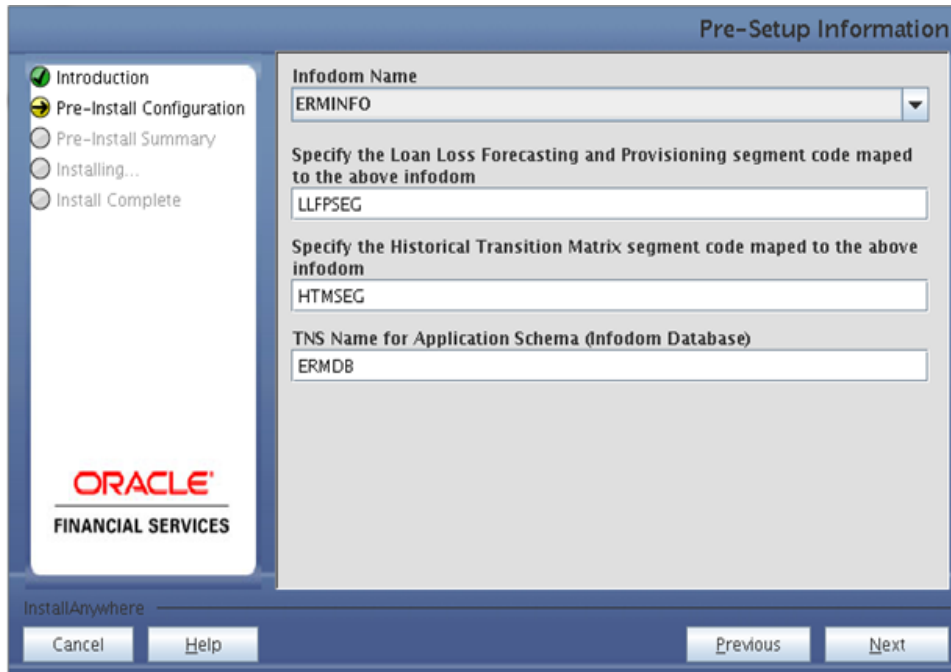
**NOTE:**

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

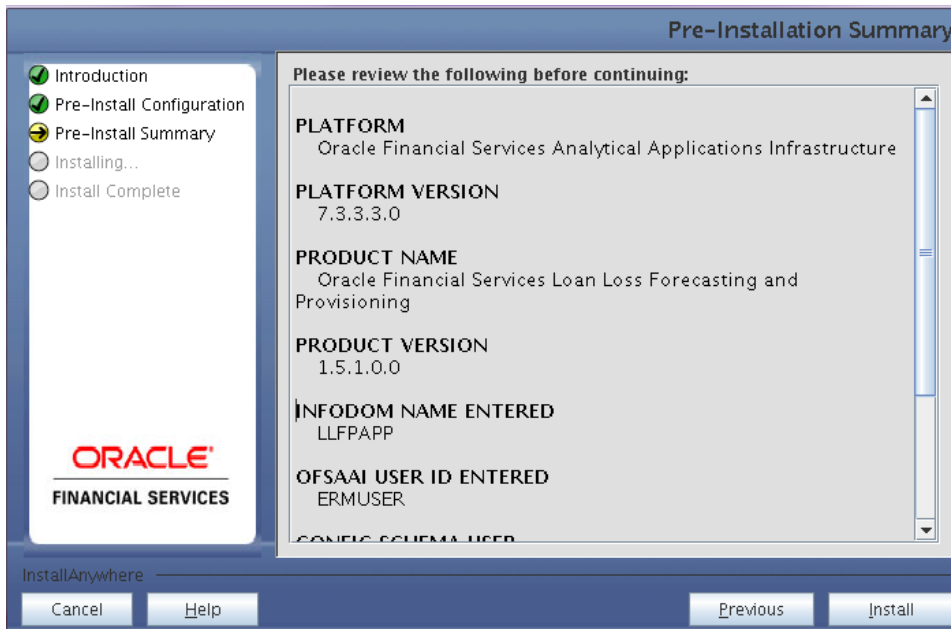


**Pre Setup Information Screen – Choose Layer to Install**

**Step 7**

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

Click **Install** to proceed.

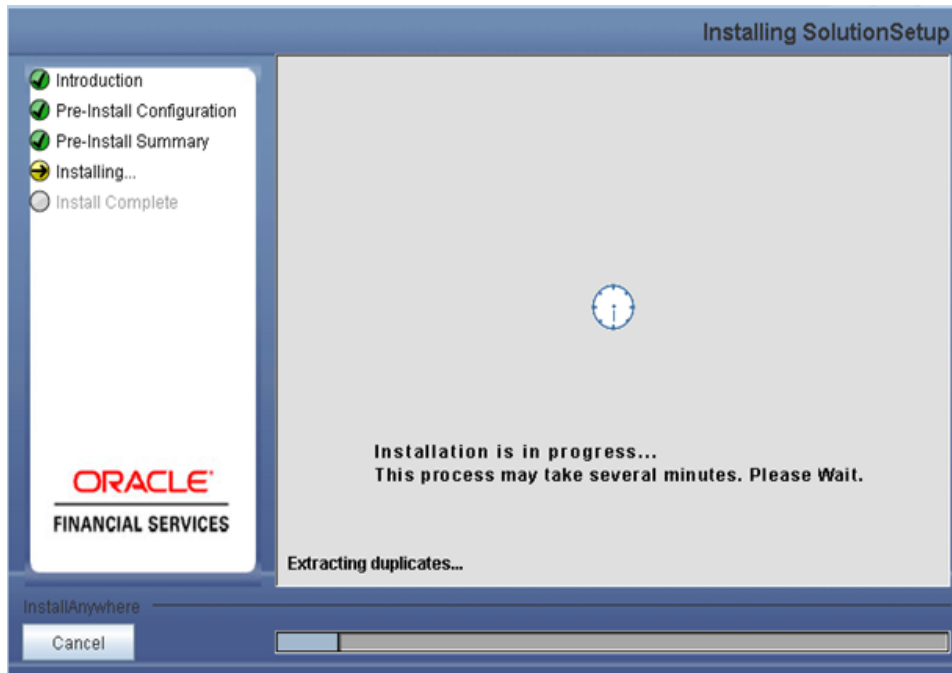


**Pre – Install Summary**



### Step 8

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

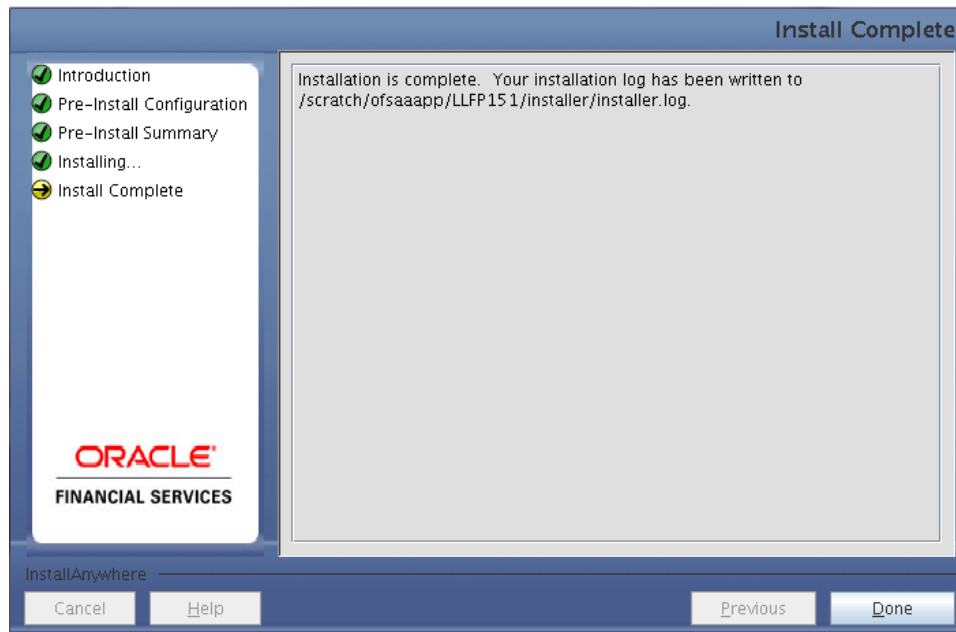


**Installation is in progress**

### Step 9

The following screen prompt displays the completion of installation of the Oracle Financial Services Loan Loss Forecasting and Provisioning Release 1.5.1.0.0 setup.

Click **Done** to exit.



Installation Complete

### 3.1.3 Machine C – Product Web Layer

#### Step 1

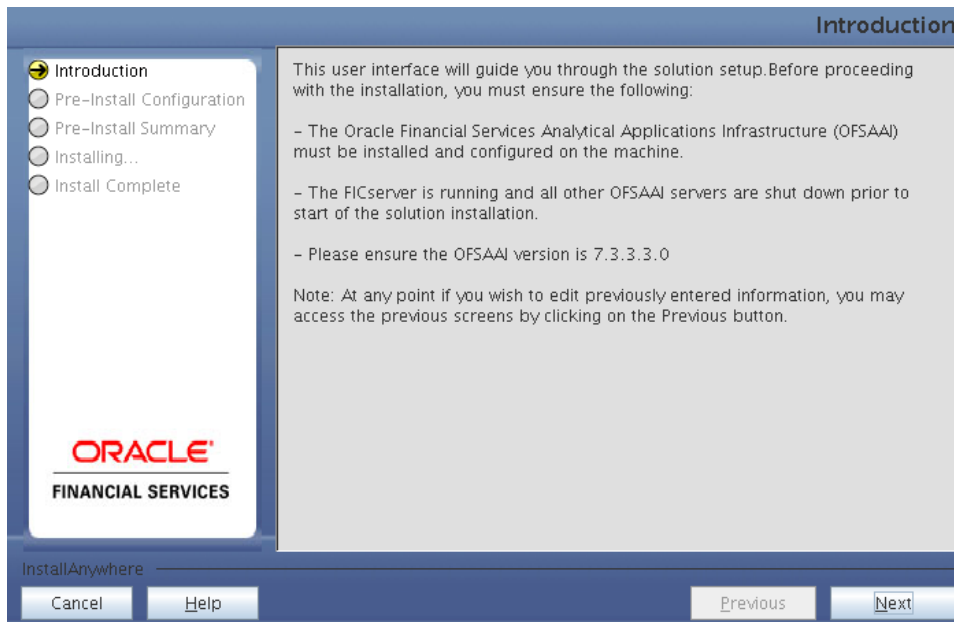
To begin with the Oracle Financial Services Loan Loss Forecasting and Provisioning Release 1.5.1.0.0 installation, execute **Setup.sh** with the parameter GUI (GUI Installation) or SILENT (for Silent installation).



Installation Splash Screen

#### Step 2

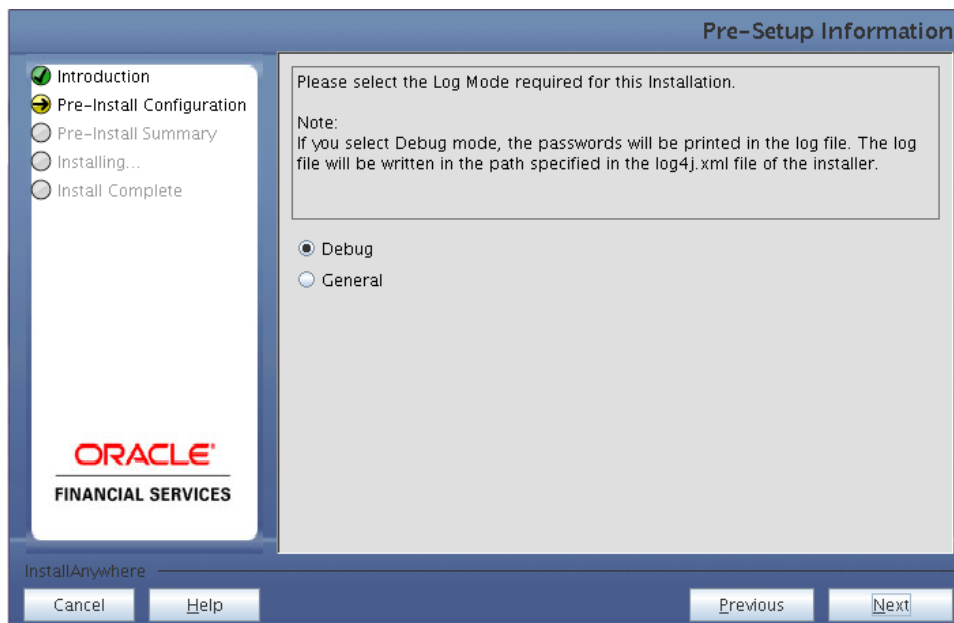
Upon loading the installer, the **Introduction** screen will display the prerequisites for installation. Ensure that these prerequisites are met before you proceed.



Introduction Screen

**Step 3**

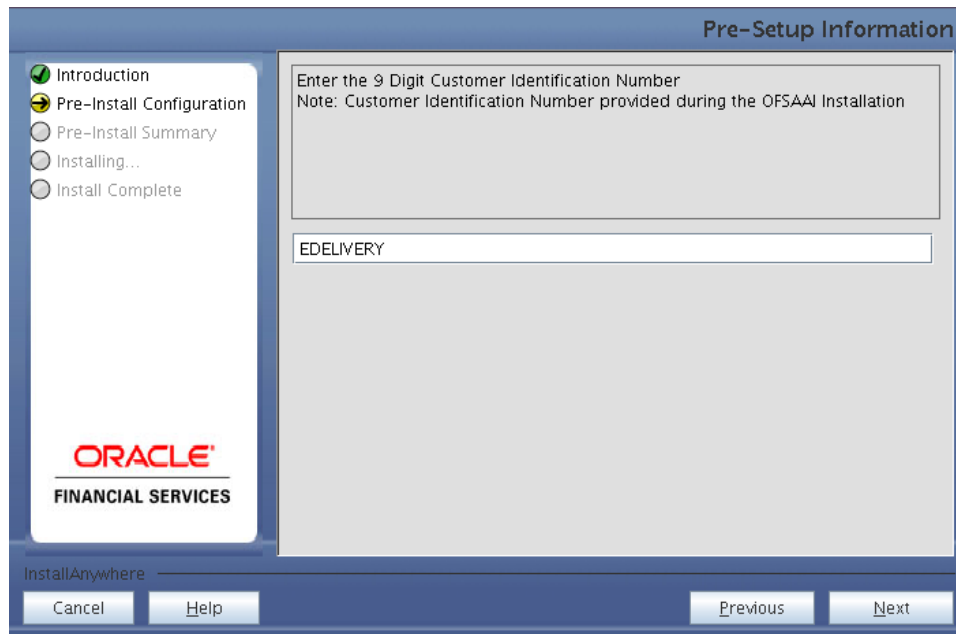
Choose the log mode for this installer. If **Debug** is selected, the debug information will be printed in the Log File.



Log Mode Option Screen

**Step 4**

Enter the nine digit Customer Identification number provided during the OFSAAI installation.



**Customer ID Input Screen**

Click **Next** to continue.

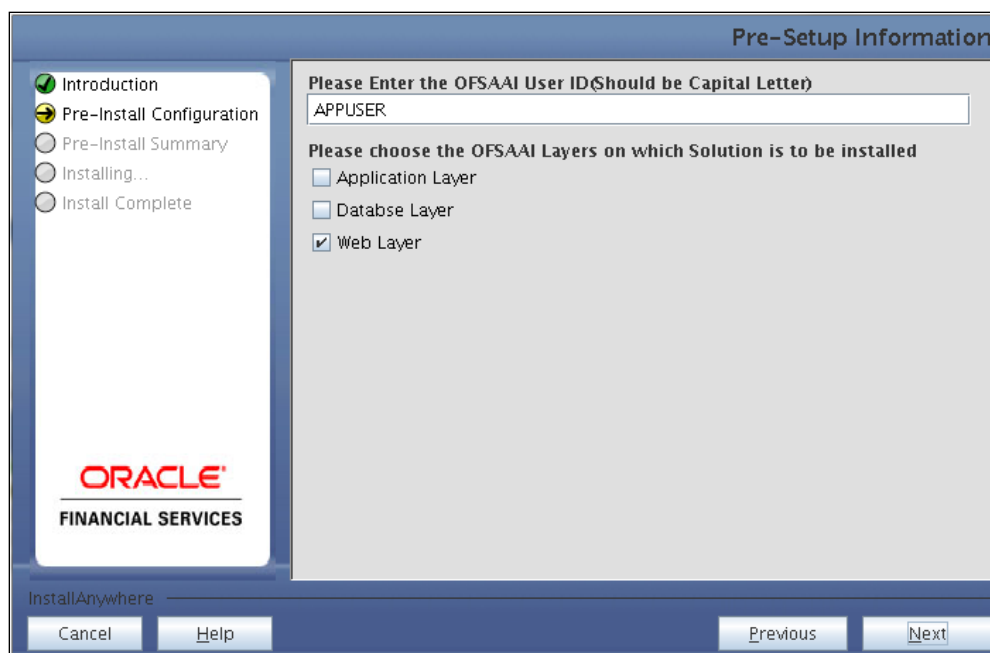
### **Step 5**

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: **Web Layer**



**Pre Setup Information Screen – Choose Layer to Install**

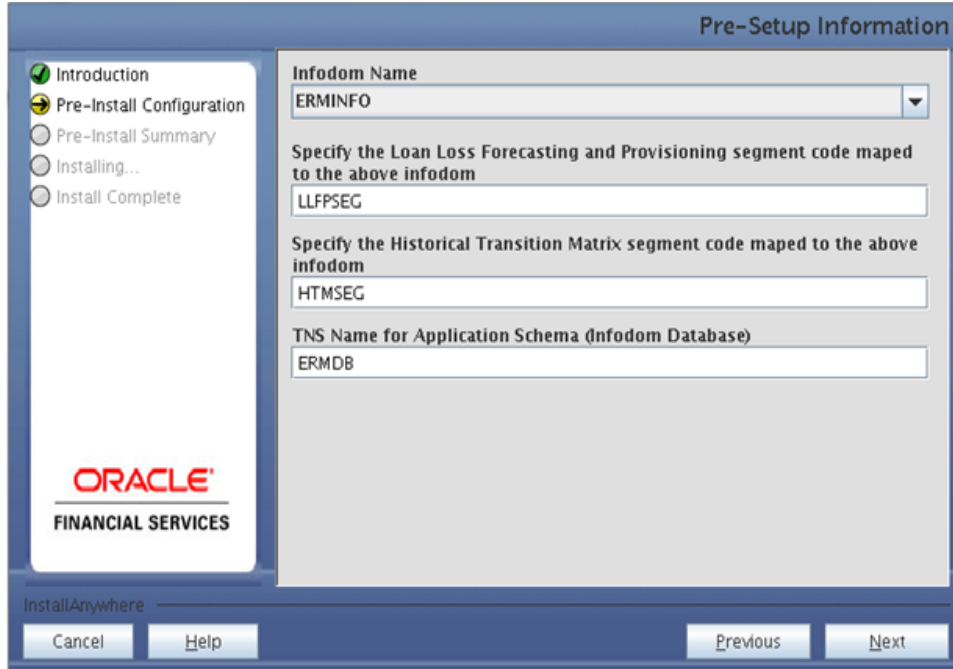
**NOTE:**

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

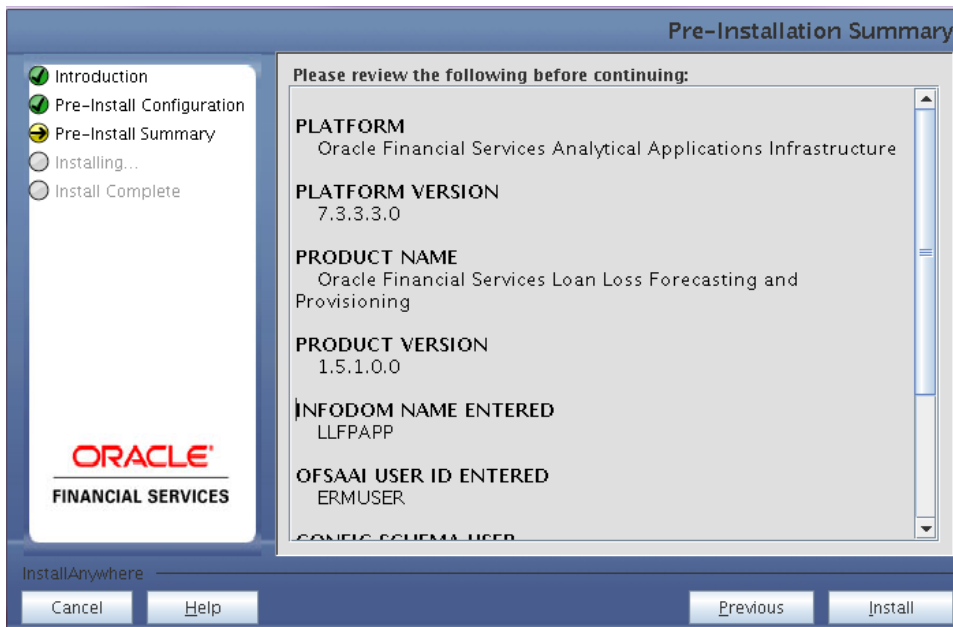


**Pre Setup Information Screen – Choose Layer to Install**

**Step 7**

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

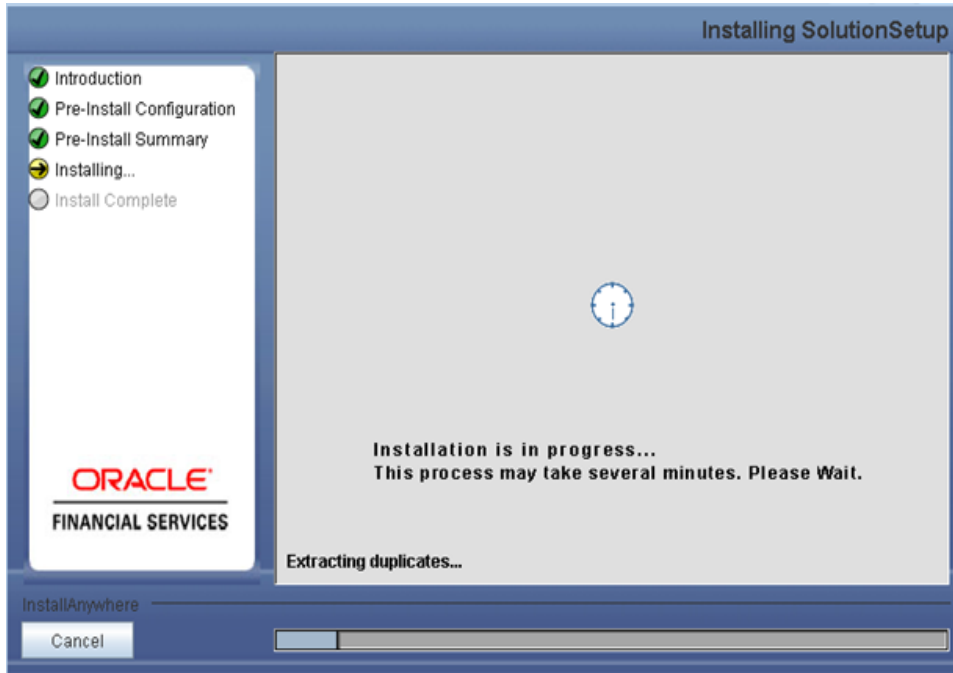
Click **Install** to proceed.



**Pre – Install Summary**

### Step 8

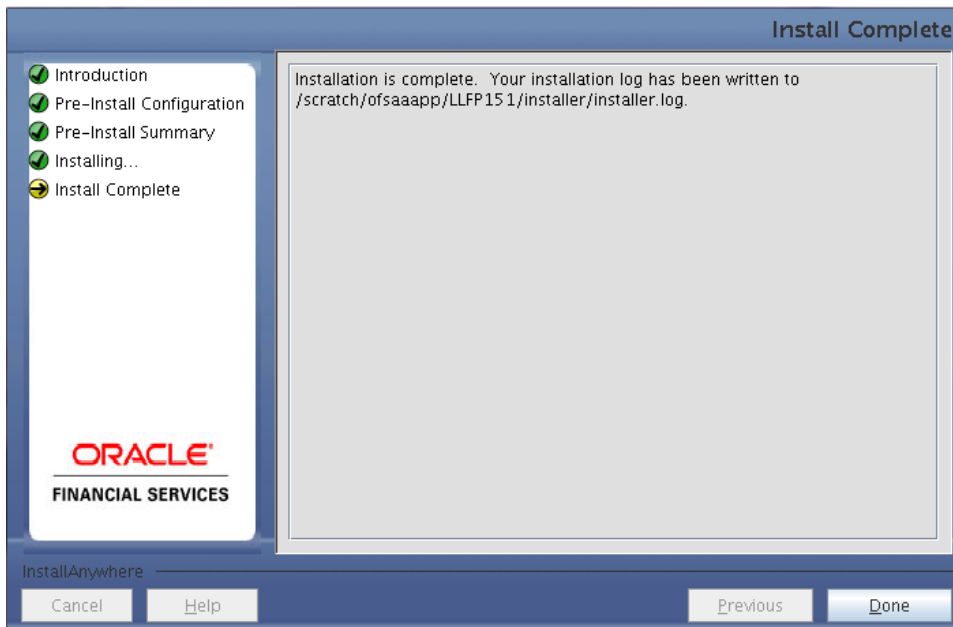
This screen prompt displays the installation process. Wait till the installation is complete.



Installation is in progress

### Step 9

The following screen prompt displays the completion of installation of the Oracle Financial Services Loan Loss Forecasting and Provisioning Release 1.5.1.0.0 setup. Click **Done** to exit.



Installation Complete

## 3.2 OFS Loan Loss Forecasting and Provisioning Release 1.5.1.0.0 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.

### 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.xls

## 3.3 Post Installation Activities

Once the installation of Oracle Financial Services Loan Loss Forecasting and Provisioning Release 1.5.1.0.0 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 <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 infodom. *For more information refer to the [OFSAAI 7.3.0.0.0 Installation manual](#).*
- Add the variables INIPATH=\$FIC\_DB\_HOME/conf and NLSPATH=\$FIC\_DB\_HOME/conf/en\_US/ofsmg.cat and export them in .profile
- 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.
- Under the location \$FIC\_HOME/ficweb/webroot/WEB-INF/props, create a copy of the file “LLFPMenu.xml”. Rename this copy to “##INFODOM##\_LLFPMenu.xml” in the same folder – replace ##INFODOM## with the name of the information domain in which Loan



Loss Forecasting and Provisioning is being installed.

- The following highlighted tag should be removed manually in web.xml if already present in web.xml.

```
<filter-mapping>
    <filter-name>struts2</filter-name>
    <url-pattern>/fsapps/*</url-pattern>
    <url-pattern>/*</url-pattern>
</filter-mapping>
<filter-mapping>
    <filter-name>struts-cleanup</filter-name>
    <url-pattern>/fsapps/*</url-pattern>
    <url-pattern>/*</url-pattern>
</filter-mapping>
```

- 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.
- Start the web server after deployment.
- Refer Starting OFSAAI Servers in the Installation Guide for assistance in starting the servers.
- If you are installing Oracle Financial Services Loan Loss Forecasting and Provisioning Release 1.5.1.0.0 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.
- Recompile all invalid Functions, procedures and views.
- Loan Loss Forecasting and Provisioning Links and screens will not be available for editing, view, and delete or execution mode for user by default. Please map the appropriate roles to the required user groups to access the functionality.
- Map all Roles created for Run Management, Loan Loss Forecasting and Provisioning, and Transition Matrix to the user group mapped to the user.
- Map Batch Execution to User from UserGroup-Batch Execution Map link under Administration->Utilities.
- Map all Hierarchies and Measures to the Segment from Segment/Metadata Mapping link under System Configuration.

The Oracle Financial Services Loan Loss Forecasting and Provisioning Release 1.5.1.0.0 application is now ready to be used.

If you encounter any problems during setup, please contact OFSAA Support at [Oracle Support](#).



## 4. Oracle Financial Services Loan Loss Forecasting and Provisioning Dashboards Configuration

### 4.1 Assumptions

- If Oracle Financial Services LLFP Application is installed, then the table scripts need not be executed as described in this document
- The database schema will have proper privileges namely: `CONNECT`, `RESOURCE AND CREATE MATERIALIZED VIEW`, to execute the above mentioned scripts.
- 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

### 4.2 Pre-requisites

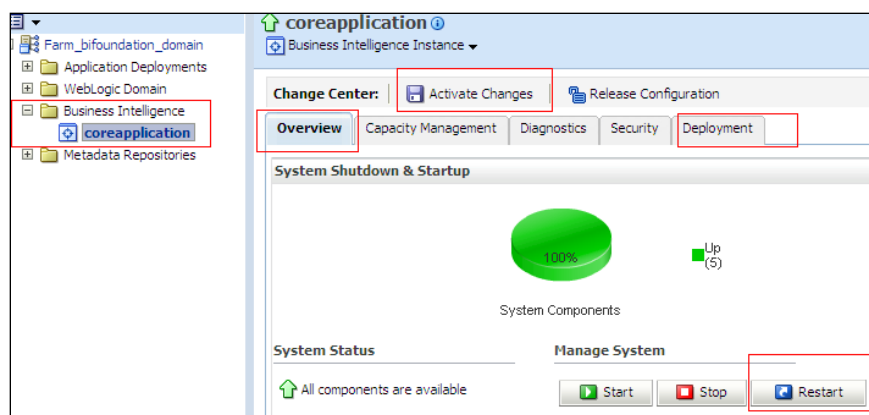
- a. Backup following OBIEE folders (*for existing installation, not required for new installation*) :
  - `<Installation Path>\middleware\instances\instance1\bifoundation\OracleBIServerComponent\coreapplication_obis1\repository`
  - `<Installation Path>\middleware\instances\instance1\bifoundation\OracleBIPresentationServicesComponent\coreapplication_obips1\catalog\<new folder created as part of Installation steps>`
- b. Server details i.e. url of OBIEE should be kept in handy
- c. Copy following files from “\$FIC\_HOME/LLFP\_DASHBOARDS” directory to the local machine:
  - `LLFP.catalog`
  - `LLFP.rpd`

### 4.3 Configuration Steps

#### 4.3.1 Server Configuration steps:

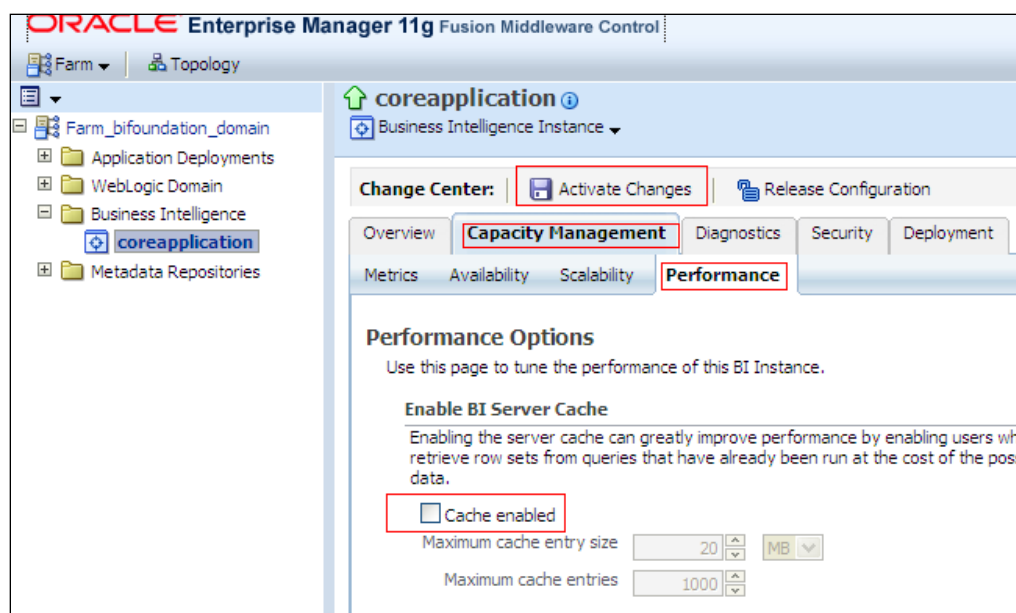
- a. Stop the BI servers
- b. Add the `tnsnames.ora` file in the following folder “`<Installation Path>\middleware\Oracle_BI1\network\admin`”. The `tnsnames.ora` file should contain the data-source connection details used in the connection pool of the RPD.
- c. Log on to Oracle Enterprise Manager.
  - i. Go to Business Intelligence menu located on the left hand side of the screen. Select Core application within it.
  - ii. Go to Deployment located on the last tab.

- iii. Click on Lock and Edit Configuration
- iv. Go to the section Upload BI Repository
- v. Browse and select the repository.
- vi. Enter the repository password and confirm the same. The repository password is “Administrator1”
- vii. Go to BI Presentation Catalog section
- viii. Edit the catalog path and remove SampleAppLite (Only in case of first time installation) from the end of the catalog path section and enter LLFP as the name of the new catalog folder. Make sure that the folder path is `<OBIEE Installation Path>middleware\instances\instance1\bifoundation\OracleBIPresentationServicesComponent\coreapplication_obips1\catalog\`
- ix. Click on Apply Button
- x. Click on Activate Changes
- xi. Click on Overview tab
- xii. Click on the Restart button.



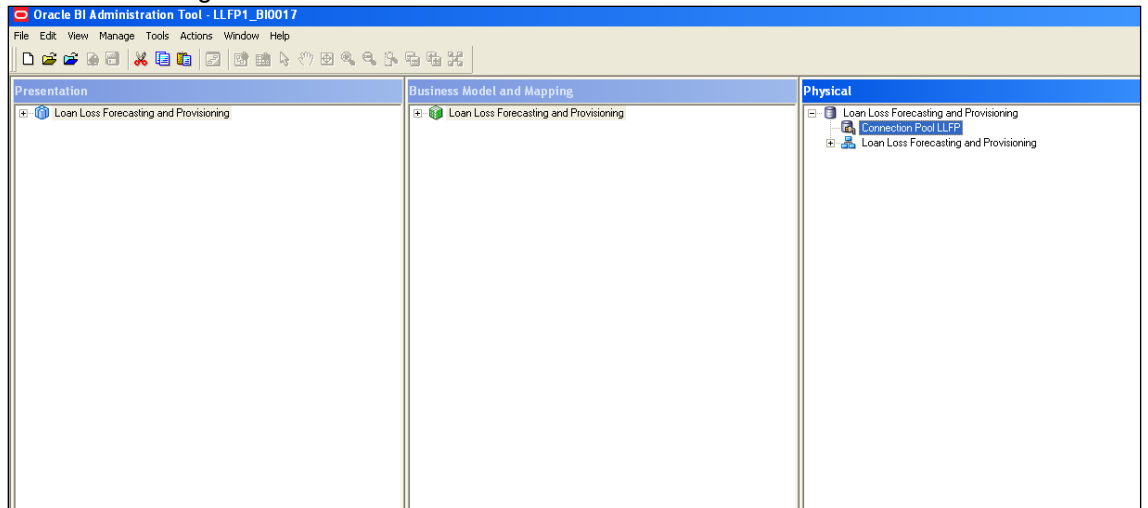
- xiii. Confirm to restart all services
- xiv. Edit the NQSCfg.INI file, found at `<Installation Path>\instances\instance1\config\OracleBIServerComponent\coreapplication_obis1` to reset the FMW\_UPDATE\_ROLE\_AND\_USER\_REF\_GUIDS = NO to YES
- xv. Add the tag `<UpdateAccountGUIDs>UpdateAndExit</UpdateAccountGUIDs>` under the `<Catalog>` tag in the instanceconfig.xml file found at `<Installation Path>\instances\instance1\config\OracleBIPresentationServicesComponent` and restart the BI Services.
- xvi. Check if all the servers are up and running.

- xvii. Edit the NQSCfg.INI file, found at *<Installation Path>\instances\instance1\config\OracleBIServerComponent\coreapplication\_obis1* to reset the FMW\_UPDATE\_ROLE\_AND\_USER\_REF\_GUIDS = YES to NO
- xviii. Remove the tag `<UpdateAccountGUIDs>UpdateAndExit</UpdateAccountGUIDs>` found under the `<Catalog>` tag in instanceconfig.xml present under the path *<Installation Path>\instances\instance1\config\OracleBIPresentationServicesComponent* and restart the BI services.
- xix. Disable the cache (cache can be enabled once the setup is moved to the production mode and on the basis of bank's requirements). To disable the cache, click on the "Capacity Management" tab in the Oracle Enterprise Manager. Select "Performance" tab within it. Click on Lock and Edit Configuration button. Un-check the option "Cache enabled". Click on Activate Changes. Restart the servers to activate changes. Please refer to the image below.

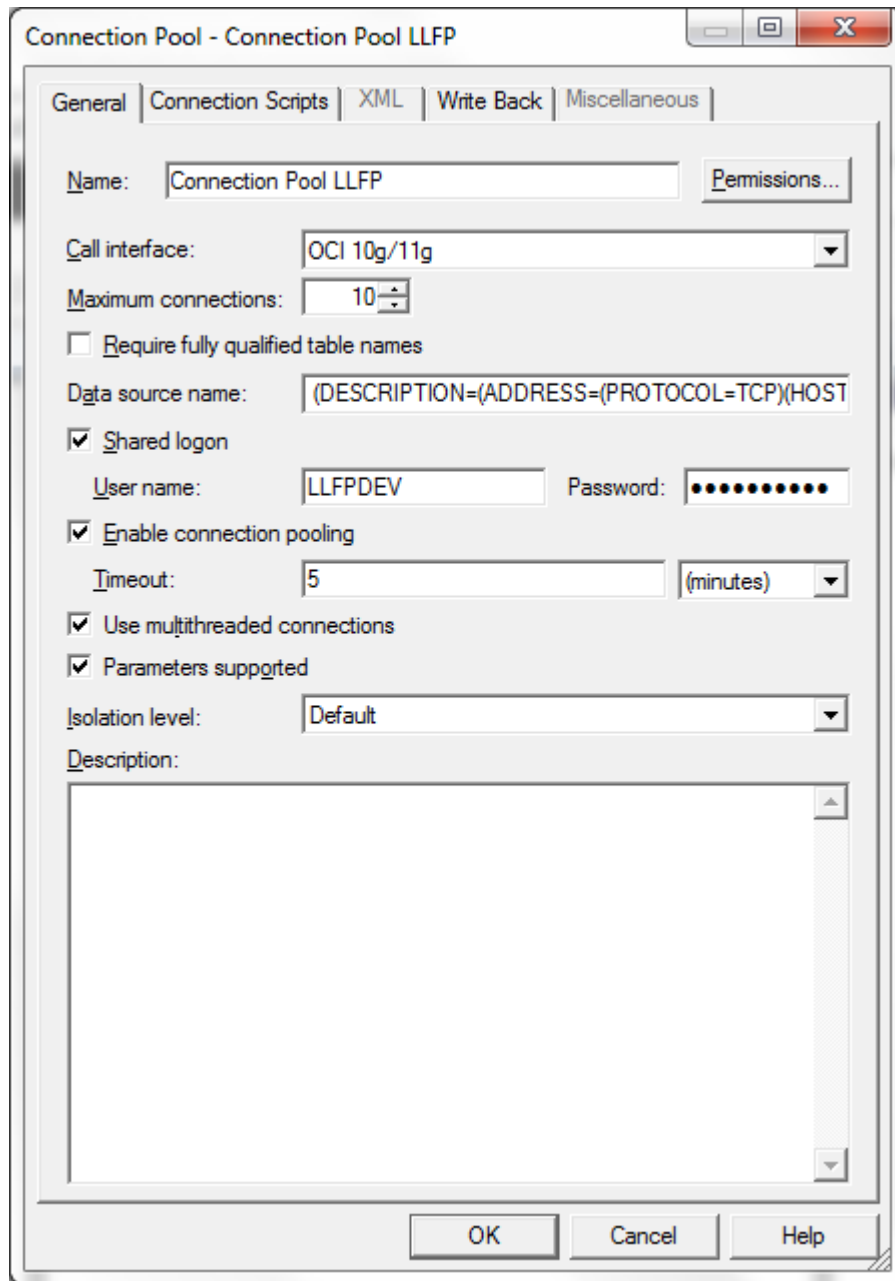


- d. On a Windows desktop, Launch start menu > All Programs > Oracle Business Intelligence > Administration. Click the "Open Offline" button. Browse and select the LLFP.rpd file, and click Open. Specify the password as **Administrator1** when prompted.

- e. Double click on “Connection Pool LLFP” in the physical layer of the RPD as shown in the diagram below:



- f. Change Data Source name, user name and password to point to the required database schema, as shown in the diagram below.



- g. Close the RPD after saving it.
- h. Redeploy the modified RPD in Enterprise Manager

#### 4.3.2 Dashboard/Answer Reports (from any client machine i.e. windows machine):

- a. Start the BI services (if not started) :
- b. Start OBIEE Catalog Manager (*Start → Programs → Oracle Business Intelligence → Catalog Manager.*)
- c. Select “Open Catalog” from File menu.
- d. Select the option “Online” for Type.

- e. Type the link for presentation services i.e. Oracle Interactive Dashboard link. for e.g. (<http://URL:PORT/analytics/saw.dll?>)
- f. Give the Administrator user Id and password, and click on OK button
- g. Click on the “Catalog Root” in the left hand pane
- h. Select the “Un-archive option” from File Menu
- i. Select the archive file “LLFP.catalog” (sent as release), copied onto the local machine as part of introduction pre-requisite step, and click on OK button
- j. Re-Start (stop and start) the BI services.

#### 4.4 Post-Configuration verification steps

- a. Log into Analytics and check if the screen looks like the diagram shown below

The screenshot displays the Oracle Loan Loss Forecasting interface. At the top, there are navigation tabs: Home Page, Trend Analysis, Transition Matrix, Comparison Analysis, Stress Test Reports, and Loss Forecast. Below the navigation, there are input fields for Execution Date (01/01/2011), Run Name (L F & P C - 27\_Jul), and Run Slay (5058), along with Apply and Reset buttons. The interface also shows metadata: Legal Entity Based: Yes, Legal Entity: Bank New York, Consolidation Type: Consolidated, and Reporting Currency: US Dollar.

The main section is titled 'Allowance for Credit Losses' and includes a 'Tabular Reports' sidebar on the left with links to various reports. The central table shows the following data:

	Current Period		Current Period Total	Previous Period		Previous Period Total
	Collectively Assessed	Individually Assessed		Collectively Assessed	Individually Assessed	
Allowance, Beginning of Period	291,992.46	286,600	578,592.46	150,072	138,245.8	288,317.8
Add: Provision for Loan Losses	68,219.81	73,737.58	141,957.39	35,146.65	36,681.12	71,827.77
Less: Net Charge Off	81,607.93	92,561.16	174,169.09	937,021.79	107,736.99	1,044,758.78
(Gross Charge Off)	168,793	178,760.29	347,553.29	92,064.93	84,892.42	176,957.35
(Recoveries)	254,226.89	41,852.69	306,189.57	19,578.51	20,912.47	40,490.98
Allowance, End of Period	143,997.96	142,994.76	286,992.72	71,830.65	69,919.32	141,749.97

Below this table is a section for 'Allowance for Credit Losses by Line of Business' with a table showing data for various business lines:

Line of Business	Carrying Cost		Allowance, Beginning of Period		Net Charge off		Allowance, End of Period		Provision	
	Current Period	Previous Period	Current Period	Previous Period	Current Period	Previous Period	Current Period	Previous Period	Current Period	Previous Period
Agency Services	121,467.31	60,944.13	106,861.62	52,210.46	27,250.49	70,264.18	53,175.16	26,844.59	24,668.68	11,935.98
Asset Management	97,665.3	52,496.73	74,451.93	38,560.53	23,115.92	65,859.94	36,084.61	18,770.68	18,229.26	8,570.89
Commercial Banking	46,407.93	25,330.11	28,452.01	16,147.99	12,432.41	7,069.86	15,516.84	7,021.15	8,974.59	4,104.94
Corporate Finance	99,947.5	54,177.38	95,285.31	47,016.96	23,278.35	80,156.99	43,204.74	21,913.6	20,898.52	10,821.91
Payment and Settlement	34,893.19	16,885.49	27,318.64	11,497.3	9,795.01	5,951.65	13,267.14	5,575	7,502.9	-4,315.81
Retail Banking	116,812.28	64,818.45	93,118.71	45,720.92	28,376.63	14,445.44	47,514.85	24,380.01		

- b. Click on each of the dashboard links, and check if all the links are visible

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



## Installation Manual

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Installation Manual  
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Oracle Financial Services Loan Loss Forecasting and Provisioning, Release 1.5.1.0.0  
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