

FCIS Database Setup
Oracle FLEXCUBE Investor Servicing
Release 12.0.3.0.0
[April] [2014]



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1. Installing Oracle FLEXCUBE Database

1.1 Introduction

Oracle FLEXCUBE database can be installed in one of the following methods.

- Import full dump – Import the Oracle FLEXCUBE objects into an empty schema using full dump. This is a manual activity.
- From Shipment Media – Load the Shipment Mediaobjects into an empty schema using Installer.
- Clone database or template based setup – Clone the database using Installer.

These methods are discussed in detail under the following heads.

1.2 Creating Schema by Importing Full Dump

Under this method, you need to manually import the Oracle FLEXCUBE DMP file into the Oracle FLEXCUBE schema. This can be done using the following command.

```
$ imp user_name/password file = dmp_file_name.dmp full = Y commit = Y log = imp.log  
compile=n
```

Post Import Activities

Once the DMP file is imported, you need to carry out the following activities:

- Enabled all triggers by running the procedure 'pr_instlr_post_import.prc' located under the folder 'InstallOptions\Database\Common'
- Update STTM_BANK with auto_gen_cif='N'
- Update the following tables:
 - actb_daily_log
 - bktb_schema_defaults
 - dstb_maint, ictb_acc_action
 - ictb_action_log, ictb_resolution_error
 - lmtb_offline_nodes, lmtb_offline_utils
 - mstb_current_msg_ind_out
 - mstb_dly_msg_in
 - mstb_dly_msg_out
 - mstm_mcs
 - mstm_undo
 - sttm_branch_node
 - sttm_branch
 - sttm_customer

Set node as the connection string for the above tables.

1.3 **Creating Schema from Shipment Media**

Under this method, you need to create the schema from the Shipment Media.

1.3.1 **Loading from Shipment Media**

You have an option of loading both host and branch objects together. Database installation includes the provision of details of the schema to connect and the location of the source objects. The objects of the selected modules are compiled as explained below.

Source input for installer for DB setup

Copy the folder 'MAIN' from the shipment media to a folder in the local system.

Eg: D:\source\MAIN

Further, copy the folder 'ELCM' from the shipment media to a folder in the local system.

Eg: D:\source\ELCM

The folder to which you have copied the sources can be the source to the Installer.

Note: After copying all the sources from shipment media to a folder in the local system, ensure that the folder containing those has full rights for that user.

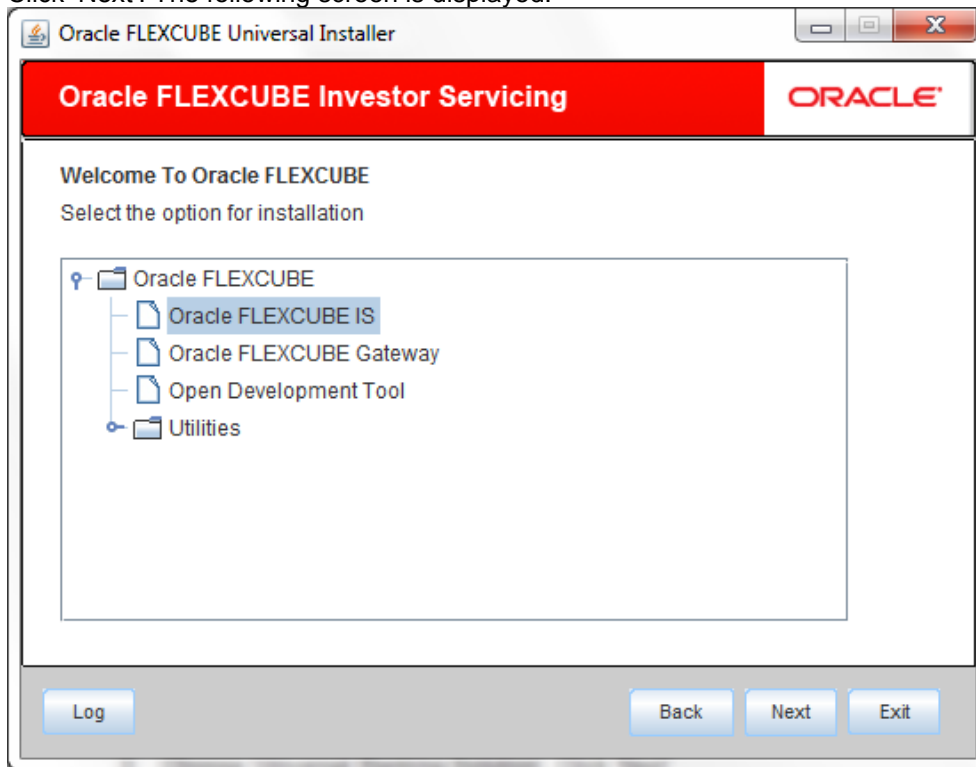
It is not mandatory to copy the sources to local system. You may also directly refer the Installer to the shipment media.

1.3.1.1 **Loading Objects from Shipment Media**

The steps to load objects from the Shipment Media are given below:

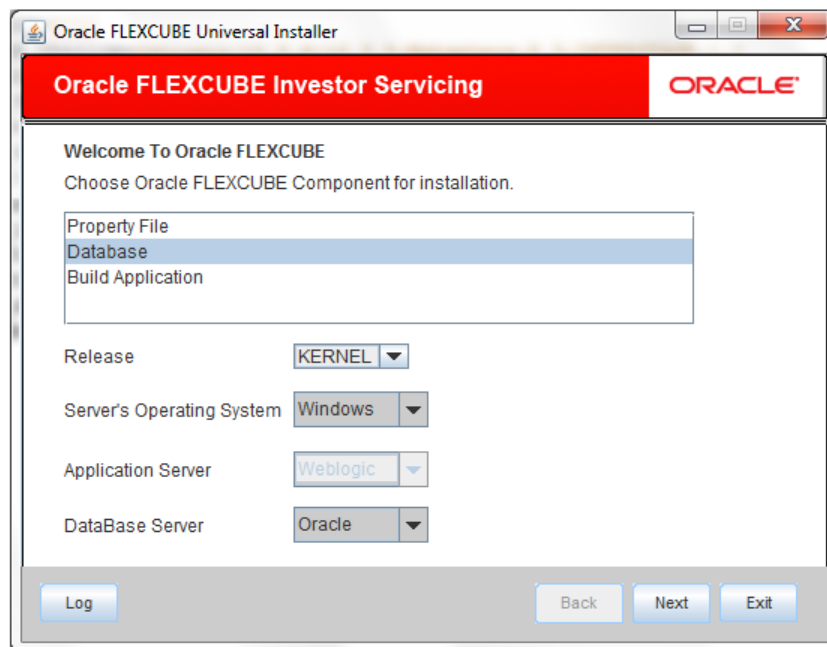
1. Launch Oracle FLEXCUBE Investor Servicing Installer.

Click 'Next'. The following screen is displayed.



2. Choose 'Oracle FLEXCUBE IS'. Click 'Next'.

The following screen is displayed:



3. Choose 'Database Setup'.

4. Specify the following details:

Release

Specify the release which you want to install.

Server's Operating System and Version

Specify the server's operating system in which you are installing Oracle FLEXCUBE.

Application Server and Version

Specify the application server on which you are installing Oracle FLEXCUBE.

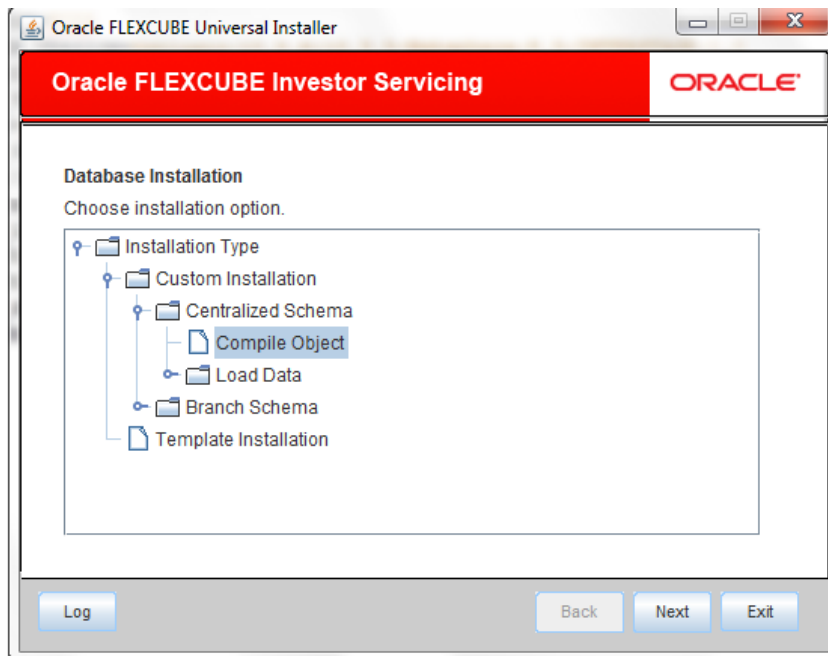
Database Server and Version

Specify the database server on which you are installing Oracle FLEXCUBE. Once you have specified the above details, click 'Next'. The following screen is displayed:

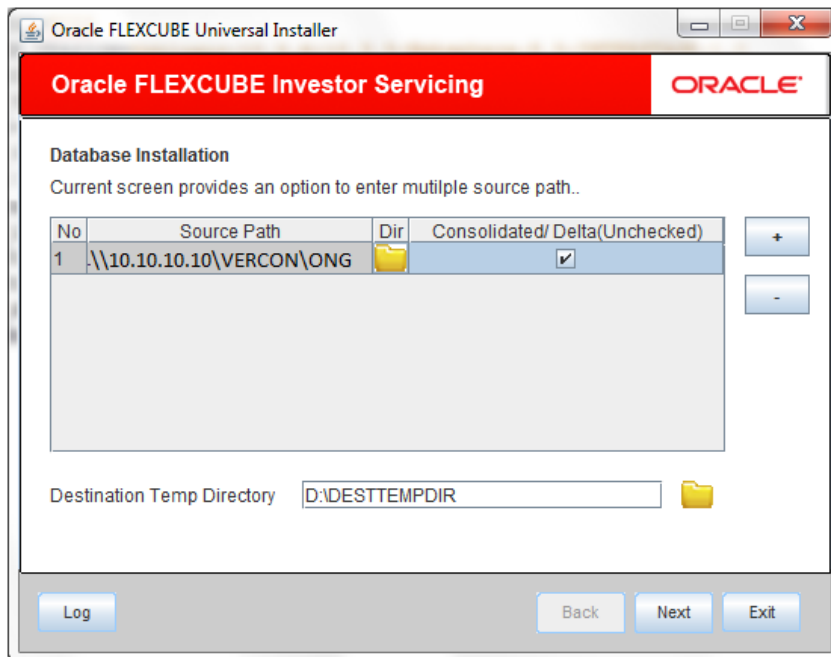
The Oracle FLEXCUBE Universal Solutions installer supports custom installation of Oracle FLEXCUBE in two methods:

- Compile objects and load static data into the database
- Load objects and data by importing data and objects from the import file

1. Select the installation type 'Custom Installation'.



5. Select 'Compile Objects' under 'Custom Installation' and click 'Next'. The following screen is displayed.



6. Specify the following details:

Source Path

Specify the source directory location. The source directory should have the 'MAIN' folder and the contents. Use the directory icon under Dir to browse the source directory.

Destination Temp Directory

Specify the destination directory. Use the directory icon to browse the destination directory.

Consolidated

Check this box if you are going for a consolidated installation.

In case you need to compile a single patch into the database, you can leave this box unchecked and specify the source of the patch in the field 'Source Directory'.

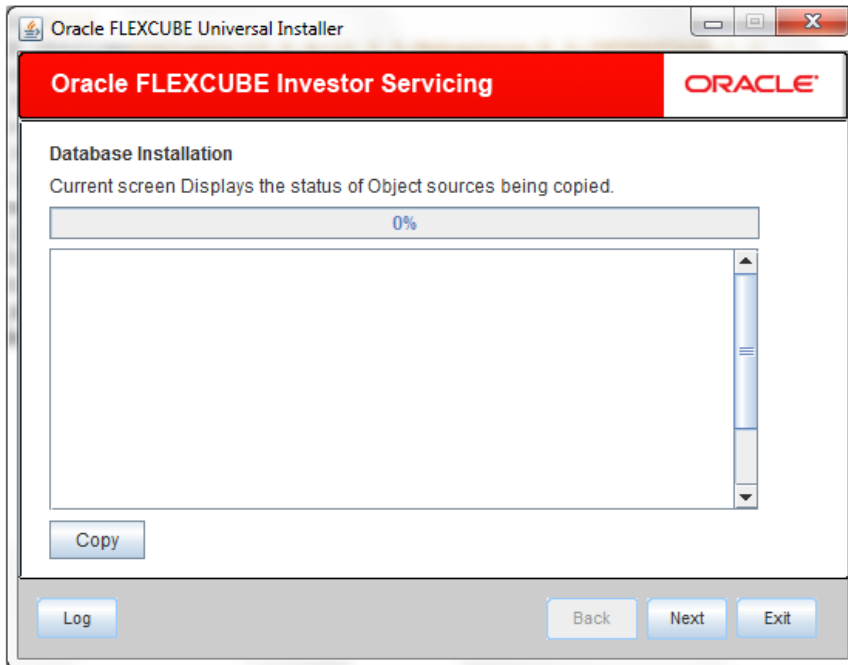
'+' Button

In case of Cluster and Patch installations, you can install the files from multiple source directories by clicking this button.

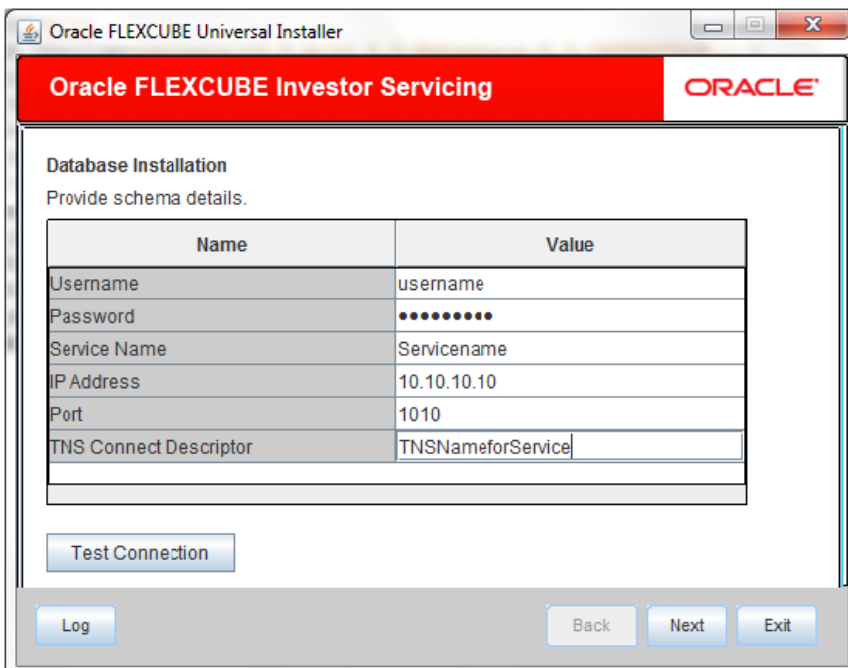
'-' Button

You can remove the files from multiple source directories by clicking this button.

7. Click 'Next' to start database objects source copy.



8. The Installer will copy the source files from the source directory to the destination directory. The files are taken from this location for compilation.
9. Wait until all the files are copied. Once the copy process is completed, the Installer navigates you to the following screen.



10. Specify the following schema details:

User Name

Specify the user name to access the schema.

Password

Enter the schema password.

Service Name

Provide service name of Database.

TNS Connect Descriptor

Specify a valid connect string that contains the details for database connectivity.

IP Address

Specify the IP address of the system where the database schema is installed.

Port

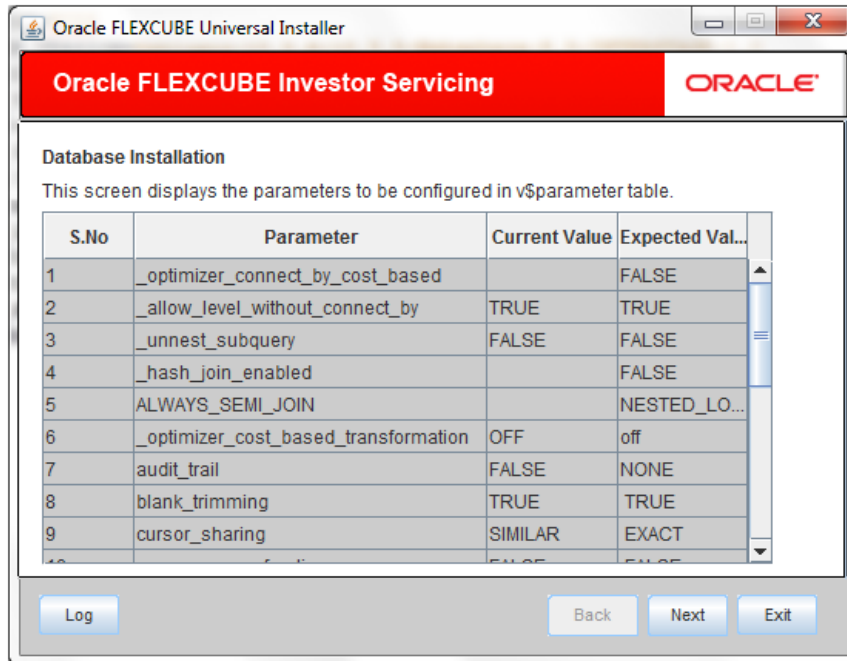
Specify the port number.

2. Once you have entered the details, you can test the database schema connection using 'Test Connection' button.

Note:

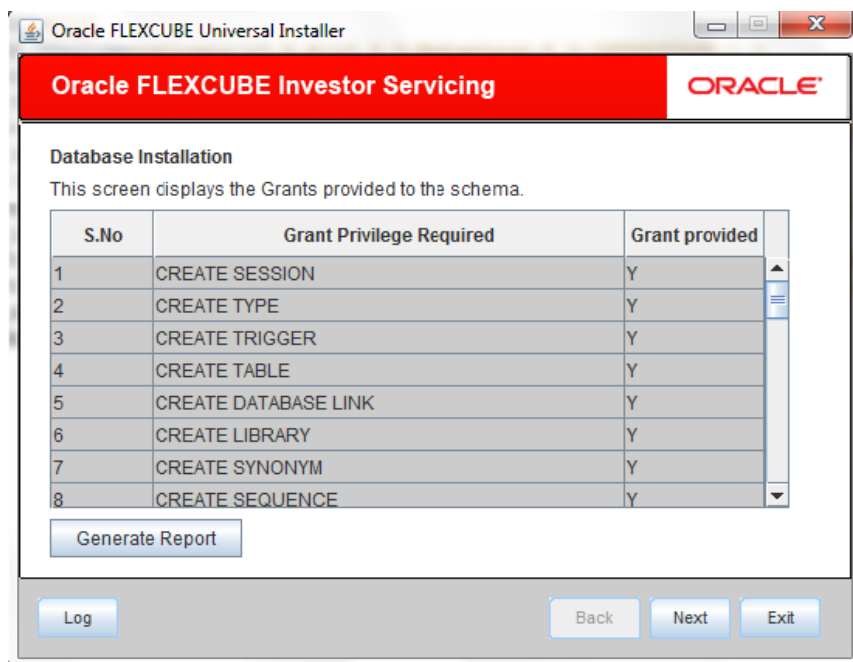
- If the connection is established, the installer displays a message 'Connection Successful'.
- If there is an error in establishing the connection, the system displays the message 'Invalid DB Credentials'.
- If the TNS entry is not proper, the installer displays the message 'TNS entries are not proper'.

11. After testing the connection successfully, click 'Next'. The following screen is displayed.



12. This screen displays the parameter details of the database. This is for information purpose. You cannot modify the parameters from this screen.

13. Click 'Next'. The following screen is displayed.

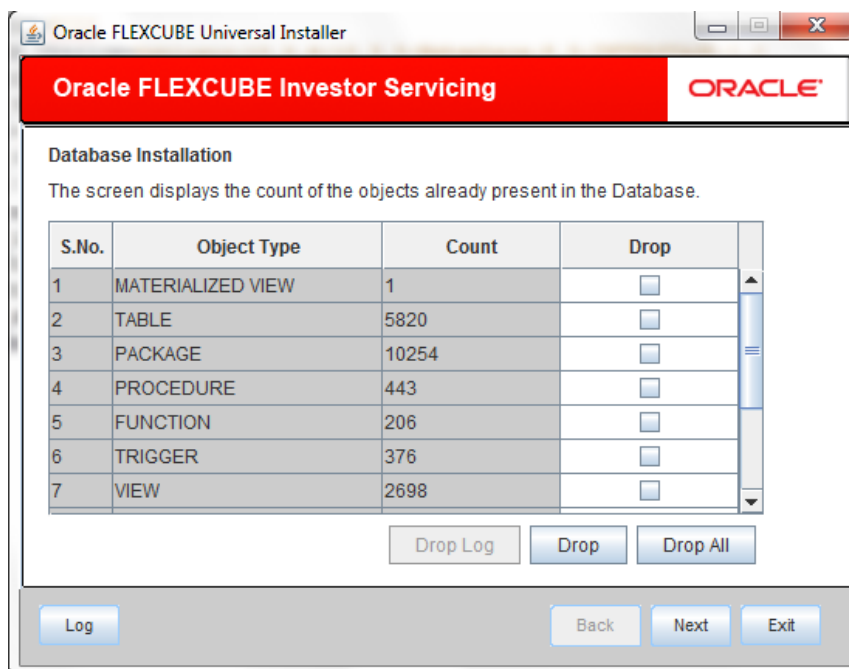


14. This screen displays the grants provided to the schema. If object compilation is required and the privilege is not given, then you can find that out from this screen. This is for information purpose.

15. If you click 'Generate Report' button, in the 'Logs' folder, the installer creates an SQL file 'grantScript.sql' containing the script for granting the privileges. You can use this file to get the access.

Note: Only the sys user can execute the file 'grantScript.sql' for granting privileges.

16. The following screen is displayed.



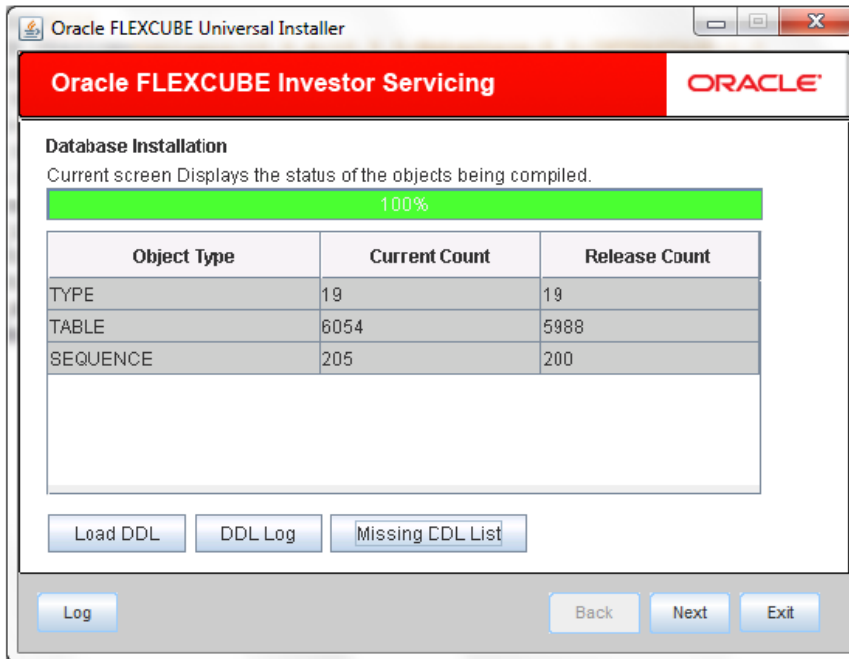
17. You can select the objects to be dropped and click 'Drop' button to drop the selected objects. As you drop the objects, the count in this screen is updated. You can drop all the objects at once using 'Drop All' button.

18. Click 'Drop Log' button to view the drop log.

Note: The details of the drop process are logged in a file 'Drop_All.log' in the folder <Destination Folder>/DBLogs.

19. If all the objects do not get dropped at the first time, you can drop them again.

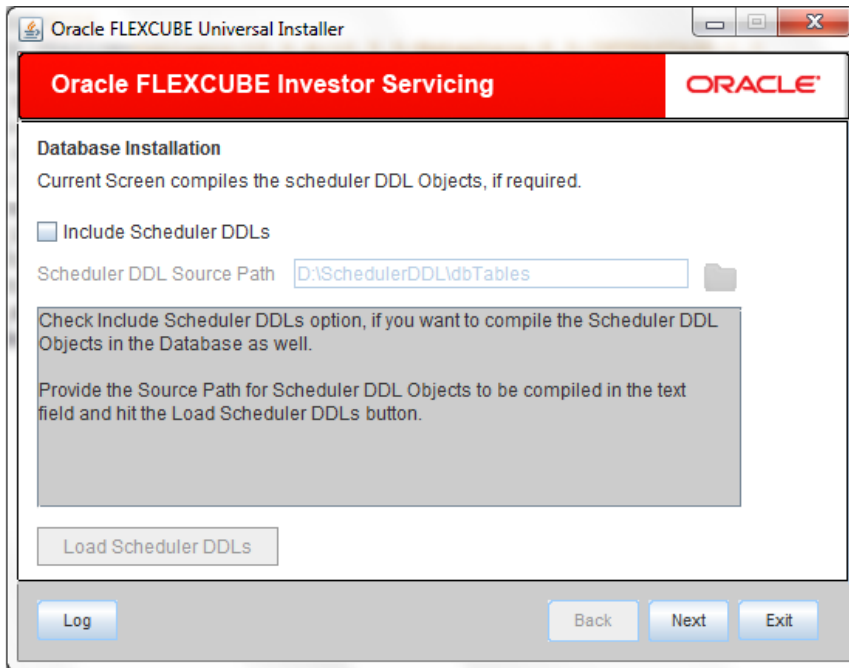
20. Click 'Next' button, the following screen is displayed.



21. The table, sequences and type objects are compiled and the count is updated.
22. You can verify the DDL objects compilation by comparing the current count and the release count. The release count is the number of files in the temporary folder to which the files are copied.
23. Click 'DDL Log' button to view the DDL logs. The log file 'LoadDDL.log' will be available in the destination directory under the folder 'DBLogs'.
24. Click 'Missing DDL List' button to view the list of DDL files that are available in the source directory, but not in the schema. The list 'FilesNotCompiled_DDLObj.txt' will be available in the destination directory under the folder 'DBLogs'.

Note: Note the following:

- You can rectify the missing DDL objects and recompile them either manually or by redoing the DDL compilation using Installer.
 - When you load DDL using this option, the Installer creates a table by name 'BASE_SQL_OBJ' in the schema. This table is not from the source. This is a table specific to the Installer that tracks the missing objects against the objects in the shipment media.
25. Click 'Next'. The following screen is displayed.



26. Specify the following details:

Include Scheduler DDLs

Check this box to include scheduler DDLs. If you do not need to include the scheduler DDLs, leave this field unchecked.

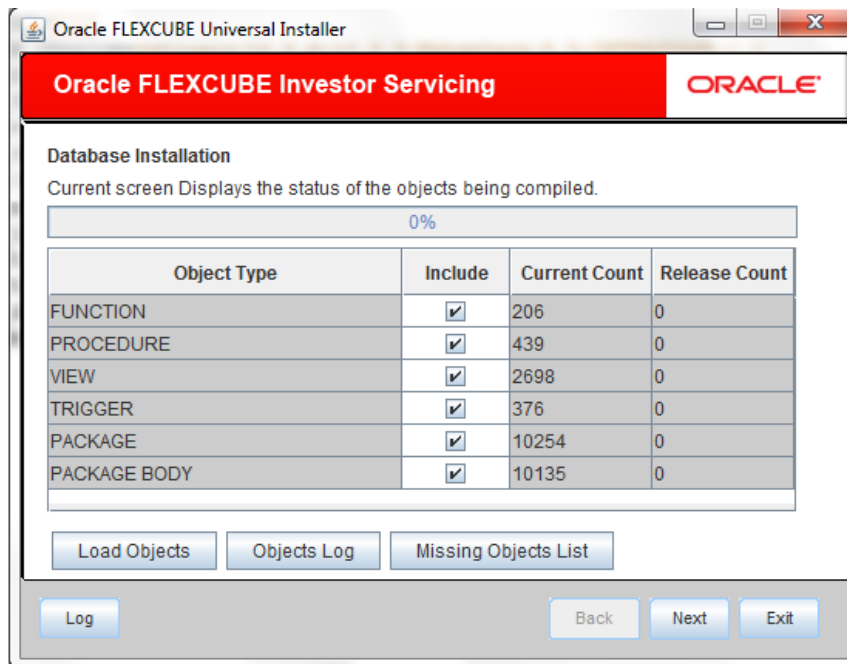
Scheduler DDL Source Path

Specify the location of the 'tables_oracle.sql' folder, which is available in the extracted 'quartz.jar'.

Note: Quartz is an open source job scheduling service. You can use Quartz to create schedules for executing jobs whose tasks are defined as standard Java components. You first need to download the file 'quartz.jar' and extract it to the local machine. In the extracted folder, find the location of the folder 'dbTables' and enter that path in the field 'Scheduler DDL Source Path'.

27. Click 'Load Scheduler DDLs' to compile the files.

28. Click 'Next'. The following screen is displayed.



29. Check the objects that you need to load.

30. Click 'Load Objects' button. The installer loads the functions, procedures, views, triggers and packages as per your selection and compiles them.

Note: You can verify the application objects compilation by comparing the count shown in this screen with the release count.

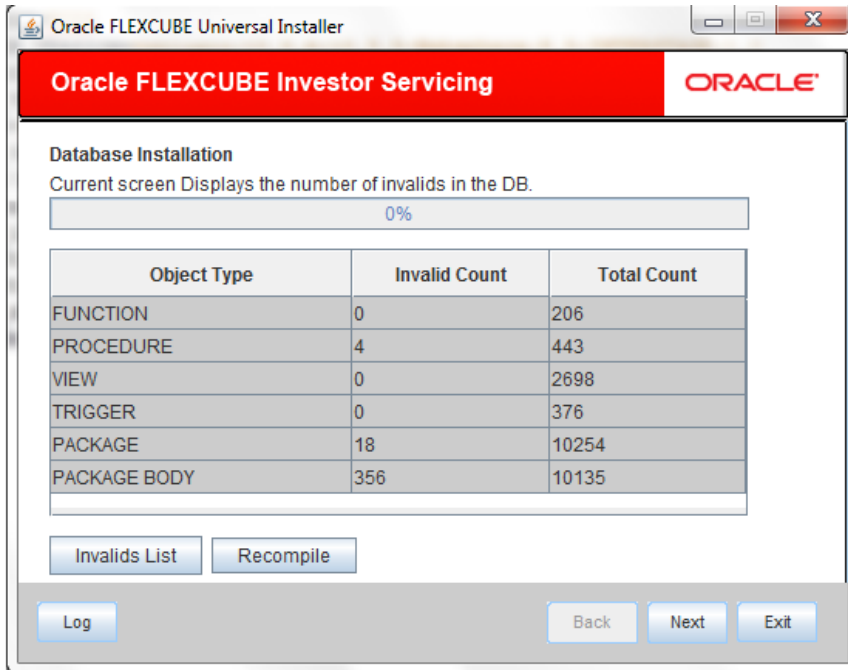
31. Click 'Objects Log' button to view the log. The log file 'LoadAppObj.log' will be available in the destination directory under the folder 'DBLogs'.

32. Click 'Missing Object List' button to view the list of application object files that are available in the source directory but not in the schema. You can view this list in the file 'FilesNotCompiled_APPObj.txt' available in the destination directory under the folder 'DBLogs'.

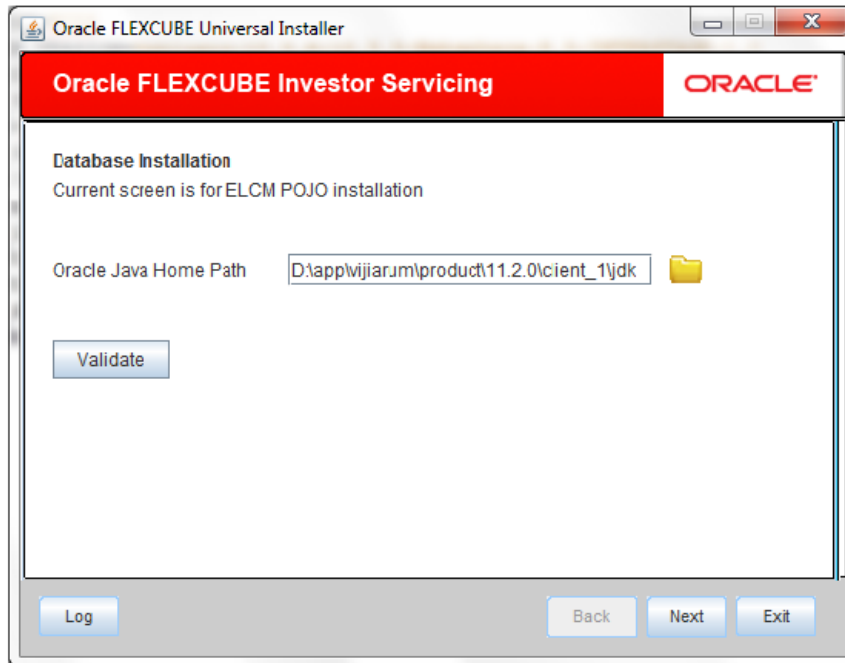
Note: You can rectify the missing objects and recompile them either manually or by redoing the Application object compilation using Installer.

33. The installer loads the DDL and application objects of the selected modules.

34. You can view the list of invalid objects in the following screen.



35. Click 'Invalid List' button to view the count of invalid objects. The installer creates the file 'InvalidList.txt' in the destination directory under the folder 'DBLogs'.
36. You can use the 'Recompile' button to do a cyclic recompilation. This will reduce the invalid objects count. The Installer allows you to use 'Recompile' button multiple times, in order to reduce the invalid objects count.
37. You can view the recompile logs by clicking 'Log' button. The installer creates a file 'recompile.log' in the destination directory under the folder 'DBLogs'.
38. Click 'Next'. The following screen is displayed. This starts the ELCM POJO installation process.



Note:

- You need to set the following two environment variables for the successful compilation of ELCM POJO JAR files.
 - ORACLE_HOME (Eg: 'D:\app\ishroy\product\11.2.0\client_1')
 - Path (append the path variable with ORACLE_HOME\BIN (Eg: 'D:\app\ishroy\product\11.2.0\client_1\BIN'))

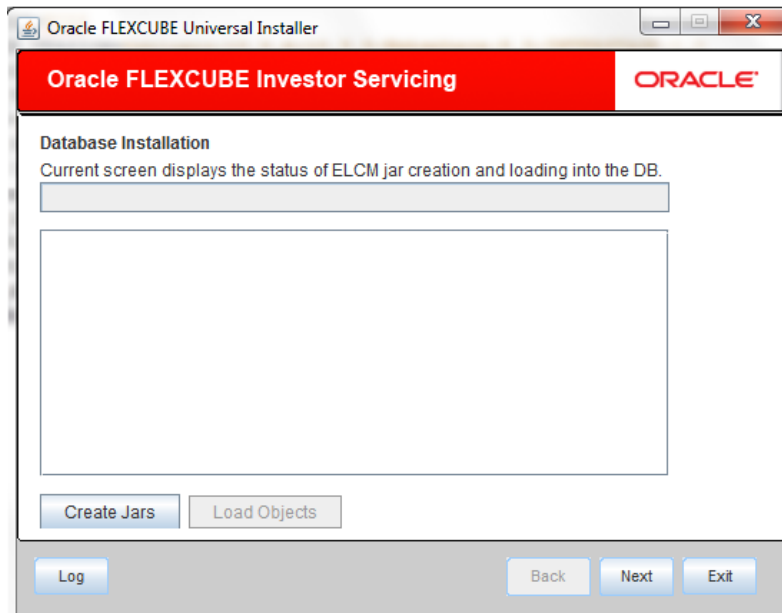
39. Specify the following details:

Oracle Java Home Path

Specify the Oracle Java home location. This is required for ELCM POJO compilation.

You can validate the Oracle Java home path by clicking 'Validate' button.

40. Click 'Next'. The following screen is displayed.

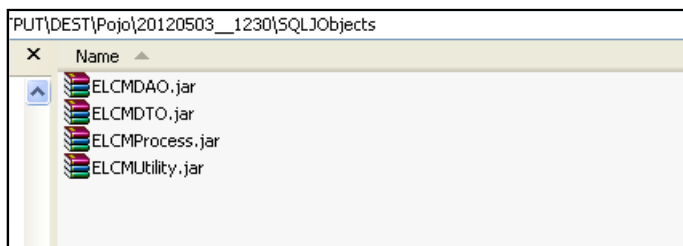


41. This screen displays the status of ELCM JAR file creation. The following JAR files are created in the folder 'SQLJObjects' inside the destination directory.

- ELCMDAO.jar
- ELCMDTO.jar
- ELCMProcess.jar
- ELCMUtility.jar

Example

If the destination directory is 'PUT\DEST\Pojo\20120503_1230', then the JAR files will be created as shown below:



42. Click 'Load Objects' button to load the JAR files to the database.

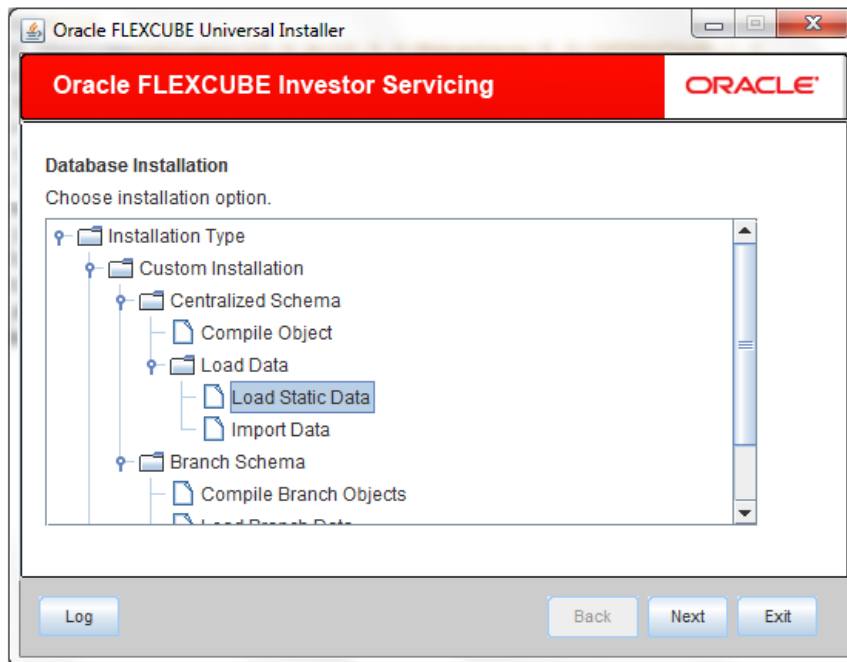
1.4 **Loading Static Data**

Once the objects are loaded, you need to insert data into the tables.

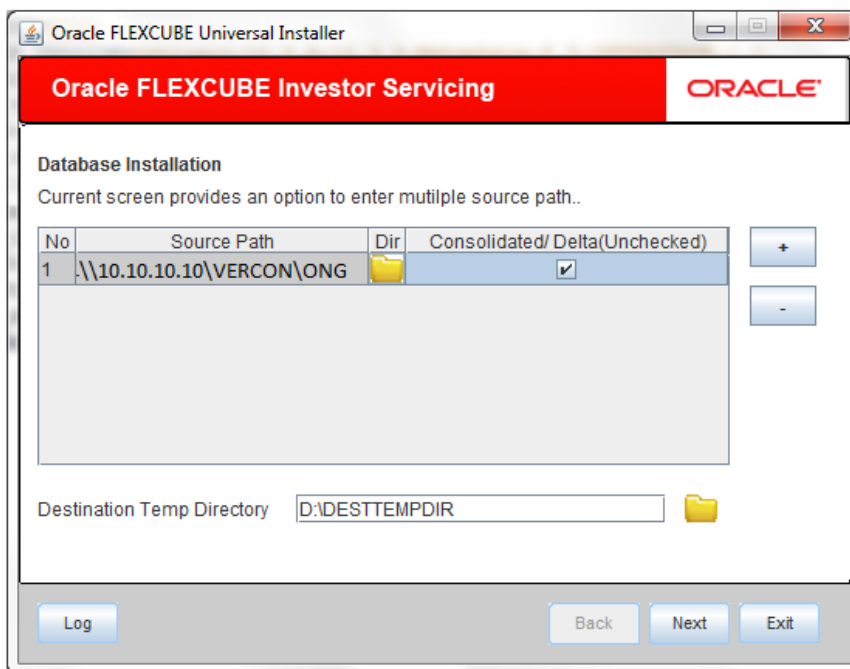
This section explains the steps to load static data into the database and the basic setup to be done.

Follow the steps given below:

1. Launch Oracle FLEXCUBE Investor Servicing Installer.



2. Select 'Load Static Data' and click 'Next'. The following screen is displayed.



3. Specify the following details:

Source Path

Specify the source directory location. The source directory should have the 'MAIN' folder and the contents. Use the directory icon to browse the source directory.

Destination Temp Directory

Specify the destination directory. Use the directory icon to browse the destination directory.

Consolidated

Check this box if you are going for a consolidated installation.

In case you need to compile a single patch into the database, you can leave this box unchecked and specify the source of the patch in the field 'Source Directory'.

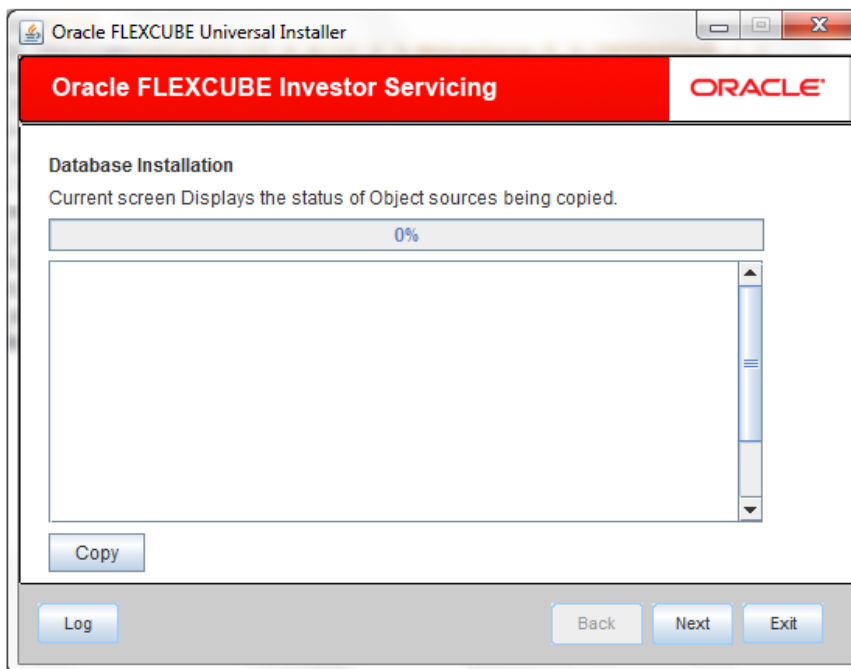
'+' Button

In case of Cluster and Patch installations, you can install the files from multiple source directories by clicking this button.

'-' Button

You can remove the source directories by clicking this button.

4. Click 'Next'. The following screen is displayed.



5. Click 'Copy' button. The Installer will copy the source files from the source directory to the destination directory. The files are taken from this location for compilation.
6. Wait until all the files are copied. Once the copy process is completed, the Installer navigates you to the following screen.

Name	Value
Username	username
Password
Service Name	Servicename
IP Address	10.10.10.10
Port	1010
TNS Connect Descriptor	TNSNameforService

7. Specify the following schema details:

User Name

Specify the user name to access the schema.

Password

Enter the schema password.

Service Name

Provide service name of Database.

TNS Connect Descriptor

Specify a valid connect string that contains the details for database connectivity.

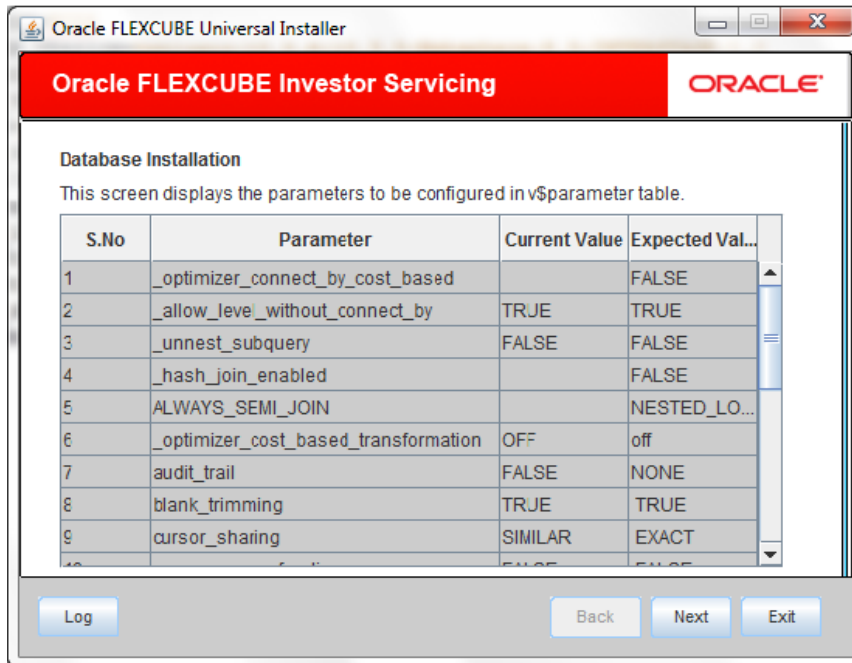
IP Address

Specify the IP address of the system where the database schema is installed.

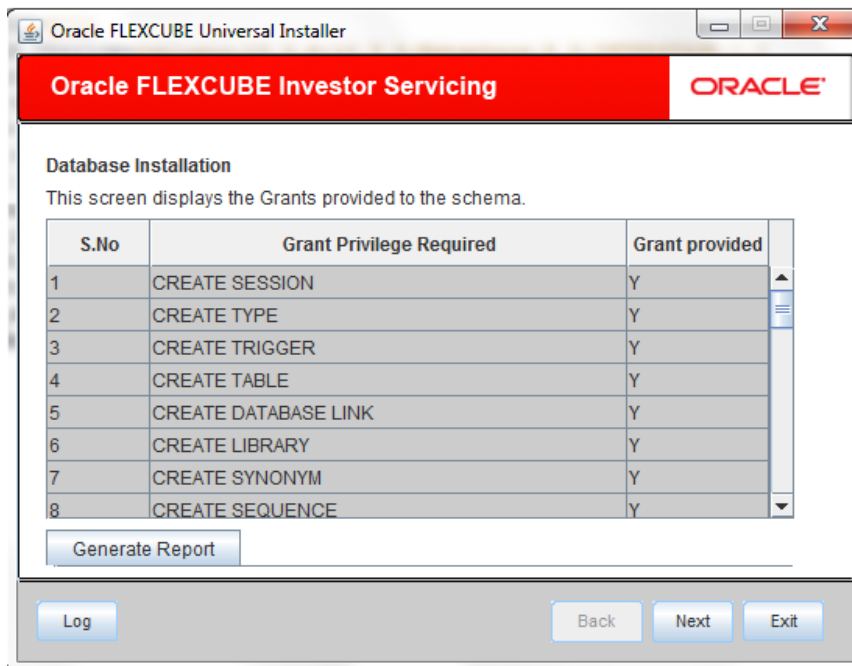
Port

Specify the port number.

1. Once you have entered the details, you can test the database schema connection using 'Test Connection' button.
2. After testing the connection, click 'Next'. The following screen is displayed.

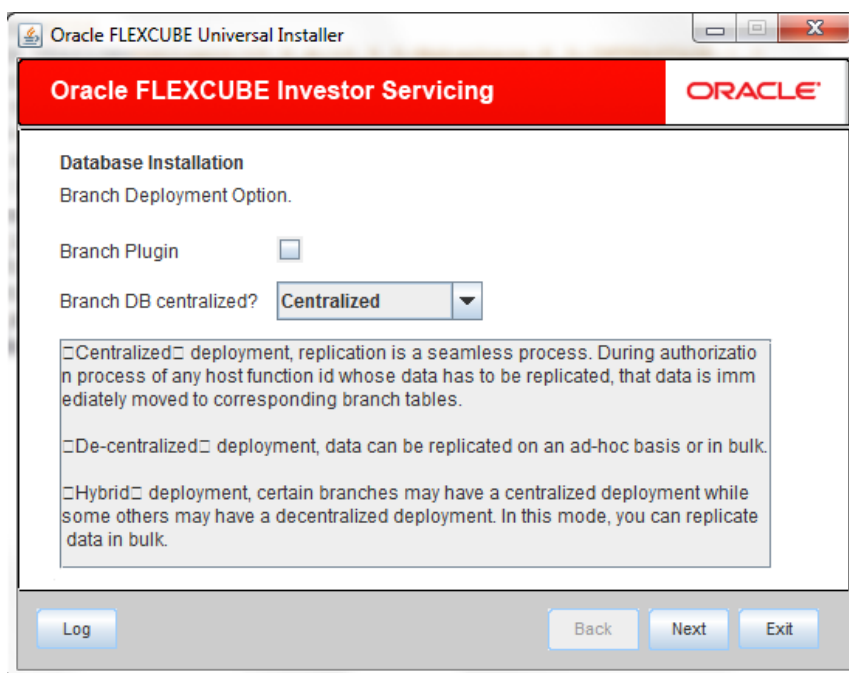


8. This screen displays the parameter details of the database. This is for information purpose. You cannot modify the parameters displayed here.
9. Click 'Next'. The following screen is displayed.



10. This screen displays the grants provided to the schema. If object compilation is required and the privilege is not given, then you can find that out from this screen. This is for information purpose.

11. Click 'Next'. The following screen is displayed.



12. Specify the following details:

Branch Plug-in

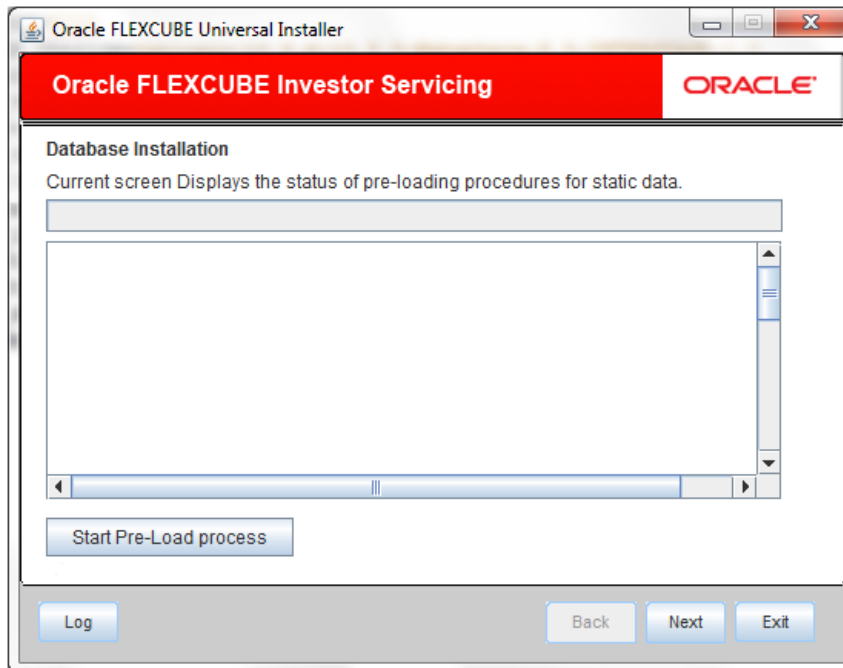
Check this box to include branch plug-in. If you check this box, you need to specify the deployment mode in the field 'Branch DB Centralized'. If you do not need branch plug-in, leave this field unchecked.

Branch DB Centralized?

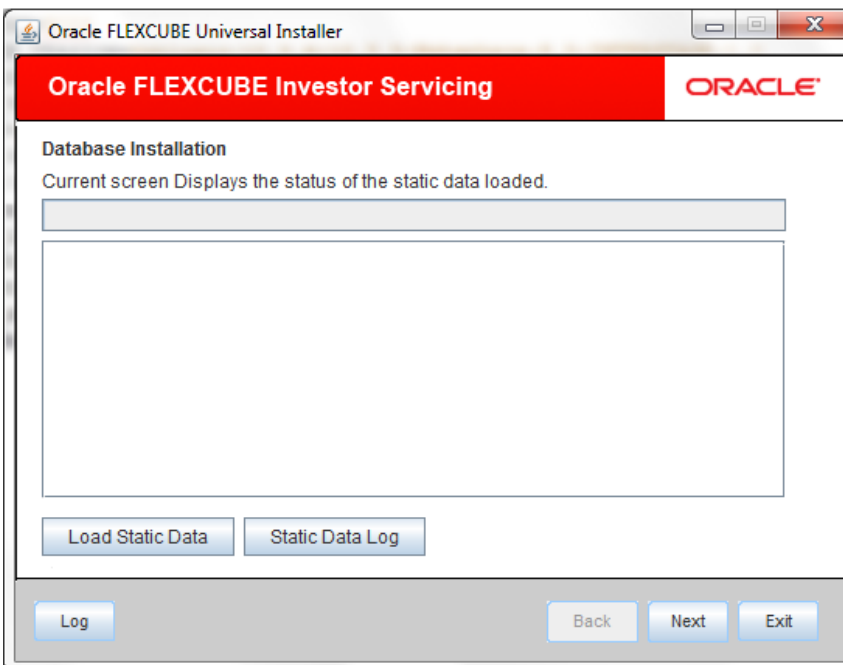
Specify the deployment mode. You can choose one of the following modes:

- Centralized
- Decentralized
- Hybrid

Once you have specified the above details, click 'Next'.



13. Click 'Start Pre-Load Process' button. The installer executes the procedures required before beginning static data compilation. All the triggers will be disabled during this process.
14. Click ' Log' button.The installer executes the process log .
15. Once the process is completed, you will see the following screen.



16. You can view the static data log by clicking 'Static Data Log' button.
17. Click 'Next'. The following screen is displayed.

Oracle FLEXCUBE Investor Servicing **ORACLE**

Basic Setup Details
Parameters of CSTB_PARAM table in the Database.

S.No.	Param Name	Param value
1	EXCEL_FORMAT	xls
2	CUSTOMER_LIMIT_CCY	USD
3	ELCM_SOURCE	ELCM
4	SMTP_PORT	
5	ELCM_POSS_URL	
6	ELCM_LOG_TXN	Y
7	ELMS_USER_ID	SYSTEM
8	PROPOGATION OF LOH	Y

Log Back Next Exit

18. Here, you can do the basic maintenances for the table 'CSTB_PARAM'.

19. Click 'Next'. The following screen is displayed.

Oracle FLEXCUBE Investor Servicing **ORACLE**

Basic Setup Details
Basic Details for bank and branch

Bank Code

Bank Name

Branch Code

Log Back Next Exit

20. Here you can do the basic maintenances for the tables 'STTM_BANK' and 'STTM_BRANCH'.

21. Click 'Next'. The following screen is displayed.

Oracle FLEXCUBE Universal Installer

Oracle FLEXCUBE Investor Servicing ORACLE

Basic Setup Details

Basic details about dates. The Date Format must be yyyy/mm/dd.

Input Date: 2013/08/14

Current Business Date: 2013/08/14

Previous Business Date: 2013/08/13

Next Business Date: 2013/08/15

Log Back Next Exit

22. Here, you can do the basic maintenances for the table 'STTM_DATES'.

23. Click 'Next'. The following screen is displayed.

Oracle FLEXCUBE Universal Installer

Oracle FLEXCUBE Investor Servicing ORACLE

Basic Setup Details

Currency Details.

Local Currency Code: USD

Local Currency Name: US Dollar

Current Fin Cycle: 2011 ▼

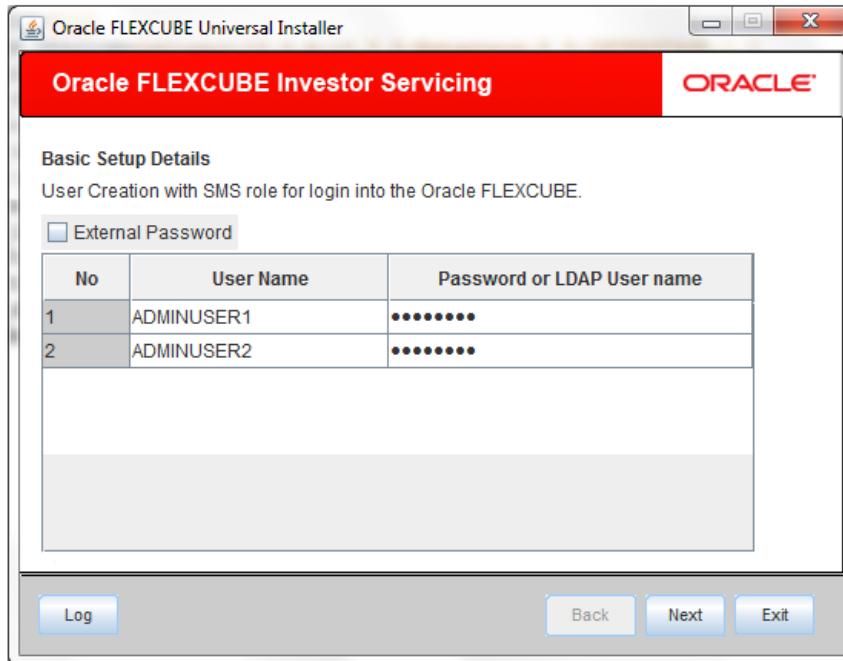
Current Fin Period: QT1 ▼

ISO Currency Code: 294

Log Back Next Exit

24. Here, you can do the basic maintenances for the table 'CYTM_CCY_DEFN'.

25. Click 'Next'. The following screen is displayed.



26. Here you can do the basic maintenances for the table 'SMTB_USER' and 'SMTB_USER_ROLE'.

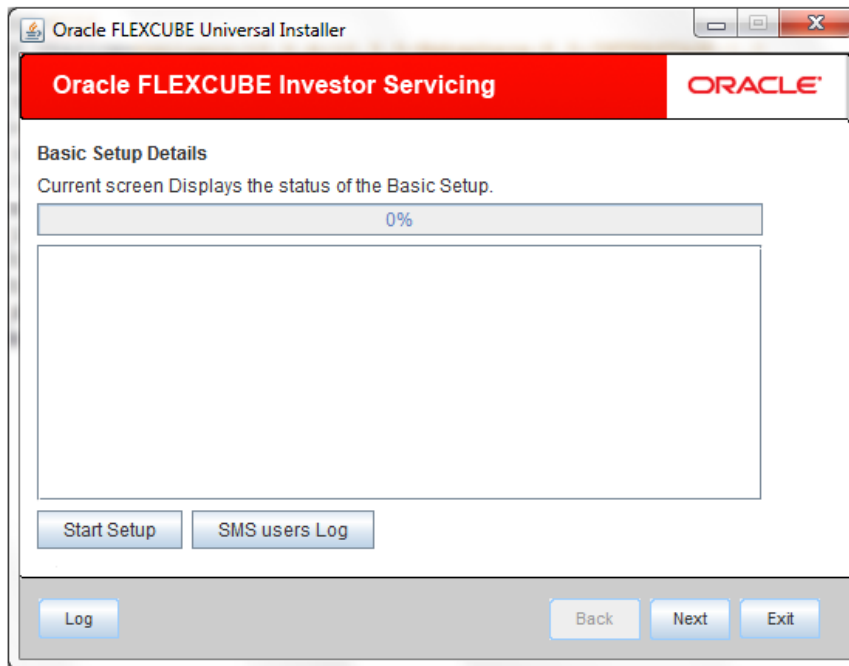
Password

Specify the password. You can use the following characters in the password:

- Alphabets in uppercase
- Alphabets in lowercase
- Numerals

Note: You cannot use '_' (underscore) in the password.

27. Click 'Next'. The following screen is displayed.



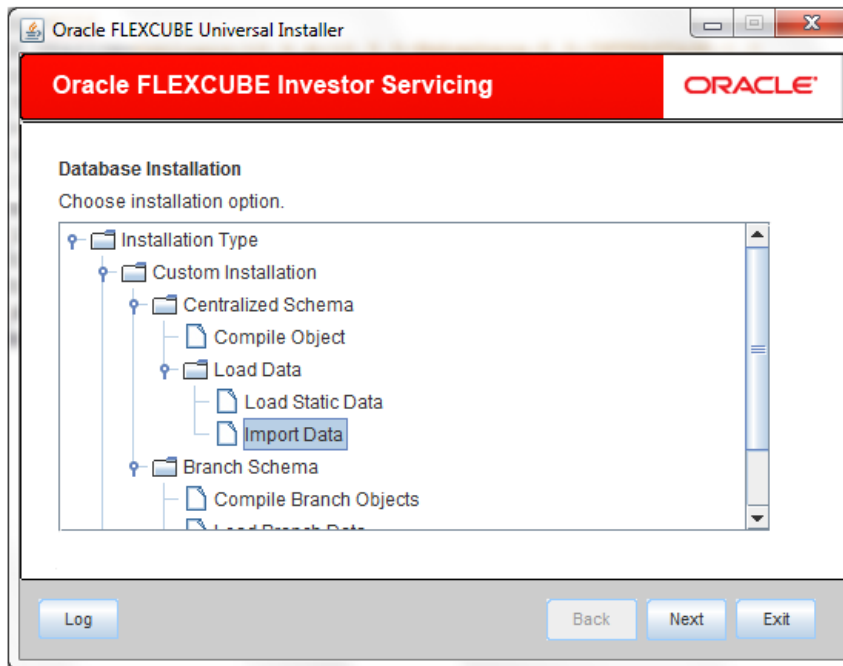
28. Click 'Start Setup' button to compile the entries.

29. This completes the static maintenance and basic setup process.

1.4.1 Import Database Installation

Data import is an alternative method to load the static data into the database. This section describes the process of importing data for installation.

1. Launch Oracle FLEXCUBE Investor Servicing Installer.



2. Select 'Import Data' and click 'Next'. The following screen is displayed.

Oracle FLEXCUBE Universal Installer

Oracle FLEXCUBE Investor Servicing ORACLE

Database Installation
Provide schema details.

Name	Value
Username	username
Password	*****
Service Name	ServiceName
IP Address	10.10.10.10
Port	1010
TNS Connect Descriptor	TNSNameforService

Test Connection

Log Back Next Exit

3. Specify the following schema details:

User Name

Specify the user name to access the schema.

Password

Enter the schema password.

Service Name

Provide service name of Database.

TNS Connect Descriptor

Specify a valid connect string that contains the details for database connectivity.

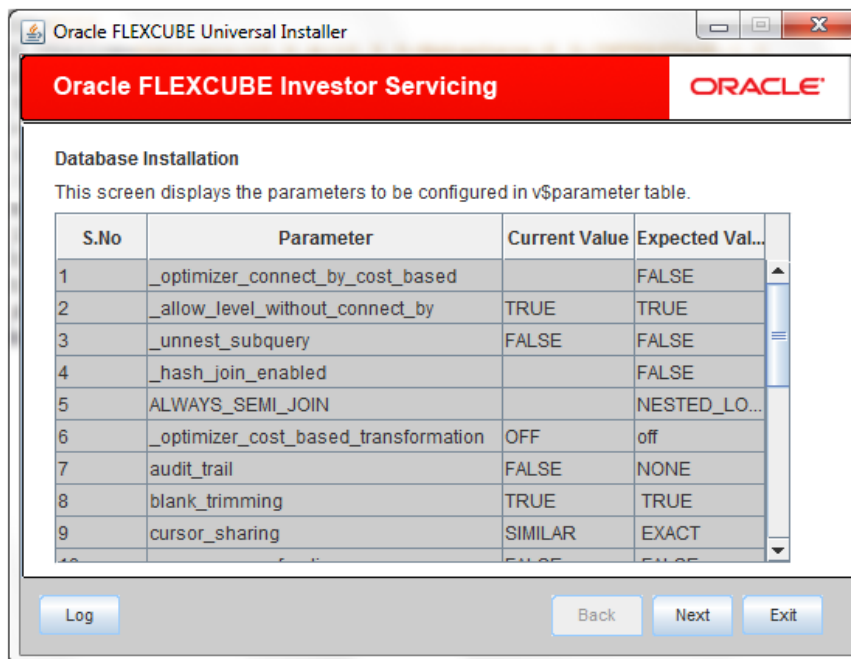
IP Address

Specify the IP address of the system where the database schema is installed.

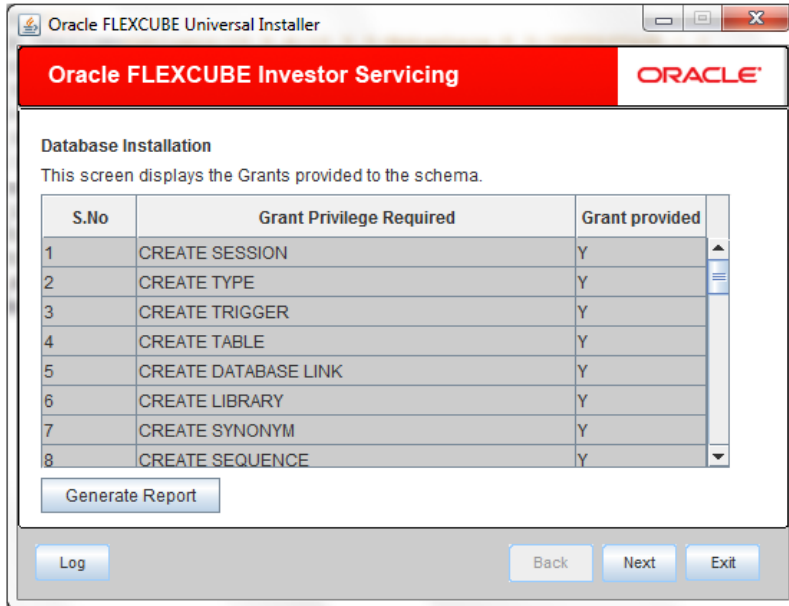
Port

Specify the port number.

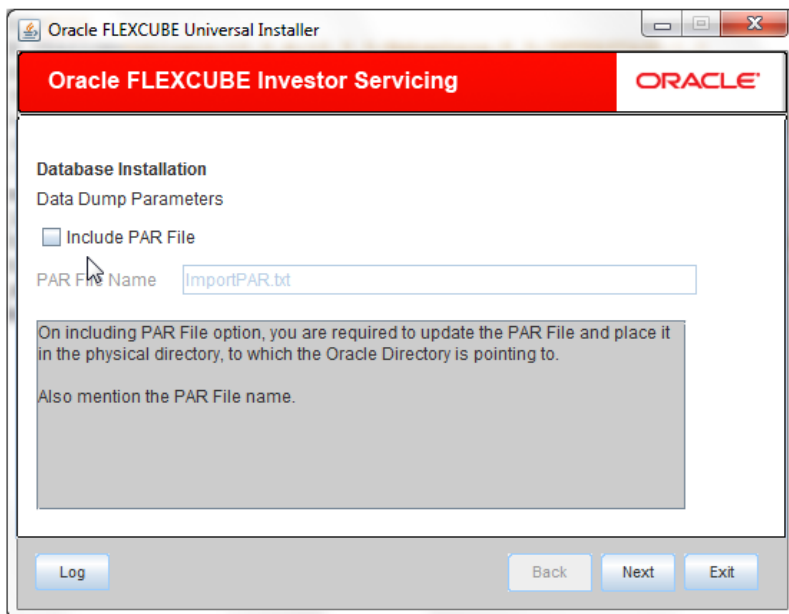
- Once you have entered the details, you can test the database schema connection using 'Test Connection' button.
- After testing the connection, click 'Next'. The following screen is displayed.



- This screen displays the parameter details of the database. This is for information purpose.
- Click 'Next'. The following screen is displayed.



8. This screen displays the grants provided to the schema. If object compilation is required and the privilege is not given, then you can find that out from this screen. This is for information purpose.
9. Click 'Next'. The following screen is displayed.



10. Specify the following details:

Include PAR File

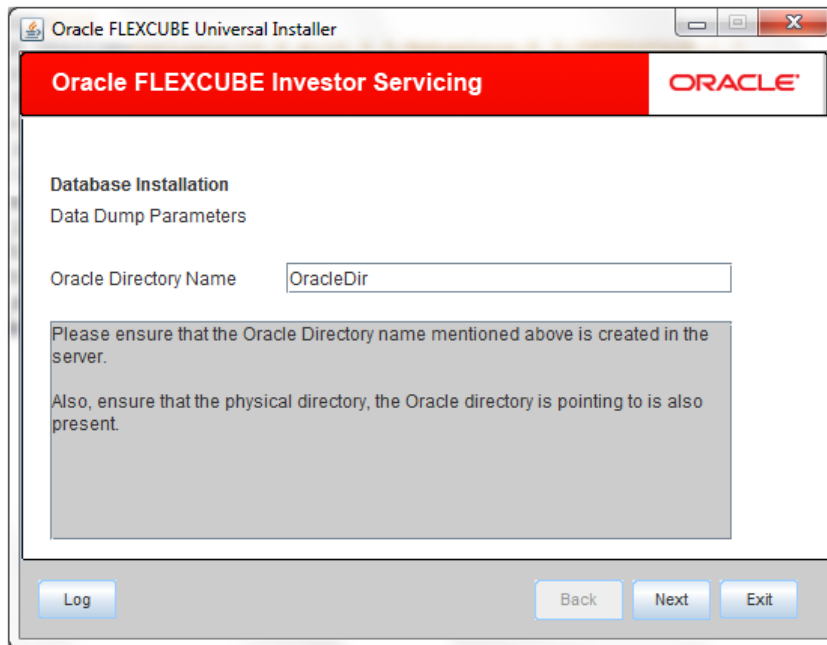
Check this box to include the PAR file. If you check this box, you need to specify the PAR file name.

PAR file stands for Parameter File. A PAR file is a text file that contains all valid parameters and their respective values. Maintaining the parameters in text format enables you to modify or reuse them easily.

PAR File Name

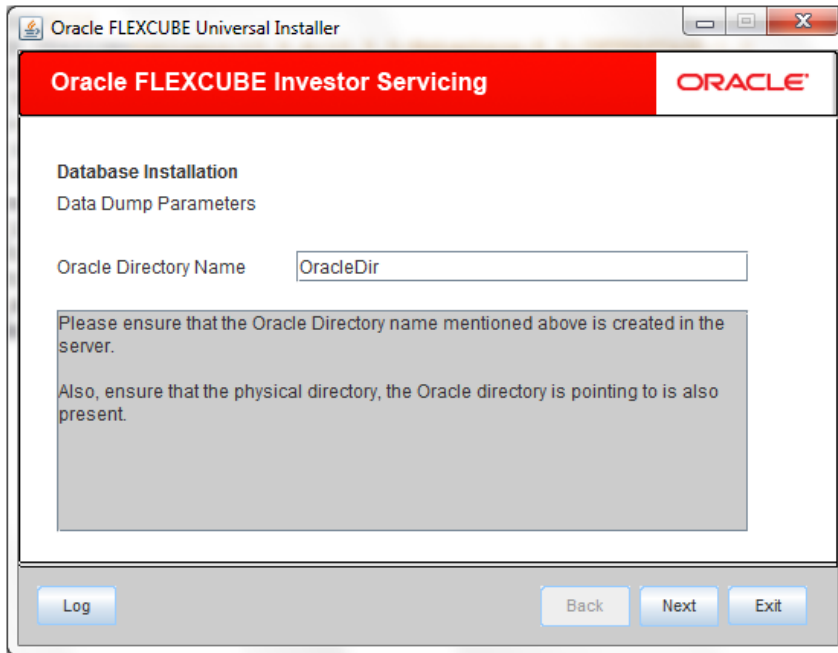
If you have checked the box 'Include PAR File', you need to specify the PAR file name here.

11. Once you have specified the above details, click 'Next' button.



12. Specify the Oracle directory name. This is the directory in the server machine where the import file is located.

Click 'Next'. The following screen is displayed



13. Specify the following details:

Dump File Name

Specify the import file name.

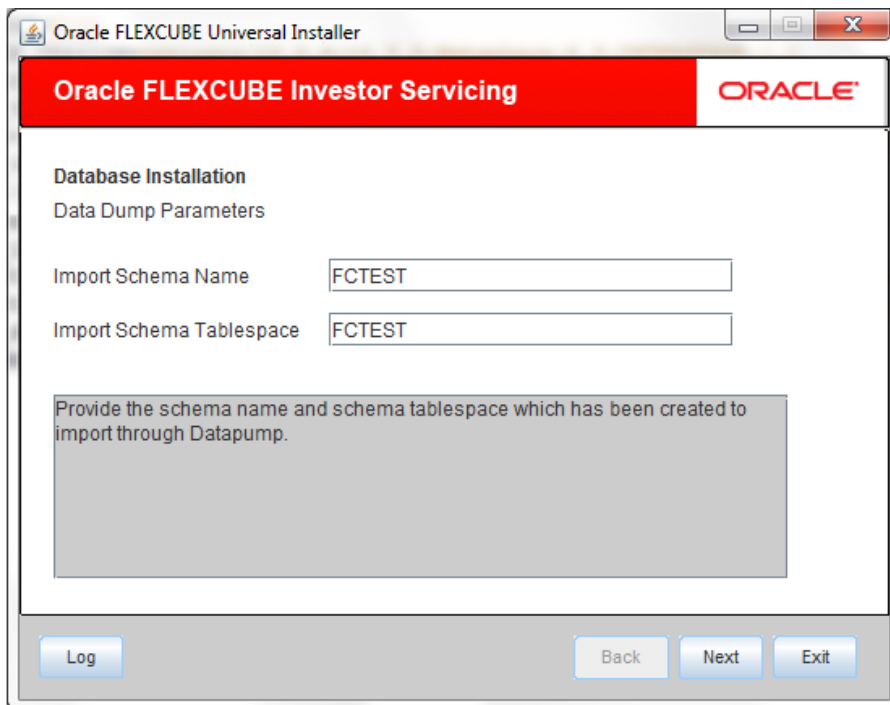
Export Schema Name

Specify the export schema name from which the import file is imported.

Export Schema Tablespace

Specify the export schema tablespace from which the import file is imported.

14. Once you have specified the above details, click 'Next'. The following screen is displayed.



15. Specify the following details:

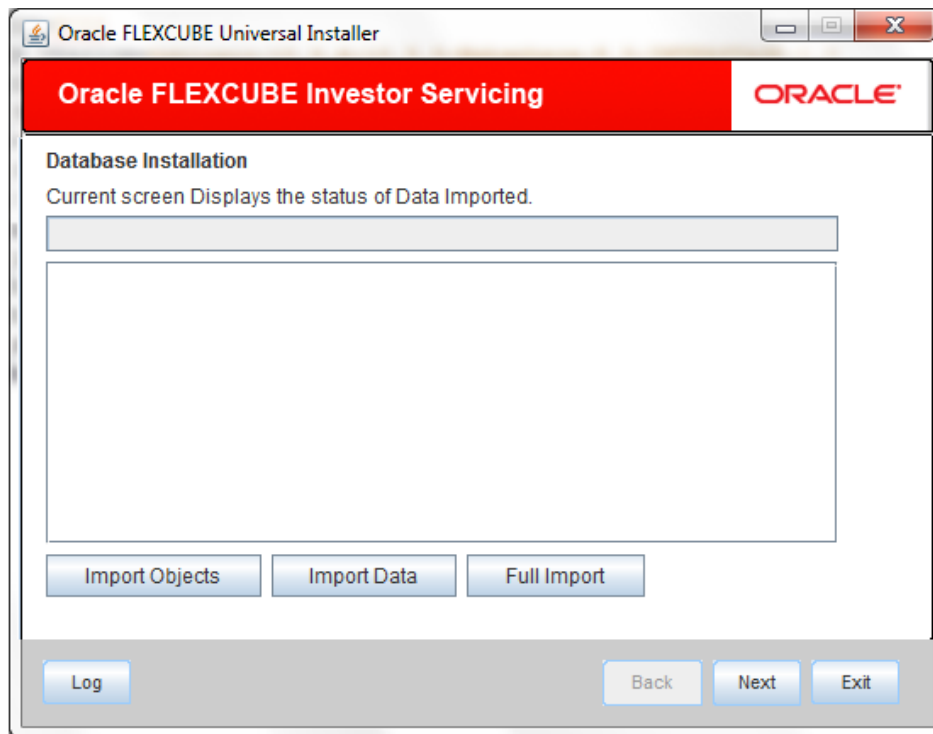
Import Schema Name

Specify the import schema name to which the import file is loaded.

Import Schema Tablespace

Specify the import schema tablespace to which the import file is loaded.

16. Once you have specified the above details, click 'Next' button. The following screen is displayed.



17. This triggers the import operation. You can optionally import the objects, data or full set by using 'Import Objects', 'Import Data' or 'Full Import' buttons respectively.
18. Click 'Import' button to import the database with the PAR file parameters.

2. Setting up Branch Database

For installing branch database, you need to complete the following tasks.

- Provide Grants in the Host Schema
- Replicate Branch Data from Host Schema

2.1 Providing Grants in Host Schema

You need to provide the following grant to the Host Schema database:

```
dbms_java.grant_permission( '<schema_name>', 'java.net.SocketPermission', '*',  
'connect,resolve' )
```

If the decentralized branch application is SSL enabled, the following steps need to be performed to support replication from host to decentralized schema.

1. Create a directory at the Database server where the keystore will be stored.
2. Create Oracle Directory in the same path with directory name 'BRANCH_SSL_KEYSTORE' and with DBA role.

The following grants need to be provided to host schema database:

```
exec dbms_java.grant_permission('<<SCHEMA NAME>>', 'java.io.FilePermission', '<<path as  
specified in Oracle directory>>/*', 'read', 'write', 'execute');
```

```
exec dbms_java.grant_permission('<< SCHEMA NAME >>', 'java.io.FilePermission', '*', 'read ,  
execute');
```

```
exec dbms_java.grant_permission('<< SCHEMA NAME >>', 'SYS:java.lang.RuntimePermission',  
'writeFileDescriptor', '*');
```

```
exec dbms_java.grant_permission('<< SCHEMA NAME >>', 'SYS:java.lang.RuntimePermission',  
'readFileDescriptor', '*');
```

```
grant javauserpriv to <<USER_NAME>>;
```

```
exec dbms_java.grant_permission( '<< SCHEMA NAME >>', 'SYS:java.util.PropertyPermission',  
'javax.net.ssl.trustStore', 'write' );
```

```
exec dbms_java.grant_permission('<< SCHEMA NAME >>', 'SYS:java.util.PropertyPermission',  
'java.protocol.handler.pkgs', 'write');
```

```
exec dbms_java.grant_permission( '<< SCHEMA NAME >>',  
'SYS:java.security.SecurityPermission', 'insertProvider.SunJSSE', " );
```

```
exec dbms_java.grant_permission( '<< SCHEMA NAME >>', 'SYS:java.net.SocketPermission',  
'<<HOST>>:<<PORT>>', 'connect,resolve' );
```

```
exec dbms_java.grant_permission( '<< SCHEMA NAME >>', 'SYS:javax.net.ssl.SSLPermission',
'setHostnameVerifier', " ");
```

```
Execute dbms_java.grant_permission(' SCHEMA NAME ', 'java.io.FilePermission', 'DB DEBUG
PATH*', 'read,write');
```

```
/Execute dbms_java.grant_permission(SCHEMA NAME,
'SYS:java.util.logging.LoggingPermission', 'control', " ");
```

```
/Execute dbms_java.grant_permission(SCHEMA NAME, 'SYS:java.util.PropertyPermission', '*',
'read,write' );
```

```
/Execute dbms_java.grant_permission(SCHEMA NAME, 'SYS:java.io.FilePermission', '<<ALL
FILES>>', 'execute');
```

```
/
```

2.2 Replicating Branch Data Using Script

In order to replicate the existing branch data, you need to follow the steps given below:

1. Compile the branch installation package in Host schema. The package specification and body names are as follows:
 - MAIN\Branch\SQL\DIPKS_BRANCH_INSTALLATION.spc
 - MAIN\Branch\SQL\DIPKS_BRANCH_INSTALLATION.sql
2. You need to update the following tables for the new branch before creating the installation script.
 - STTM_FLEXBRANCH_LOC
 - STTM_BRANCHLOC_MAP

Sample records for these tables are given below:

STTM_FLEXBRANCH_LOC

BRANCH_CODE	LOC_CODE	BRANCH_URL
WB1	WB1	http://10.10.10.10:1010/FCJNeoWeb/ReplicationBranchServlet

STTM_BRANCHLOC_MAP

BRANCH_CODE	LOC_CODE	MAIN_BRANCH	GEN_SCR
WB1	Refer below	Refer below	Refer below

For centralized setup, you need to maintain the following values:

LOC_CODE	CN
MAIN_BRANCH	NULL
GEN_SCR	Y

For decentralized setup, you need to maintain the following values:

LOC_CODE	<Branch_Code>
MAIN_BRANCH	If multiple branches use the same schema, then you need to set 'Y' for one branch and 'N' for the other branches.
GEN_SCR	Y

3. Compile the 'dipks_branch_installation' package. Further, execute the procedure 'pr_start' on that package.
exec dipks_branch_installation.pr_start();
4. On successful execution of this procedure, the branch installation script will be created in the Work Area folder as defined in 'cstb_param'.
5. Run the Installation scripts in the required branch schema. You can modify this according to your maintenances in the SQL script below:



CentralizedWebBranchInsertScripts.sql



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

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

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