

Setting up Database  
Oracle FLEXCUBE Universal Banking  
Version 12.87.03.0.0  
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# 1. Setting up Database

## 1.1 Introduction

This document explains the steps to install the Host and Branch database. These steps include Load objects, Import Dump, Basic Setup, and Clone Database.

This tool automates the creation of the database. The database created using this tool will have the database objects and the corresponding data required for the following applications.

- Oracle FLEXCUBE Universal Banking Solutions
- Oracle FLEXCUBE General Ledger
- Oracle FLEXCUBE Enterprise Limits and Collaterals
- Oracle FLEXCUBE Investor Services

## 1.2 Prerequisites

Following are the prerequisites for installing decentralize branch database:

Prerequisite	Description
Operating System	Windows 2000 / Windows XP / Windows 7/Windows 8, UNIX

Note the following:

- Ensure that Oracle FLEXCUBE Schema (Branch) and database connectivity details are as per the standards.
- Make sure that Oracle FLEXCUBE Schema and database connectivity exist as per the norms in 'TNSNAMES.ORA' file of Oracle 12c Client or later versions.
- During the setup, service/DB jobs should not be running in the schema. If some services are still running in the schema, use 'exec dbms\_job.remove('||job||');' from user\_jobs.

## 1.3 Pre-Installation Tasks

### 1.3.1 Purpose

To guide DBA to setup the database for Oracle FLEXCUBE and to do the routine DBA basic activities for the following DB version:

DB version	Refer Release Certificate
Oracle FLEXCUBE version	Oracle Database 12c Enterprise Edition( Latest Qualified Version ) - 64bit Production

**Note:** For details on latest version of the software qualified with Oracle FLEXCUBE, refer to the release certificate.

## 1.3.2 Setting up Database for Oracle FLEXCUBE

This section guides you through the steps to setup database for Oracle FLEXCUBE.

### 1.3.2.1 Environment Setup Phase

Following are the main Kernel and database initialization parameters that you need to setup as part of the environment.

#### **Sun Solaris Kernel Parameters**

Kernel Parameter	Suggested Starting Value	Description
SHMMAX	4294967295 or 70% of physical memory (whichever is larger)	Maximum size of a single shared memory segment
SHMMIN	1	Minimum size of a single shared memory segment
SHMMNI	100	Maximum number of shared memory segments in entire system
SHMSEG	10	Maximum number of shared memory segments one process can attach
SEMMNS	2000	Maximum number of semaphores in entire system
SEMMSL	1000	Maximum number of semaphores per set
SEMMNI	100	Maximum number of semaphore sets in entire system
Swap Space	Twice the physical memory present	
Patches	Verify as per Oracle's platform specific release notes	

#### **IBM AIX Kernel Parameters**

Unlike other UNIX platforms, AIX does not have the ability to directly configure Kernel parameters. Instead, the AIX Kernel dynamically allocates and reallocates resources as they are needed, up to a predefined limit, making the traditional practice of tuning parameters unnecessary. The only tuneable Kernel parameter is 'maxuprc' (maximum number of processes per user ID) which can be modified via SMIT (AIX's menu-based system administration utility) or the command line utility.

Swap Space	Twice the Physical memory present
Patches	Verify as per Oracle's platform specific release notes

#### HP UNIX Kernel Parameters

Kernel Parameter	Suggested Starting Value	Description
aio_max_ops	2048	Maximum number of queued AIO ops
dbc_min_pct	2	Minimum percentage of system memory used for buffer cache
dbc_max_pct	ensure <= 128MB	Maximum percentage of system memory used for buffer cache
Fsync	0	Asynchronous i/o on file systems
max_async_ports	1024	Maximum ports for asynchronous I/O operations
maxdsiz64	1Gb	Shadow process heap size
Maxfiles	512	Soft limit number of open files per process
maxfiles_limit	1024	Hard limit number of open files per process
Maxusers	no of Oracle connections+64	Influences nproc, nfile, ninode and maxuprc
Maxuprc	maxusers*5	Number of processes per user ID
nfile	use SAM formula	Open files system wide
Nflocks	>= (200 + (sum of db files ))	File locks system wide
Nproc	use SAM formula	Processes system wide
Shmmax	4294967295	Maximum size of a single shared memory segment
Swap Space	Twice the physical memory present	
Patches	Verify as per Oracle's platform specific release notes	

### 1.3.2.2 Database Setup

This section contains the following details:

- Create database using Oracle DBCA utility with jvm and xdb options and NLS as UTF
- Create Oracle FLEXCUBE schema
- Storage for Oracle FLEXCUBE schema

TABLESPACES	Storage %	Table Space Name	Table Space Type	Extent Size (KB)	Extent Allocation Type	Segment Space Management
FCC Data	60%	FCCDATASML 15% or 4 GB FCCDATAMED 25% or 20 GB FCCDATAJAR 60%	DATA	128 1024 5120	UNIFORM	AUTO
FCC Index	40%	FCCINDXSML 15% or 4 GB FCCINDXMED 25% or 20 GB FCCINDXLAR 60%	INDEX	128 512 5120	UNIFORM	AUTO
System	5 GB	SYSTEM	SYSTEM		Not applicable	Not applicable
Temporary	5 GB	TEMP	TEMP	1024	Not applicable	Not applicable
Undo	5 GB	UNDO	UNDO		Not applicable	Not applicable

**Note:** The storage parameters for FCC Data and FCC Index table spaces are provided as percentage. The exact sizing for these table spaces need to be worked out based on the sizing of Oracle FLEXCUBE, which is a factor of volumes at the bank.

*For the parameters to be set at the database level for Oracle FLEXCUBE, refer to the excel sheet ['Initparameters to change.xls'](#).*

#### Granting Rights to Oracle FLEXCUBE Schema

You need to disable the password case sensitivity and grant rights to the schema. While doing this, ensure that you are connected to the database as 'sys' user.

Before granting rights to the schema, you need to execute the following command:

```
ALTER SYSTEM SET SEC_CASE_SENSITIVE_LOGON = FALSE;
```

**Note:** The above command should be executed if the database is Oracle 12c and the application server is Oracle SOA Suite. This command disables the case sensitivity of the schema password.

Further, execute the following script to grant rights to the schema. This should also be executed while connected as “sys” user to the database.

Refer '[grants\\_dbms.sql](#)' file.

### **Listener and Tnsentries Setup**

Create the Listener and Tnsentries using Oracle net manager utility.

### **Invalid Objects and Recompile**

Find all the invalid objects and recompile the invalid units using the following syntax.

```
exec utl_recomp.recomp_parallel(4, 'FCUBS_SCHEMA')
```

#### **Note:**

- Here, 'FCUBS\_SCHEMA' is an example for the name of the schema created for FCUBS data installation.
- Before executing the above command, ensure that you are connected as a sys/sysdba user.

### **Database Statistics Gathering**

The script for gathering database statistics creates two jobs. Once job gathers the DICTIONARY\_STATS of the instance and the other job gathers the Oracle FLEXCUBE schema stats. The script is given below:

Refer '[StatsJobs.sql](#)' file.

You need to run the 'StatsJobs.sql' in the user schema. GRANTS for DBMS\_STATS should be given before running this script.

## **1.4 Before Getting Started**

Before going to the next step, you need to run the command given below:

Go to **Start > Run** on your system and enter the command given below and press Enter key:

**Sqlplus (schema\_name)/(password)@(connect\_string)**

#### **Example**

Suppose that you are connecting to a schema FCUBS (schema\_name). The password is FCUBS and connect string is FCUBS.WORLD (TNS Connect descriptor connect\_string). In that case, you need to run the following command:

**Sqlplus FCUBS/FCUBS@FCUBS.WORLD**

Ensure that you are able to connect to the schema without errors. Also, check the SQL\* Plus version is Latest Qualified Version.

**Note:** For details on latest version of the software qualified with Oracle FLEXCUBE, refer to the release certificate.

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## 2. Installing Oracle FLEXCUBE Database

### 2.1 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.

### 2.2 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.

```
$ impdp 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.



## 2.3 Creating Schema from Shipment Media

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

### 2.3.1 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.

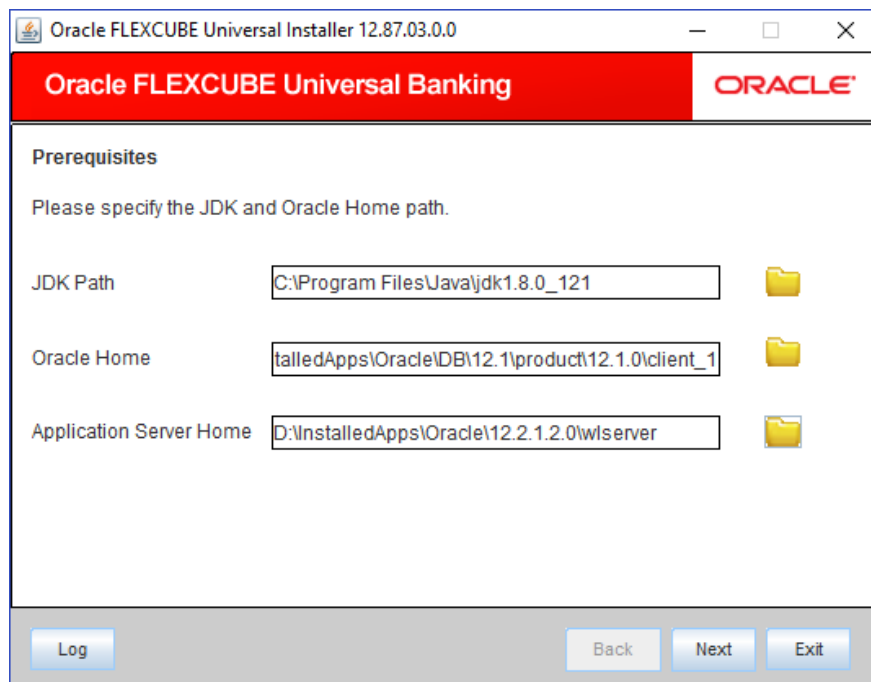
**Note:** After copying all the sources from shipment media to a folder in the local system, ensure that the folder containing those has full rights for that user.

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

#### 2.3.1.1 Loading Objects from Shipment Media

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

1. Launch Oracle FLEXCUBE Universal Banking Solution Installer.



2. Specify the following details:

### JDK Path

Specify the location of the JDK. You can use the directory button to browse to the JDK location.

### Oracle Home

Specify the location of the Oracle Home installation. You can use the directory button to browse to the location.

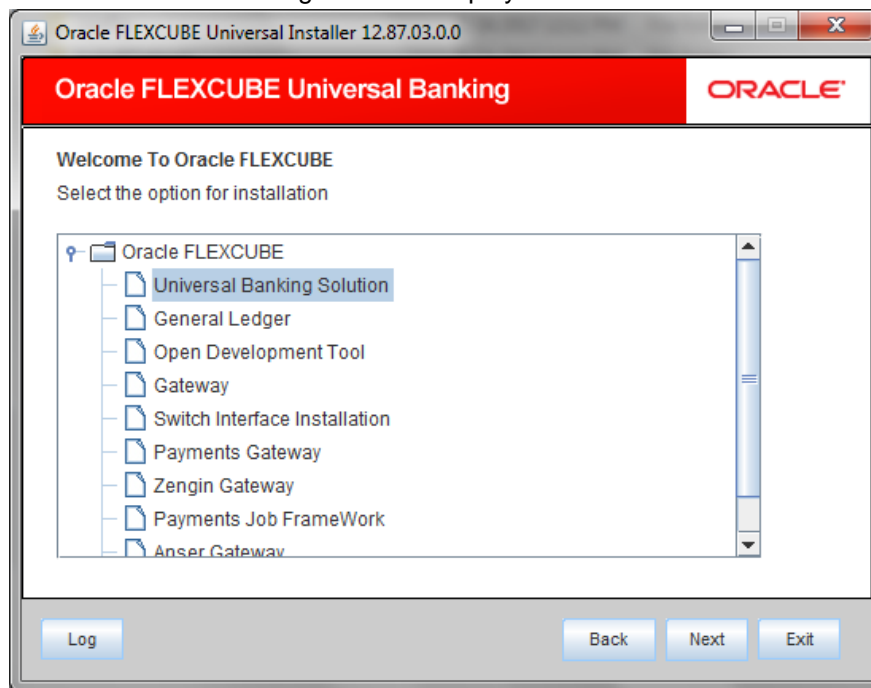
### Application Server Home

Specify the Application Server Home.

Note: If application server being used is Fujitsu Interstage, then the field Application server home can be ignored

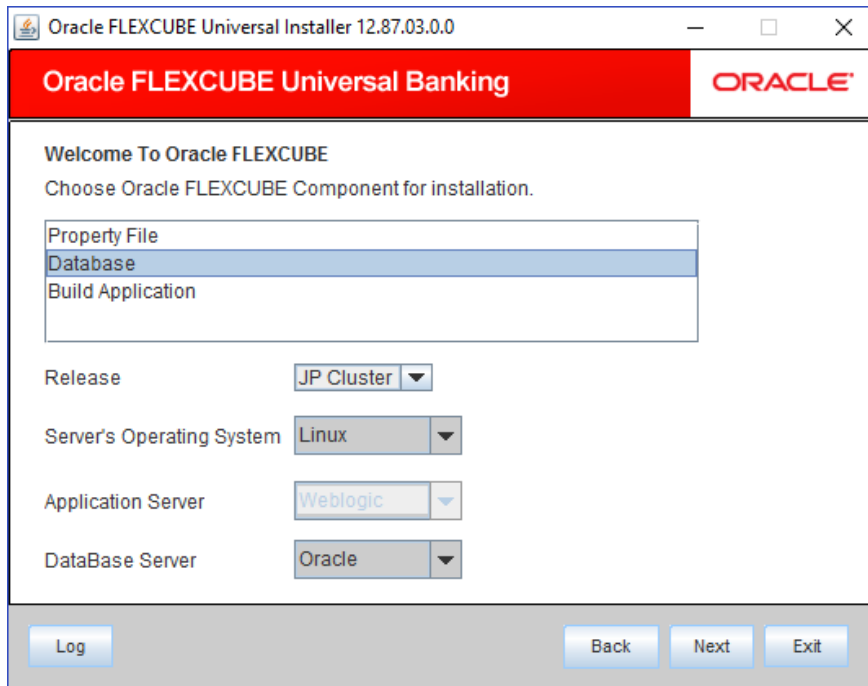
**Note:** In case any of the selected directories is incorrect, the Installer will display an appropriate error message. In that case, you need to correct the directory path and proceed.

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



4. Choose 'Universal Banking Solution'. Click 'Next'.

The following screen is displayed:



5. Choose 'Database Setup'.
6. Specify the following details:

#### **Release**

Specify the release which you want to install. Choose the appropriate one from the drop-down list. The list has three values KERNEL, JP Cluster, and VN Cluster.

#### **Server's Operating System**

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

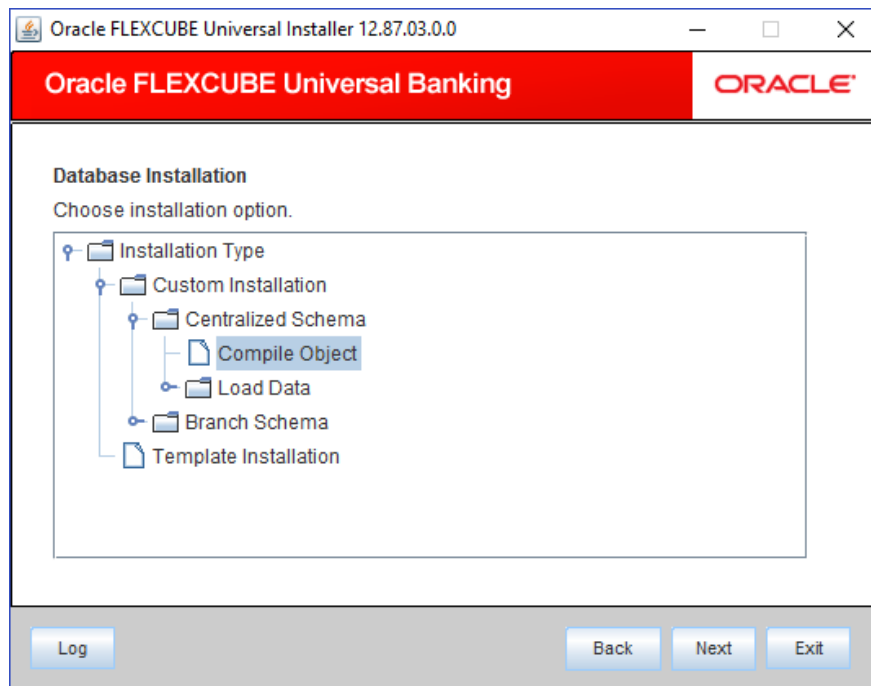
#### **Application Server**

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

#### **Database Server**

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:



As you see on this screen, you can install Oracle FLEXCUBE in two methods:

- Custom Installation
- Template Installation

7. Select the appropriate installation method and click 'Next'.

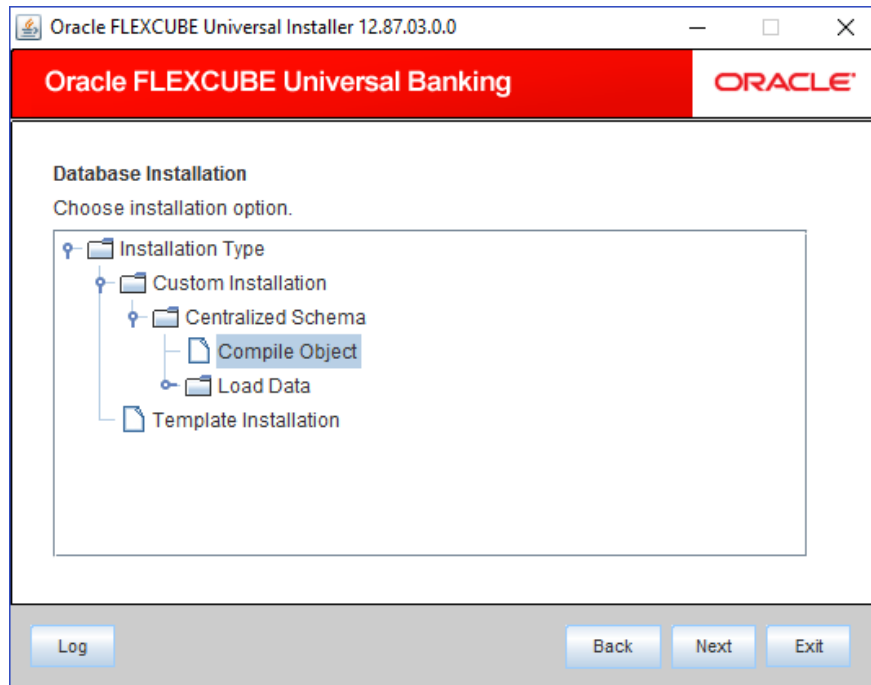
*Template installation is performed through Oracle DBCA tool.*

### 2.3.2 Custom Installation

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'.



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

No	Source Path	Dir	Consolidated/ Delta(Unchecked)
1	D:/1202Src		<input type="checkbox"/>

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 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'.

#### OFTW Required

Select the check box of objects related to Oracle FLEXCUBE testing workbench have to be compiled

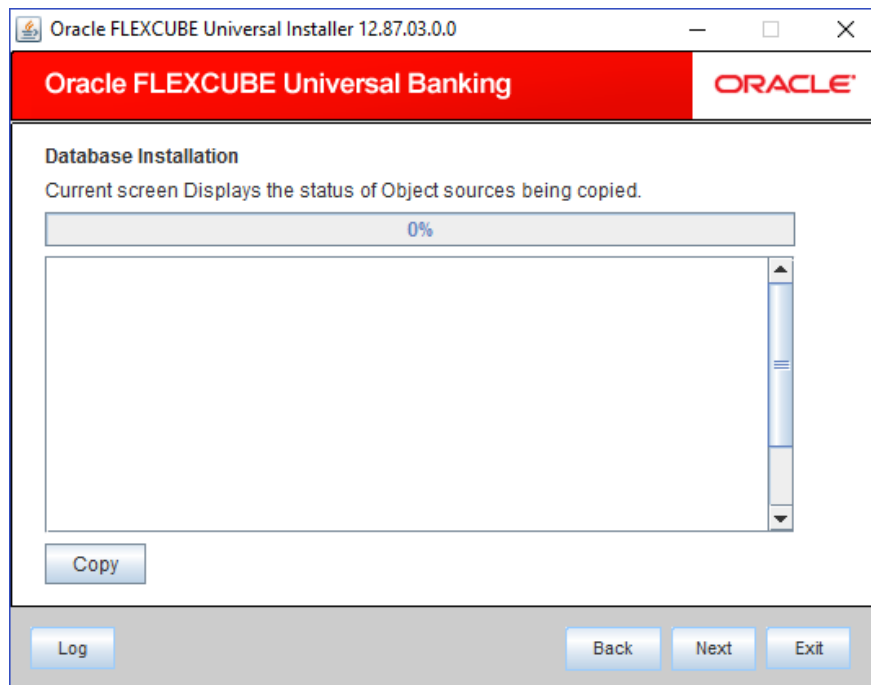
#### '+' Button

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

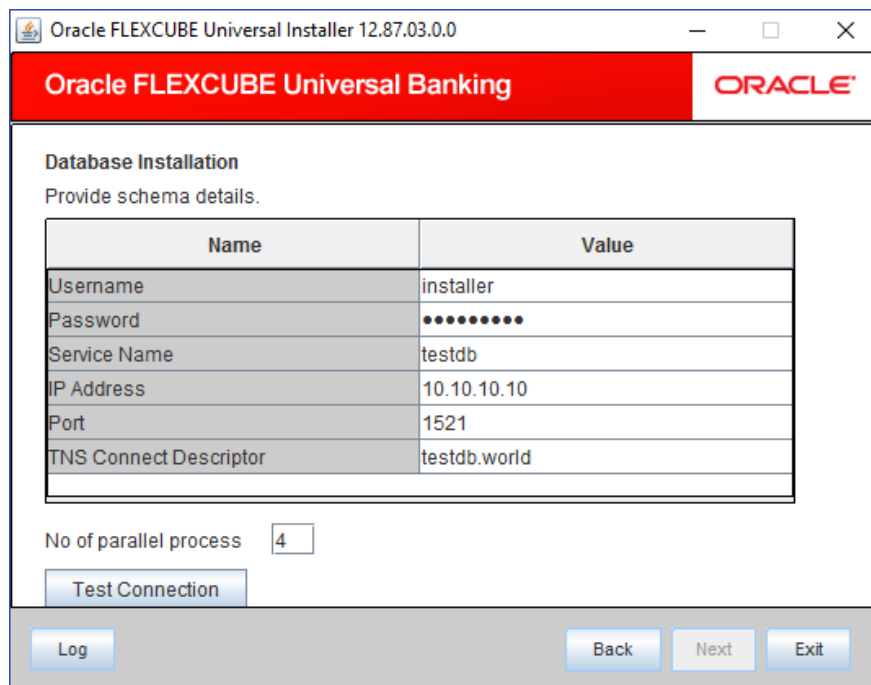
#### '-' Button

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

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



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



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.

**No of parallel process**

Specify the number of process to be created in database to recompile the invalids in the schema.

8. 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'.



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

Oracle FLEXCUBE Universal Installer 12.87.03.0.0

**Oracle FLEXCUBE Universal Banking** ORACLE

**Database Installation**  
This screen displays the parameters to be configured in v\$parameter table.

S.No	Parameter	Current Value	Expected Va...
1	_optimizer_connect_by_cost_based	FALSE	FALSE
2	_allow_level_without_connect_by	TRUE	TRUE
3	_unnest_subquery	FALSE	FALSE
4	_hash_join_enabled		FALSE
5	ALWAYS_SEMI_JOIN		NESTED_LO...
6	_optimizer_cost_based_transformation	OFF	off
7	audit_trail	DB	NONE
8	blank_trimming	TRUE	TRUE
9	cursor_sharing	FORCE	EXACT

Log Back Next Exit

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

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

Oracle FLEXCUBE Universal Installer 12.87.03.0.0

**Oracle FLEXCUBE Universal Banking** ORACLE

**Database Installation**  
This screen displays the Grants provided to the schema.

S.No	Grant Privilege Required	Grant provided
1	CREATE SESSION	Y
2	CREATE TYPE	Y
3	CREATE TRIGGER	Y
4	CREATE TABLE	Y
5	CREATE DATABASE LINK	Y
6	CREATE LIBRARY	Y
7	CREATE SYNONYM	Y
8	CREATE SEQUENCE	Y

Generate Report

Log Back Next Exit

12. 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.

13. 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.

14. The following screen is displayed.

S.No.	Object Type	Count	Drop
1	MATERIALIZED VIEW	2	<input type="checkbox"/>
2	TABLE	7096	<input type="checkbox"/>
3	PACKAGE	12564	<input type="checkbox"/>
4	PROCEDURE	585	<input type="checkbox"/>
5	FUNCTION	172	<input type="checkbox"/>
6	TRIGGER	403	<input type="checkbox"/>
7	VIEW	3086	<input type="checkbox"/>

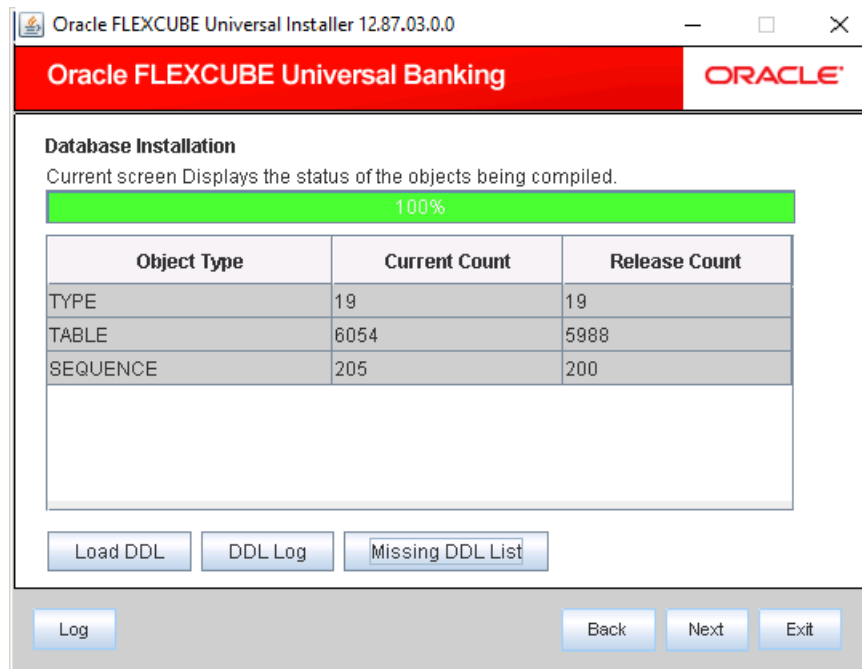
15. You can select the objects to be dropped and click 'Drop' button to drop the selected objects. As you drop the objects, the count in this screen is updated. You can drop all the objects at once using 'Drop All' button.

16. 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.

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

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



19. The table, sequences and type objects are compiled and the count is updated.

20. 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.

21. 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'.

22. 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.

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

Oracle FLEXCUBE Universal Installer 12.87.03.0.0

**Oracle FLEXCUBE Universal Banking** ORACLE

**Database Installation**

Current Screen compiles the scheduler DDL Objects, if required.

☐ Include Scheduler DDLs

Scheduler DDL Source Path

Check Include Scheduler DDLs option, if you want to compile the Scheduler DDL Objects in the Database as well.

Provide the Source Path for Scheduler DDL Objects to be compiled in the text field and hit the Load Scheduler DDLs button.

Load Scheduler DDLs

Log Back Next Exit

24. 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.zip'.

**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'. The version of quartz used is 2.2.1

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

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

Object Type	Include	Current Count	Release Count
FUNCTION	<input checked="" type="checkbox"/>	206	0
PROCEDURE	<input checked="" type="checkbox"/>	439	0
VIEW	<input checked="" type="checkbox"/>	2698	0
TRIGGER	<input checked="" type="checkbox"/>	376	0
PACKAGE	<input checked="" type="checkbox"/>	10254	0
PACKAGE BODY	<input checked="" type="checkbox"/>	10135	0

27. Check the objects that you need to load.

28. 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.

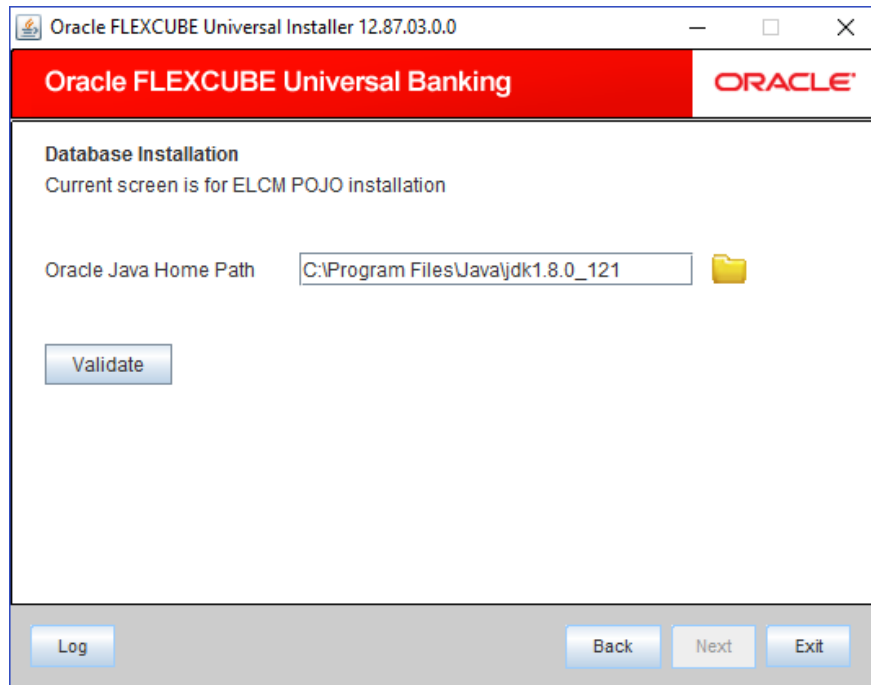
29. Click 'Objects Log' button to view the log. The log file 'LoadAppObj.log' will be available in the destination directory under the folder 'DBLogs'.

30. 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.

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

32. 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:\InstalledApps\Oracle\DB\12.1\product\12.1.0\client\_1')
  - Path (append the path variable with ORACLE\_HOME\BIN (Eg: 'D:\InstalledApps\Oracle\DB\12.1\product\12.1.0\client\_1\BIN')

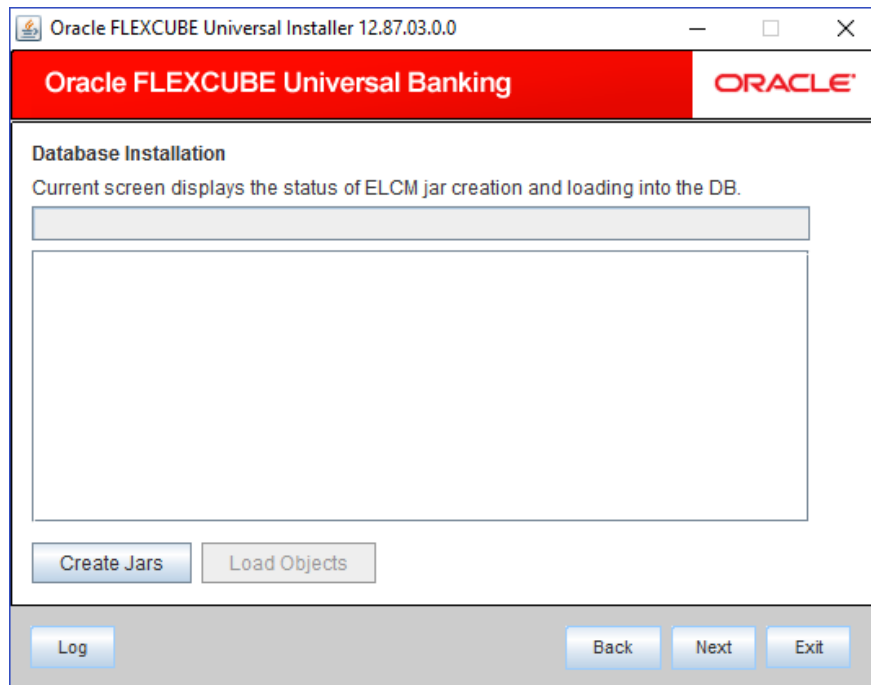
33. Specify the following details:

**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.

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

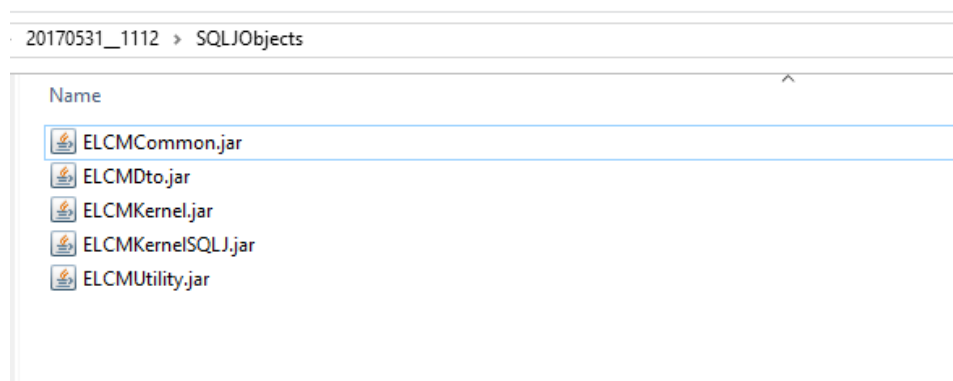


35. This screen displays the status of ELCM JAR file creation. The following JAR files are created in the folder 'SQLJObjects' inside the destination directory.

- ELCMCommon.jar
- ELCMDto.jar
- ELCMKernel.jar
- ELCMKernelSQLJ.jar
- ELCMUtility.jar

**Example**

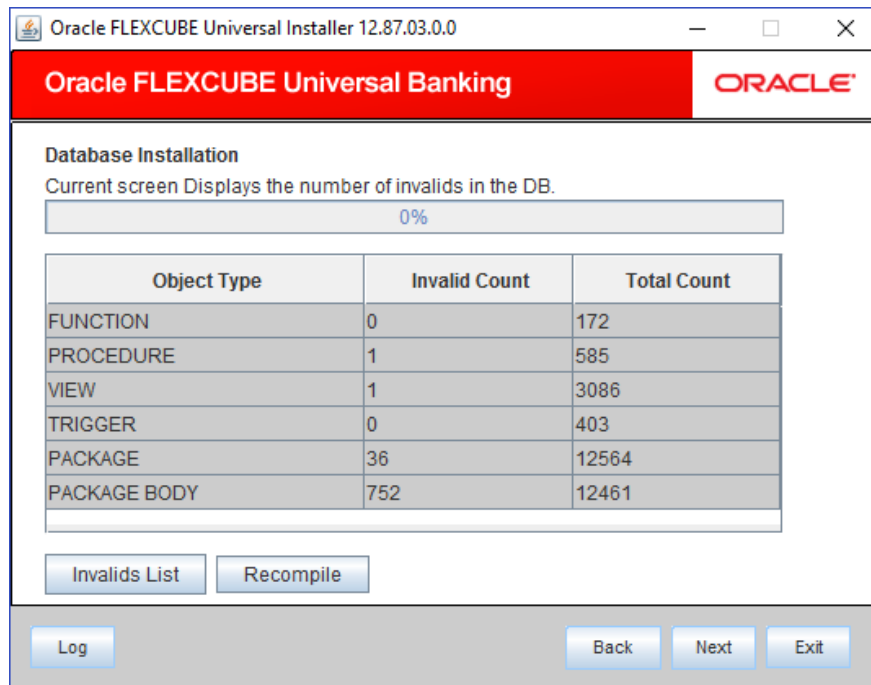
If the destination directory is '20170531\_1112\SQLJObjects\' , then the JAR files will be created as shown below:



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

37. Click on Next. The following screen appears.

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



39. 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'.

40. 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.

41. 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'



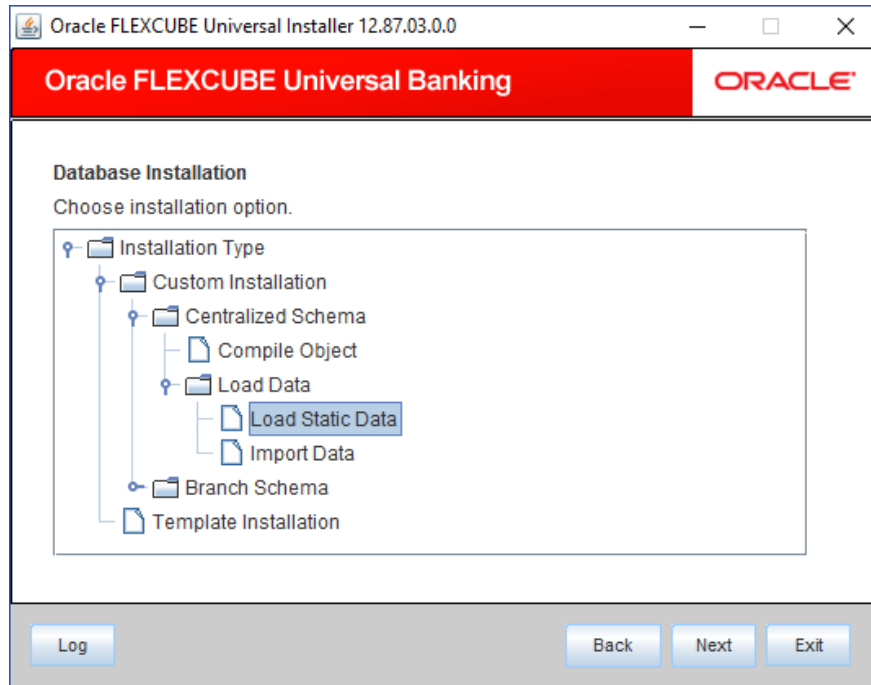
## 2.4 Loading Static Data

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 Universal Banking Solutions Installer.



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

No	Source Path	Dir	Consolidated/ Delta(Unchecked)
1	D:\UC\SOFT		<input type="checkbox"/>

☐ OFTW Required

Destination Temp Directory:

Log Back Next Exit

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'.

#### OFTW Required

Select the check box of objects related to Oracle FLEXCUBE testing workbench have to be compiled

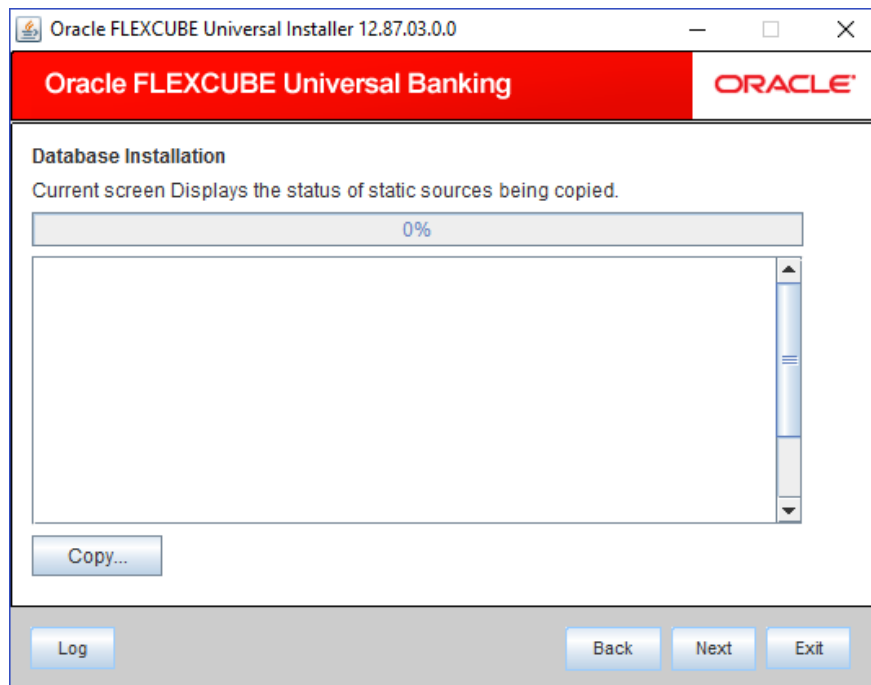
#### '+' Button

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

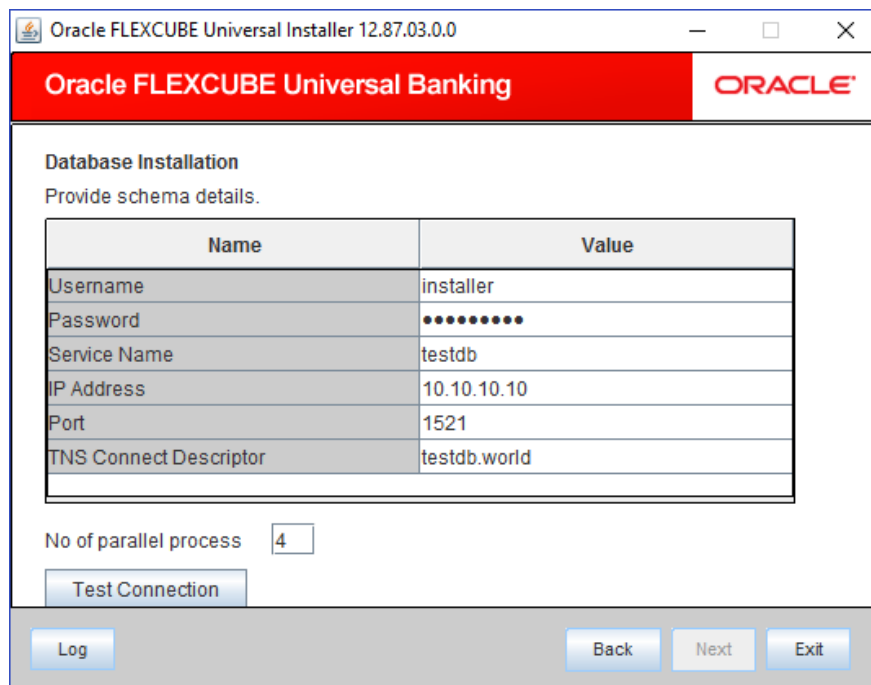
#### '-' Button

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.



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.

#### No of parallel process

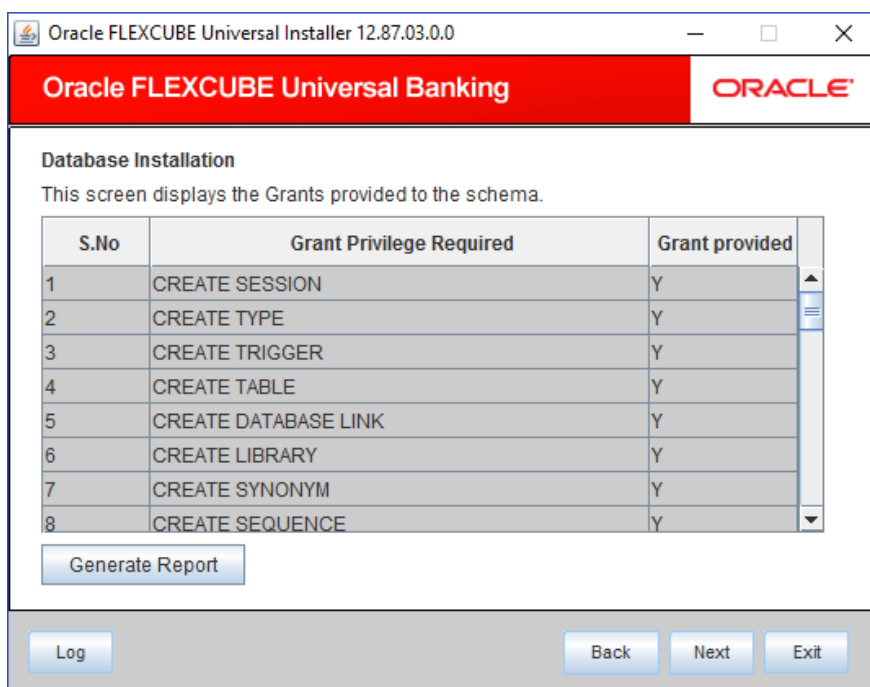
Specify the number of process to be created in database to recompile the invalids in the schema.

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

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

S.No	Parameter	Current Value	Expected Value
1	_optimizer_connect_by_cost_based	FALSE	FALSE
2	_allow_level_without_connect_by	TRUE	TRUE
3	_unnest_subquery	FALSE	FALSE
4	_hash_join_enabled		FALSE
5	ALWAYS_SEMI_JOIN		NESTED_LO...
6	_optimizer_cost_based_transformation	OFF	off
7	audit_trail	DB	NONE
8	blank_trimming	TRUE	TRUE
9	cursor_sharing	FORCE	EXACT

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



Oracle FLEXCUBE Universal Installer 12.87.03.0.0

**Oracle FLEXCUBE Universal Banking** ORACLE

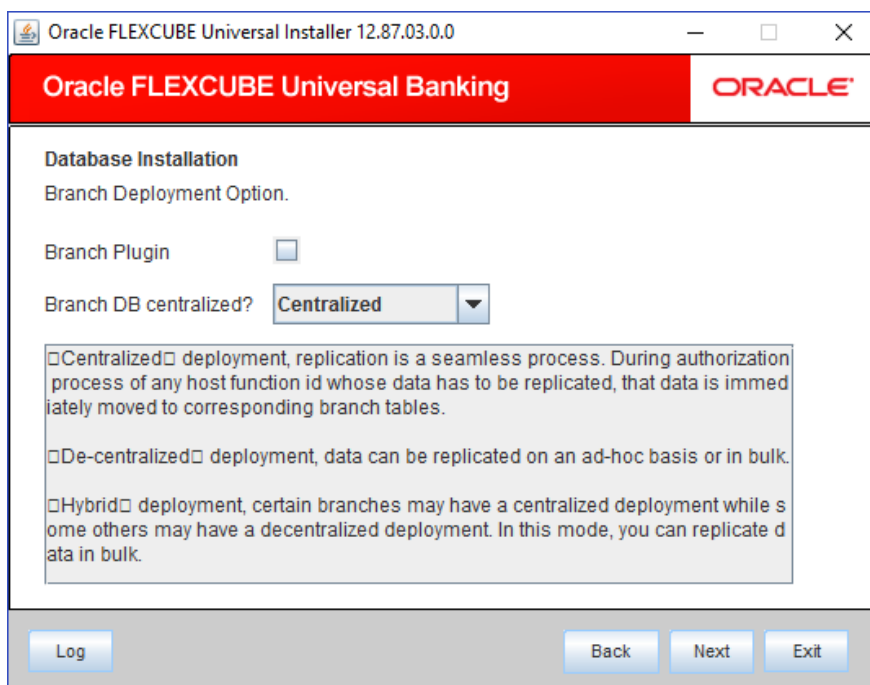
**Database Installation**  
This screen displays the Grants provided to the schema.

S.No	Grant Privilege Required	Grant provided
1	CREATE SESSION	Y
2	CREATE TYPE	Y
3	CREATE TRIGGER	Y
4	CREATE TABLE	Y
5	CREATE DATABASE LINK	Y
6	CREATE LIBRARY	Y
7	CREATE SYNONYM	Y
8	CREATE SEQUENCE	Y

Generate Report

Log Back Next Exit

12. 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.
13. Click 'Next'. The following screen is displayed.



Oracle FLEXCUBE Universal Installer 12.87.03.0.0

**Oracle FLEXCUBE Universal Banking** ORACLE

**Database Installation**  
Branch Deployment Option.

Branch Plugin ☐

Branch DB centralized? **Centralized**

☐ Centralized deployment, replication is a seamless process. During authorization process of any host function id whose data has to be replicated, that data is immediately moved to corresponding branch tables.

☐ De-centralized deployment, data can be replicated on an ad-hoc basis or in bulk.

☐ Hybrid deployment, certain branches may have a centralized deployment while some others may have a decentralized deployment. In this mode, you can replicate data in bulk.

Log Back Next Exit

14. Specify the following details:

### Branch Plug-in

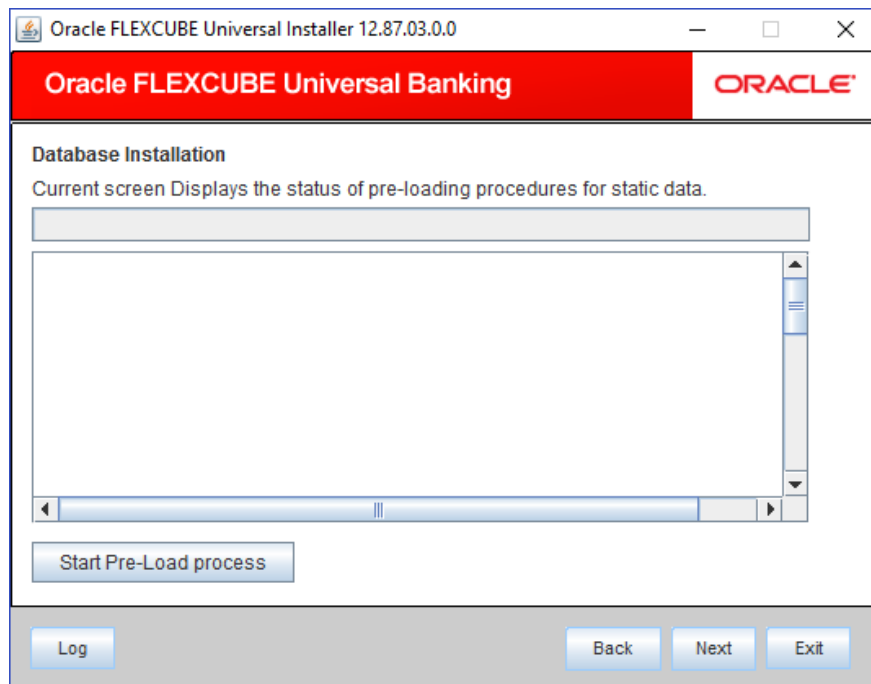
Check this box to include branch plug-in. If you check this box, you need to specify the deployment mode in the field 'Branch DB Centralized'. If you do not need branch plug-in, leave this field unchecked.

### Branch DB Centralized?

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

- Centralized
- Decentralized
- Hybrid

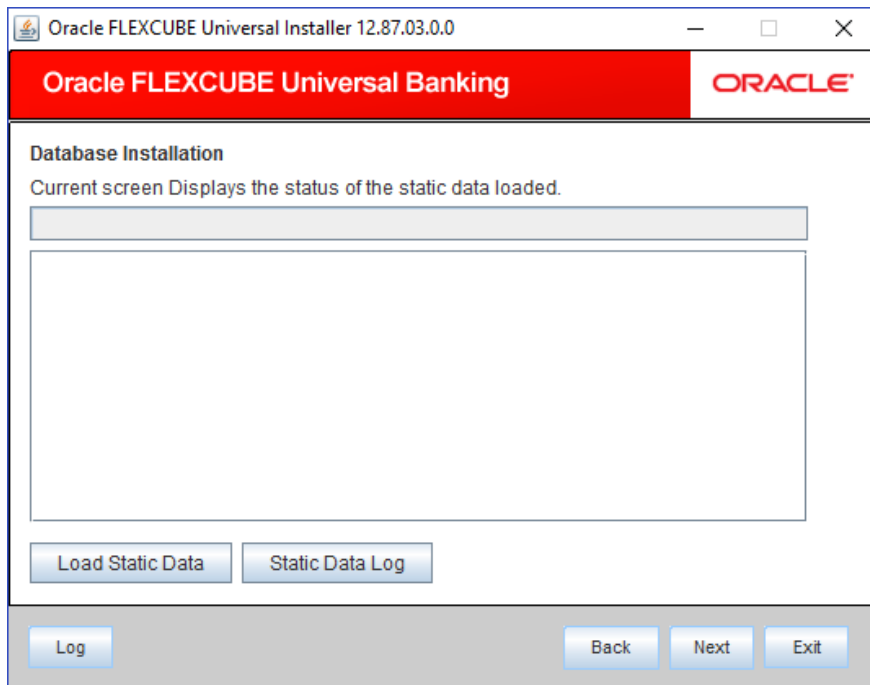
Once you have specified the above details, click 'Next'.



15. 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.

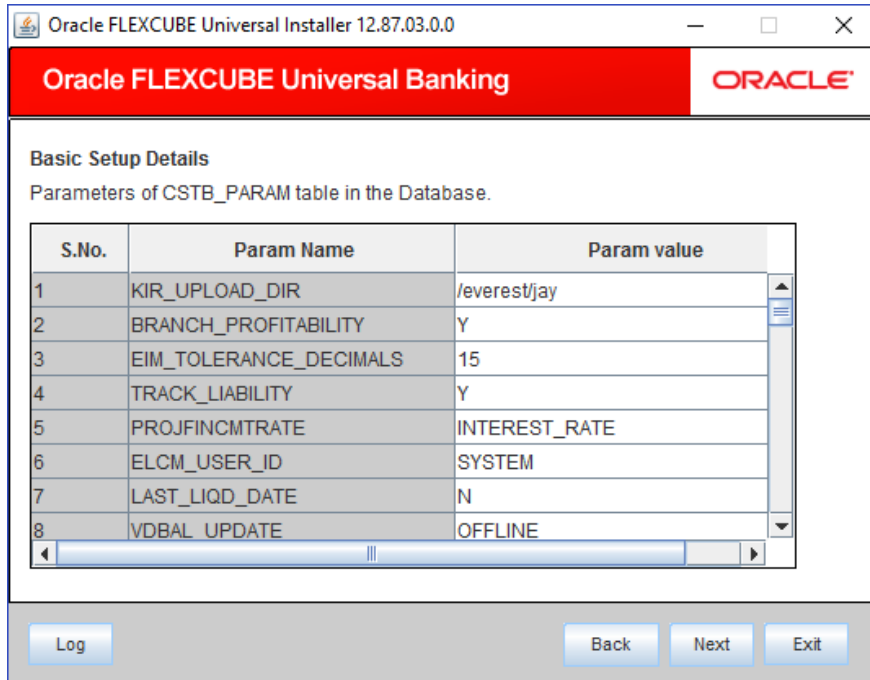
16. Click 'Log' button. The installer executes the process log .

17. Once the process is completed, you will see the following screen.



18. You can view the static data log by clicking 'Static Data Log' button.

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



20. Here, you can do the basic maintenances for the table 'CSTB\_PARAM'.

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

The screenshot shows the 'Basic Setup Details' window for 'Oracle FLEXCUBE Universal Banking'. The window title is 'Oracle FLEXCUBE Universal Installer 12.87.03.0.0'. The header bar is red with 'Oracle FLEXCUBE Universal Banking' and the 'ORACLE' logo. The main content area is titled 'Basic Setup Details' and 'Basic Details for bank and branch'. It contains the following fields:

Bank Code	CH0
Bank Name	City Head Office
Branch Code	001
Cheque Number Mask	NNNNNN
RM_HIERARCHY_SETUP	N

At the bottom, there are four buttons: 'Log', 'Back', 'Next', and 'Exit'.

22. Here you can do the basic maintenances for the tables 'STTM\_BANK' and 'STTM\_BRANCH'.

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

The screenshot shows the 'Basic Setup Details' window for 'Oracle FLEXCUBE Universal Banking'. The window title is 'Oracle FLEXCUBE Universal Installer 12.87.03.0.0'. The header bar is red with 'Oracle FLEXCUBE Universal Banking' and the 'ORACLE' logo. The main content area is titled 'Basic Setup Details' and 'Basic details about dates. The Date Format must be yyyy/mm/dd.'. It contains the following fields:

Input Date	2017/06/05
Current Business Date	2017/06/05
Previous Business Date	2017/06/04
Next Business Date	2017/06/06

At the bottom, there are four buttons: 'Log', 'Back', 'Next', and 'Exit'.

24. Here, you can do the basic maintenances for the table 'STTM\_DATES'.



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

Oracle FLEXCUBE Universal Installer 12.87.03.0.0

**Oracle FLEXCUBE Universal Banking** 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

Currency Decimals Allowed: 2

Log Back Next Exit

26. Here, you can do the basic maintenances for the table 'CYTM\_CCY\_DEFN'.

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

Oracle FLEXCUBE Universal Installer 12.87.03.0.0

**Oracle FLEXCUBE Universal Banking** ORACLE

**Basic Setup Details**

User Creation with SMS role for login into the Oracle FLEXCUBE.

☐ External Password

No	User Name	Password or LDAP User name
1	ADMINUSER1	••••••••
2	ADMINUSER2	••••••••

Log Back Next Exit

28. 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.

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

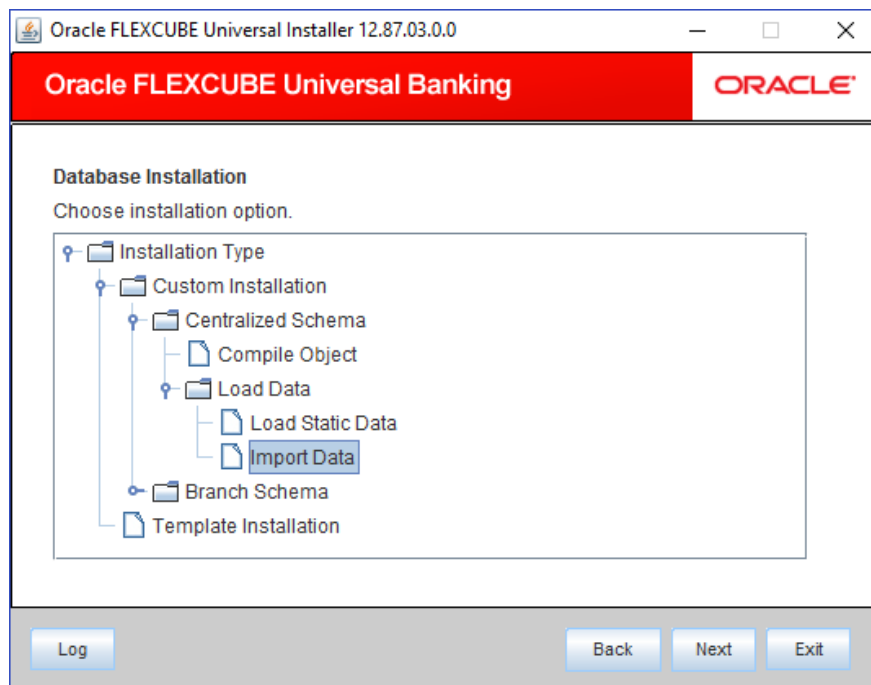
30. Click 'Start Setup' button to compile the entries.

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

## 2.4.1 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 Universal Banking Solutions Installer.



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

Name	Value
Username	installer
Password	••••••••
Service Name	testdb
IP Address	10.10.10.10
Port	1521
TNS Connect Descriptor	testdb.world

No of parallel process

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.

4. 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.

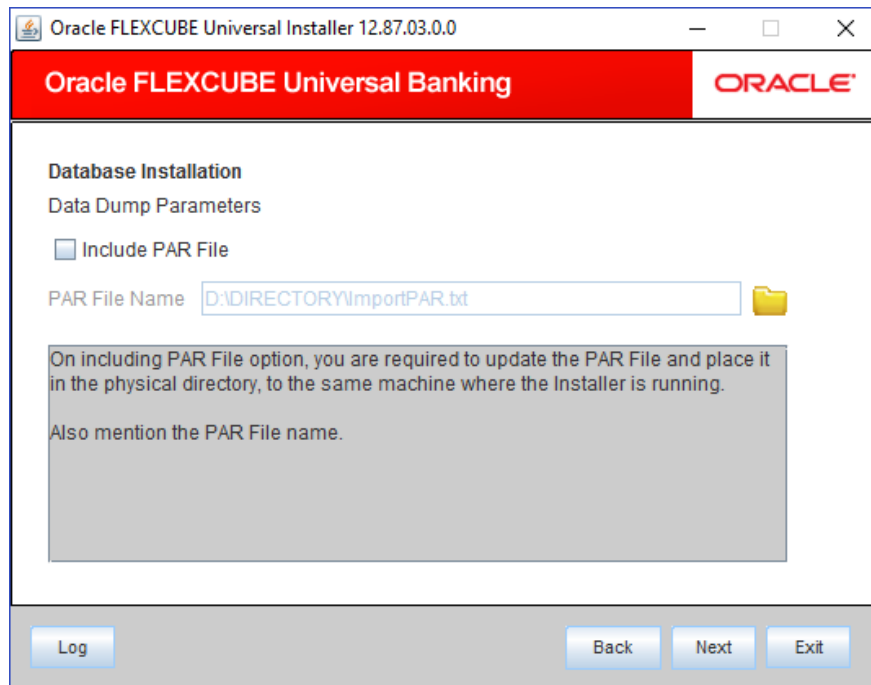
S.No	Parameter	Current Value	Expected Value
1	_optimizer_connect_by_cost_based	FALSE	FALSE
2	_allow_level_without_connect_by	TRUE	TRUE
3	_unnest_subquery	FALSE	FALSE
4	_hash_join_enabled		FALSE
5	ALWAYS_SEMI_JOIN		NESTED_LOOPS
6	_optimizer_cost_based_transformation	OFF	off
7	audit_trail	DB	NONE
8	blank_trimming	TRUE	TRUE
9	cursor_sharing	FORCE	EXACT
10	cursor_sharing_implementation	FALSE	FALSE

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

S.No	Grant Privilege Required	Grant provided
1	CREATE SESSION	Y
2	CREATE TYPE	Y
3	CREATE TRIGGER	Y
4	CREATE TABLE	Y
5	CREATE DATABASE LINK	Y
6	CREATE LIBRARY	Y
7	CREATE SYNONYM	Y
8	CREATE SEQUENCE	Y

- 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.

The screenshot shows the 'Oracle FLEXCUBE Universal Installer 12.87.03.0.0' window. The title bar includes the Oracle logo and the text 'Oracle FLEXCUBE Universal Banking'. The main content area is titled 'Database Installation' and 'Data Dump Parameters'. It features a text input field for 'Oracle Directory Name' with the value 'OracleDir'. Below this, a grey box contains instructions: 'Please ensure that the Oracle Directory name mentioned above is created in the server. Also, ensure that the physical directory, the Oracle directory is pointing to is also present.' At the bottom, there are four buttons: 'Log', 'Back', 'Next', and 'Exit'.

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

The screenshot shows the same 'Oracle FLEXCUBE Universal Installer 12.87.03.0.0' window, but now the 'Data Dump Parameters' section is active. It contains three text input fields: 'Dump File Name' with the value 'FCUBS\_MAIN.dmp', 'Export Schema Name' with the value 'FCUBS1BR2', and 'Export Schema Tablespace' with the value 'FCUBS1BR2'. Below these fields, a grey box contains instructions: 'Please ensure that the Dump file name mentioned is present in the Oracle Directory in the server. For more details refer the log file associated with the dump file present in the baseline area.' At the bottom, there are four buttons: 'Log', 'Back', 'Next', and 'Exit'.

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.

Oracle FLEXCUBE Universal Installer 12.87.03.0.0

Oracle FLEXCUBE Universal Banking ORACLE

**Database Installation**  
Data Dump Parameters

Import Schema Name FCTEST

Import Schema Tablespace FCTEST

Provide the schema name and schema tablespace which has been created to import through Datapump.

Log Back Next Exit

15. Specify the following details:

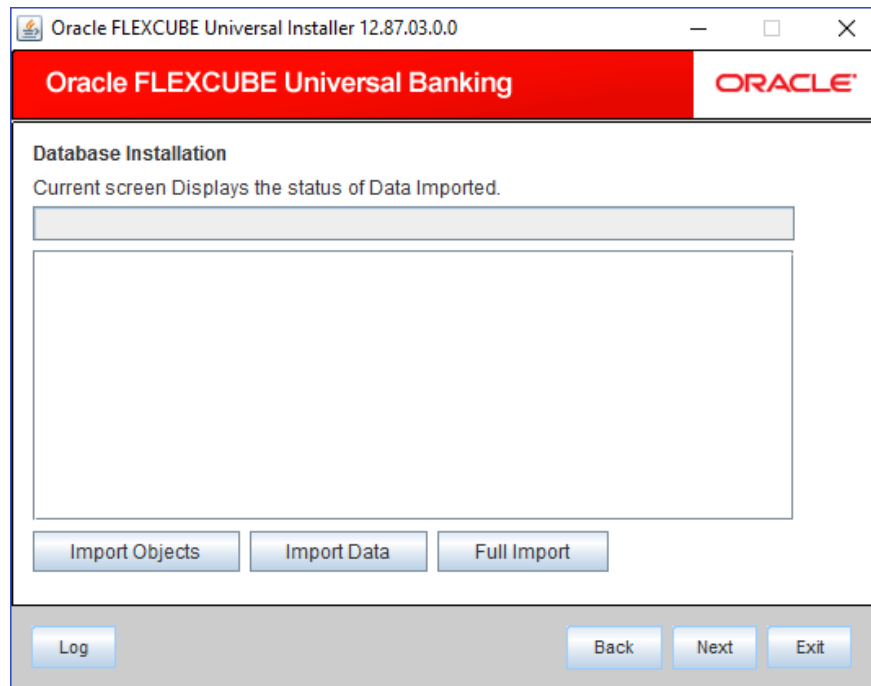
**Import Schema Name**

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.
19. If you have not checked the box 'Include PAR File', on clicking 'Next', you will be navigated to the following screen.

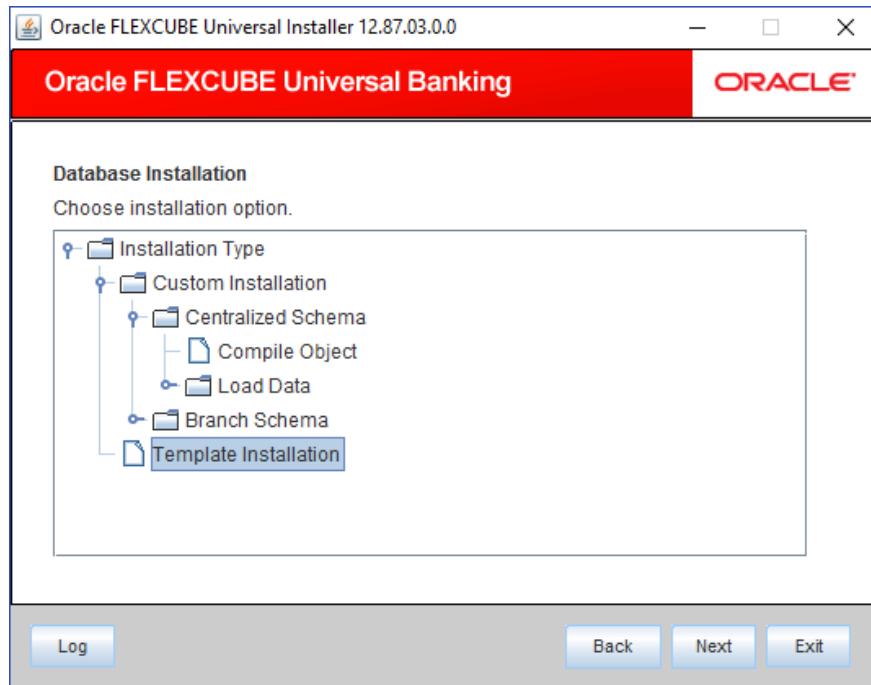


## 2.4.2 Template Database Installation

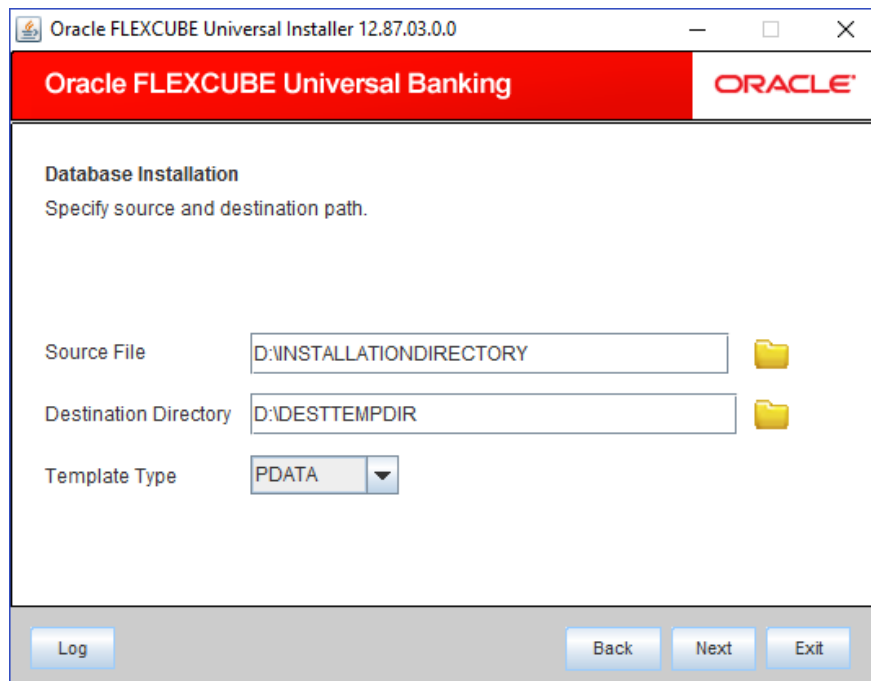
Template installation is an alternative method to setup the database. Oracle DBCA tool is used for processing the template installation.

This section describes the process of template database installation.

1. Launch Oracle FLEXCUBE Universal Banking Solutions Installer.



2. Select 'Template Installation' and click 'Next'. The following screen is displayed.



3. Specify the following details:

#### Source File

Specify the location of the source file. You can use the directory icon to browse to the appropriate file location.

#### Destination Directory

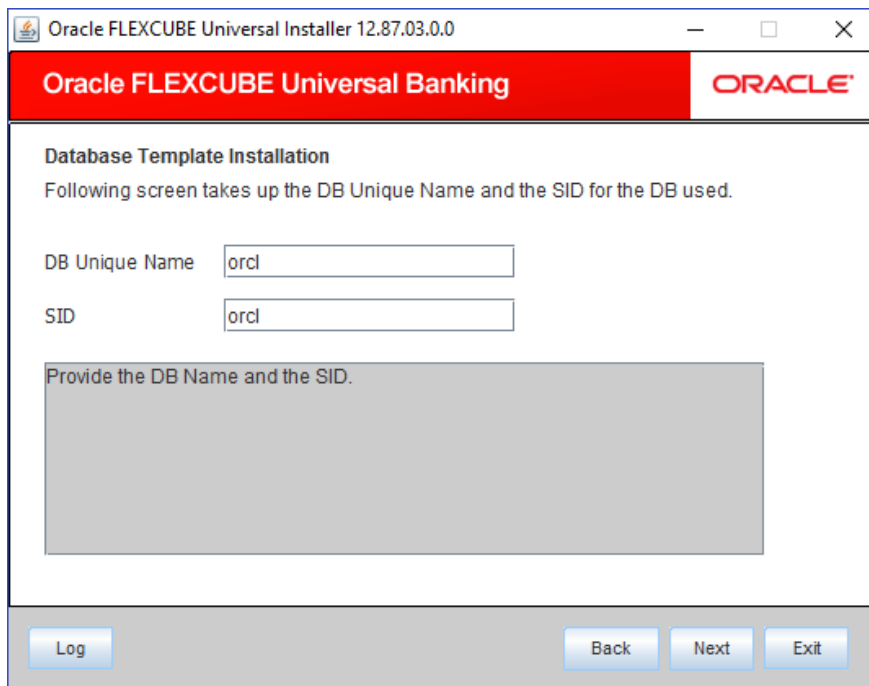
Specify the destination. You can use the directory icon to browse to the appropriate file location.

#### Template Type

Specify the template type. You can choose one of the following destination types.

- PDATA
- MDATA

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



5. Specify the following details:

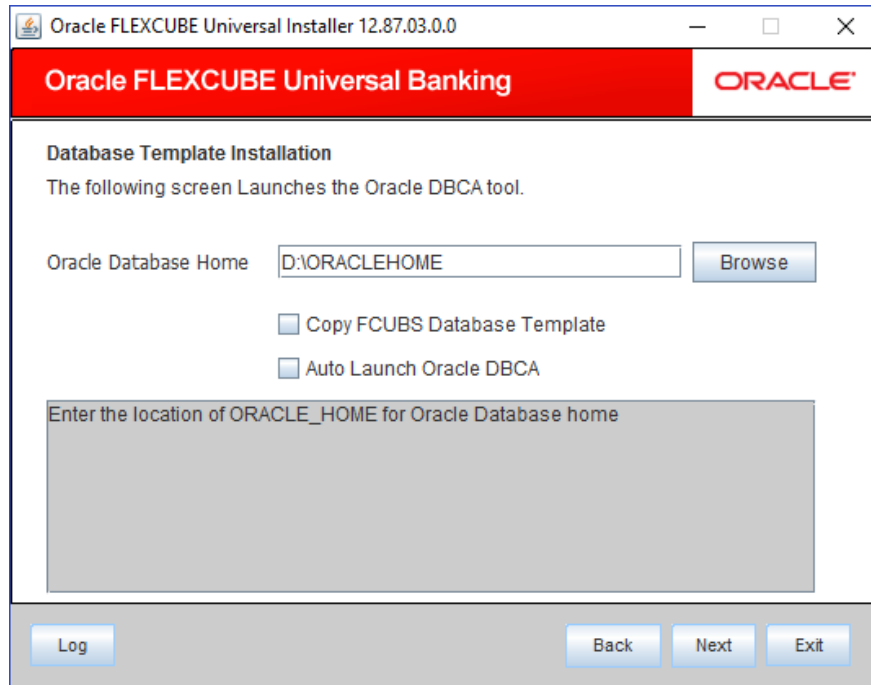
#### DB Unique name

Specify a unique name of the database.

#### SID

Specify the SID of the database.

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



7. Specify the following details:

#### **Oracle Database Home**

Specify the Oracle database home directory. You can use the 'Browse' button to browse and select the appropriate directory.

#### **Copy FCUBS Database Template**

Check this box to use the existing FCUBS template.

#### **Auto Launch Oracle DBCA**

Check this box to launch the Oracle DBCA tool. If you check this button and click next, the installer will start Oracle DBCA tool, from which you can proceed with the database installation.

---

## 3. Setting up FGL Database

### 3.1 Introduction

This chapter explains the steps to set up database for FGL.

### 3.2 Creating FGL Schema by Importing Full Dump

You can create the FGL schema by way of a full dump import. This is a manual activity. For details, refer to the section 'Creating Schema by Importing Full Dump'. You may follow the same steps for FGL database setup.

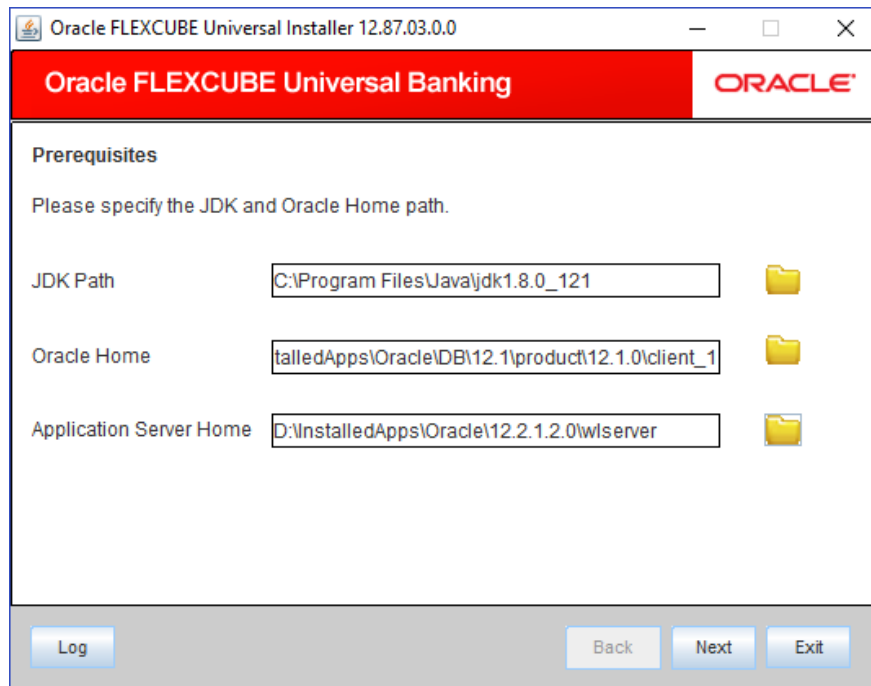
### 3.3 Creating FGL Schema from Shipment media

You can create the FGL schema by loading the objects from the shipment media itself. The method is described under the following headings.

#### 3.3.1.1 Loading Objects from Shipment Media

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

1. Launch Oracle FLEXCUBE Universal Banking Solution Installer.



2. Specify the following details:

#### **JDK Path**

Specify the location of the JDK. You can use the directory button to browse to the JDK location.

## Oracle Home

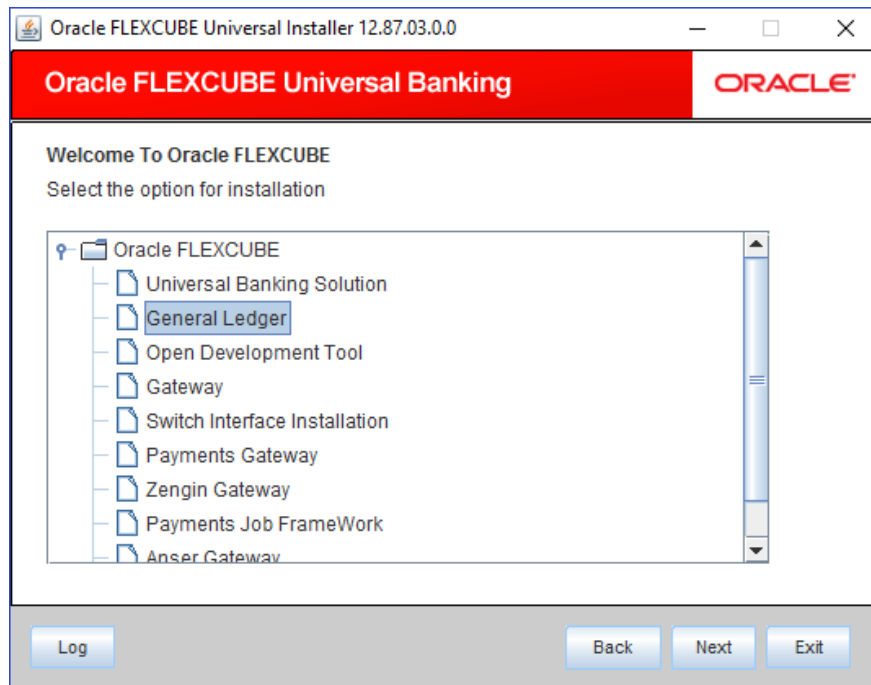
Specify the location of the Oracle Home installation. You can use the directory button to browse to the location.

## Weblogic Home

Specify the location of the WebLogic Home installation. You can use the directory button to browse to the location.

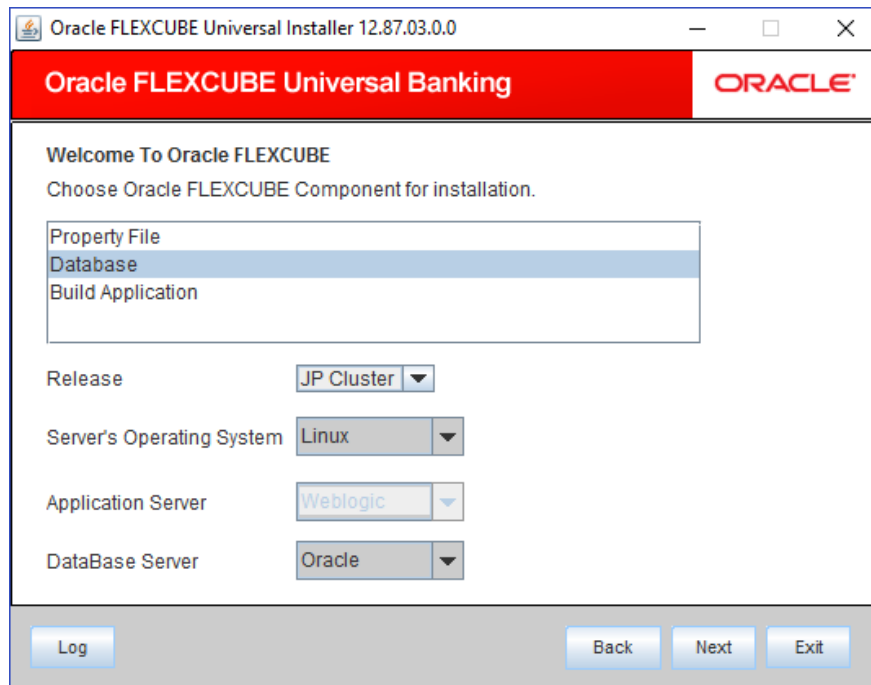
**Note:** In case any of the selected directories is incorrect, the Installer will display an appropriate error message. In that case, you need to correct the directory path and proceed.

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



4. Choose 'General Ledger'. Click 'Next'.

The following screen is displayed:



5. Choose 'Database Setup'.
6. Specify the following details:

#### **Operating System and Version**

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

You also need to specify the version of the operating system.

#### **Application Server and Version**

Specify the application server on which you are installing Oracle FLEXCUBE. You also need to specify the version of the application server.

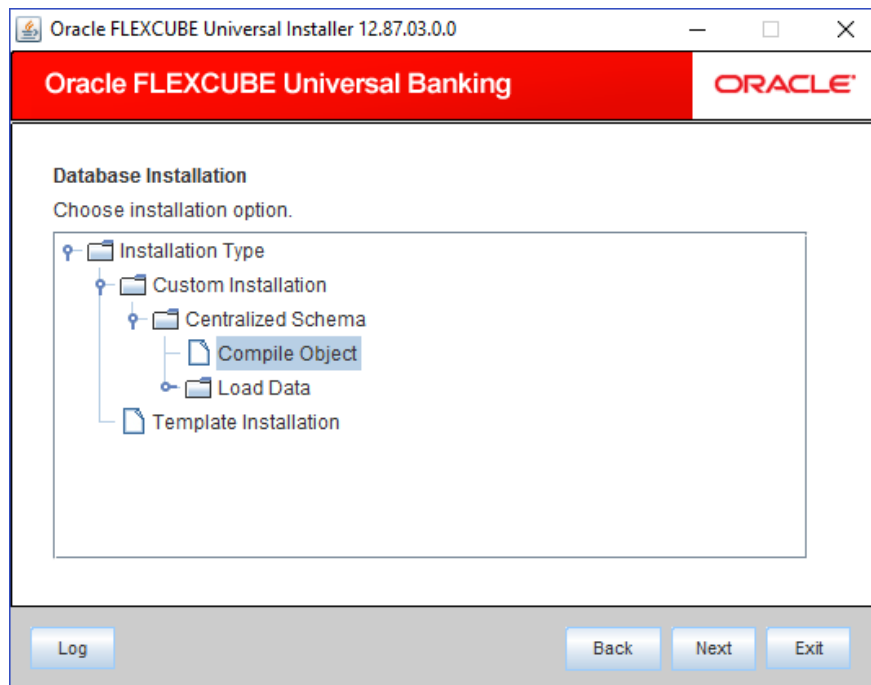
#### **Database Server and Version**

Specify the database server on which you are installing Oracle FLEXCUBE. You also need to specify the version of the database server.

#### **Release**

Specify the release which you want to install. Choose the appropriate one from the drop-down list. The list takes three values KERNEL, JP Cluster, and VN Cluster.

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



As you see on this screen, you can install Oracle FGL in two methods:

- Custom Installation
- Template Installation

8. Select the appropriate installation method and click 'Next'.

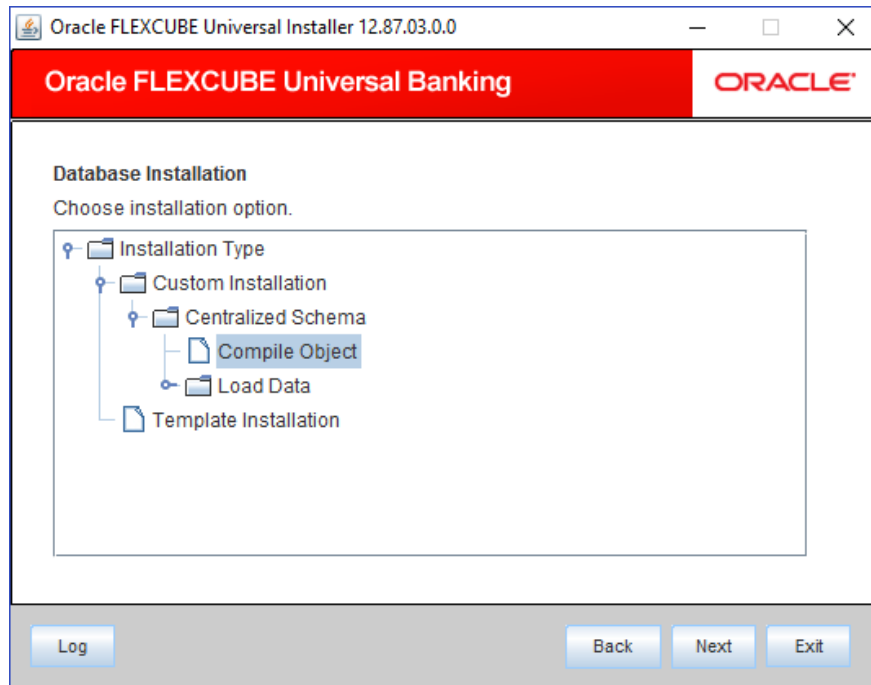
*Template installation is performed through Oracle DBCA tool.*

### 3.3.2 Custom Installation

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'.





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

No	Source Path	Dir	Consolidated/ Delta(Unchecked)
1	D:\UC\SOFT		<input checked="" type="checkbox"/>

☐ OFTW Required

Destination Temp Directory:

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'.

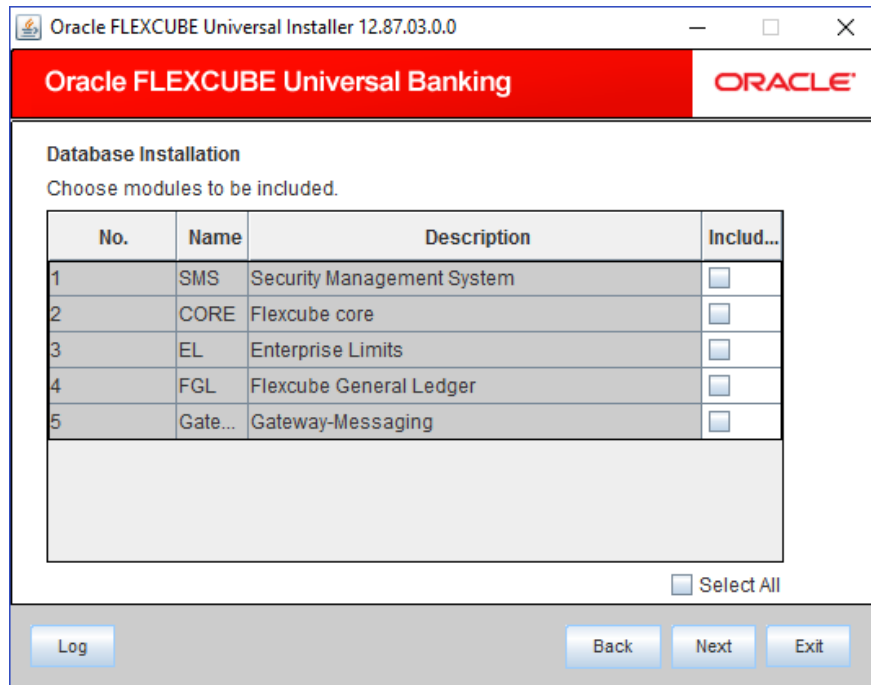
#### '+' Button

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

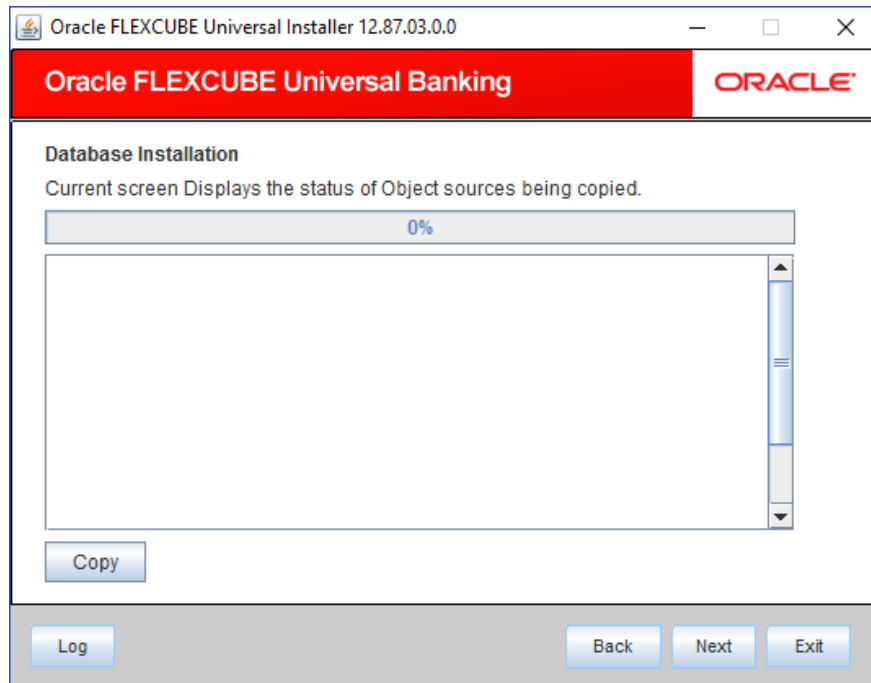
#### '-' Button

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

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



5. Select 'FGL' module. Click 'Next'. The following screen is displayed.



6. 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.

7. Once the copy process is completed, the Installer navigates you to the following screen.

Name	Value
Username	installer
Password	*****
Service Name	testdb
IP Address	10.10.10.10
Port	1521
TNS Connect Descriptor	testdb.world

No of parallel process

8. 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.

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

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

S.No	Parameter	Current Value	Expected Value
1	_optimizer_connect_by_cost_based	FALSE	FALSE
2	_allow_level_without_connect_by	TRUE	TRUE
3	_unnest_subquery	FALSE	FALSE
4	_hash_join_enabled		FALSE
5	ALWAYS_SEMI_JOIN		NESTED_LOOPS
6	_optimizer_cost_based_transformation	OFF	off
7	audit_trail	DB	NONE
8	blank_trimming	TRUE	TRUE
9	cursor_sharing	FORCE	EXACT
10	cursor_sharing_implementation	FALSE	FALSE

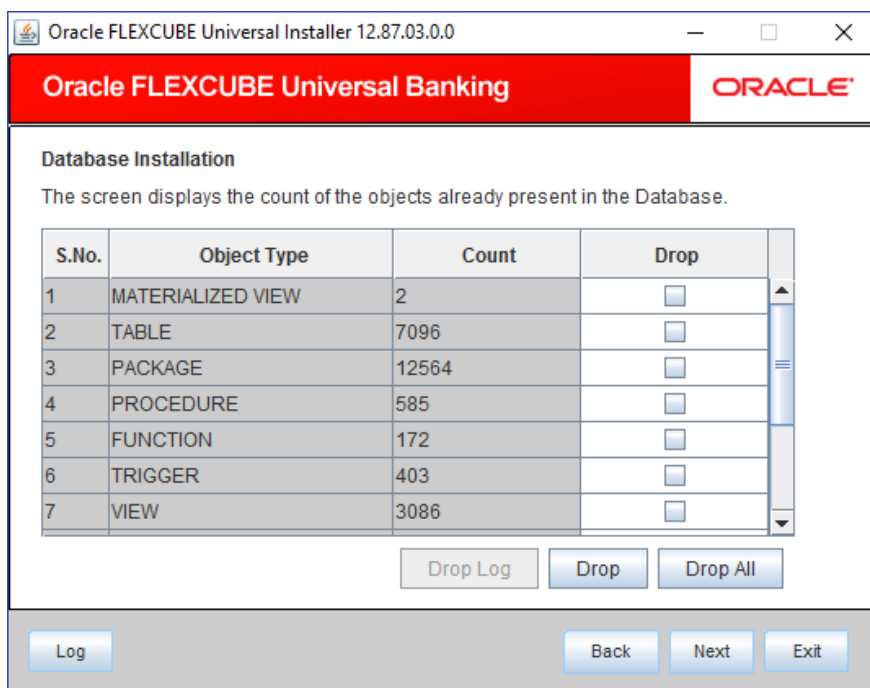
11. This screen displays the parameter details of the database. This is for information purpose.

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

S.No	Grant Privilege Required	Grant provided
1	CREATE SESSION	Y
2	CREATE TYPE	Y
3	CREATE TRIGGER	Y
4	CREATE TABLE	Y
5	CREATE DATABASE LINK	Y
6	CREATE LIBRARY	Y
7	CREATE SYNONYM	Y
8	CREATE SEQUENCE	Y

13. 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.

14. 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. The following screen is displayed.



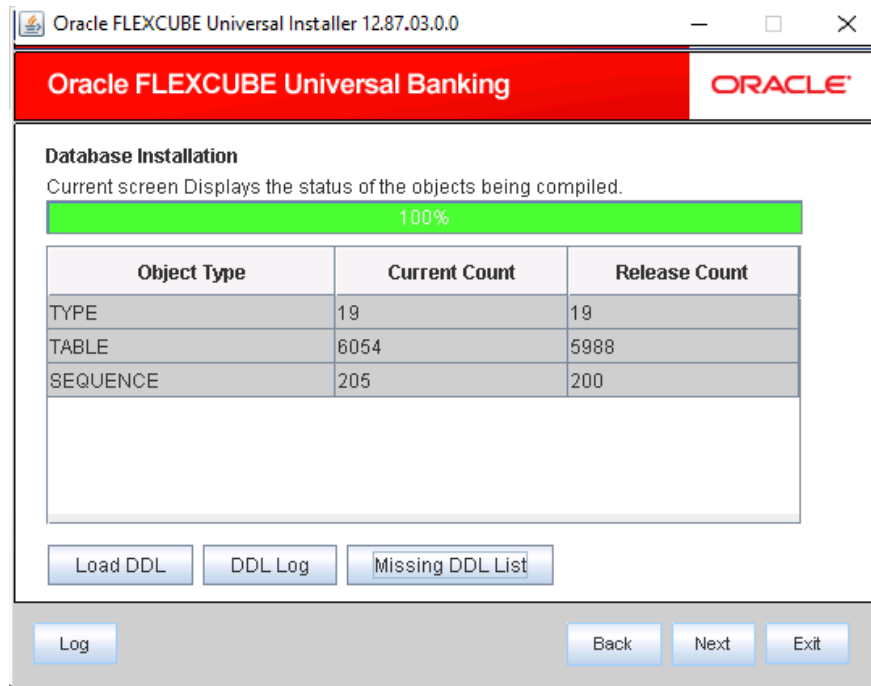
15. You can select the objects to be dropped and click 'Drop' button to drop the selected objects. As you drop the objects, the count in this screen is updated.

16. 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.

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

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



19. The table, sequences and type objects are compiled and the count is updated.
20. You can verify the DDL objects compilation by comparing the current count and the release count.
21. 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'.
22. 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'.

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

Oracle FLEXCUBE Universal Installer 12.87.03.0.0

**Oracle FLEXCUBE Universal Banking** ORACLE

**Database Installation**  
Current Screen compiles the scheduler DDL Objects, if required.

☐ Include Scheduler DDLs

Scheduler DDL Source Path

Check Include Scheduler DDLs option, if you want to compile the Scheduler DDL Objects in the Database as well.  
Provide the Source Path for Scheduler DDL Objects to be compiled in the text field and hit the Load Scheduler DDLs button.

Load Scheduler DDLs

Log Back Next Exit

24. 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.

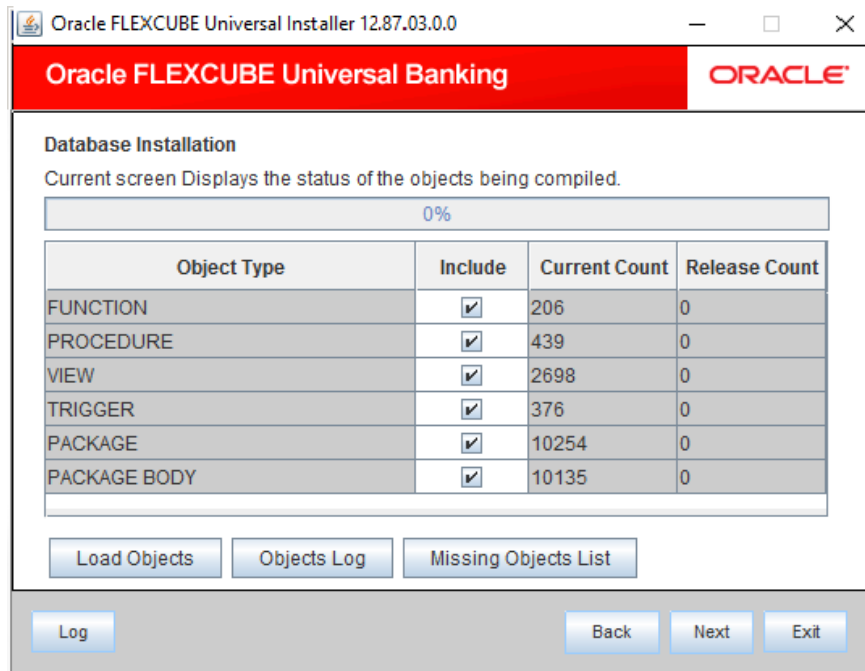
#### **Scheduler DDL Source Path**

Specify the location of the 'tables\_oracle.sql' folder, which is available in 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'.

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

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



27. Check the objects that you need to load.

28. 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.

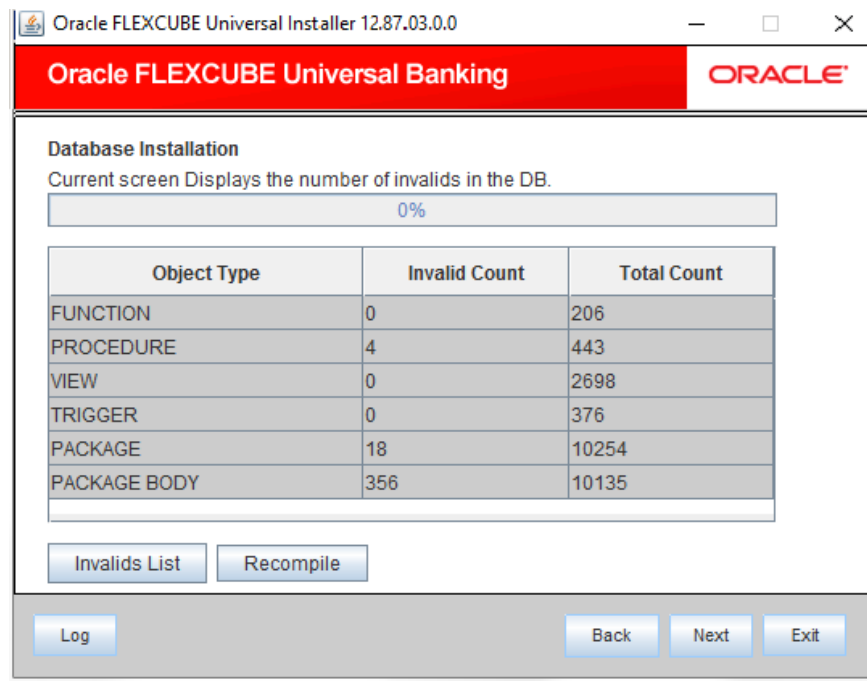
29. Click 'Objects Log' button to view the log. The log file 'LoadAppObj.log' will be available in the destination directory under the folder 'DBLogs'.

30. 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'.

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



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

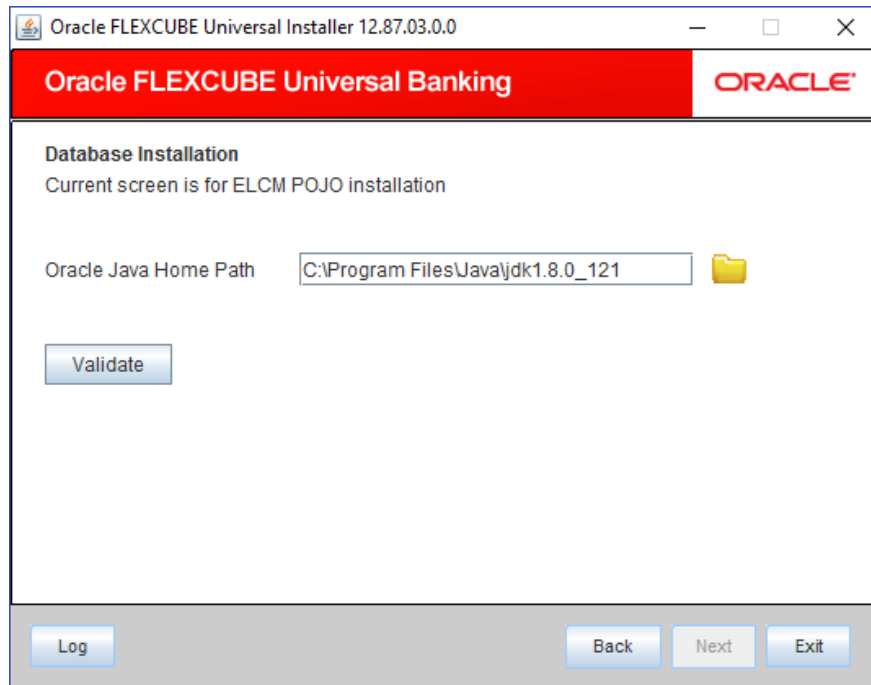


33. Click 'Invalid List' button to view the count of invalid objects. The installer creates the file 'InvalidList.txt' in the destination directory under the folder 'DBLogs'.

34. You can use the 'Recompile' button to do a cyclic recompilation. This will reduce the invalid objects count.

35. 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'.

36. Click 'Next'. The following screen is displayed. This starts the ELCM POJO installation process.



37. Specify the following details:

#### Oracle Java Home Path

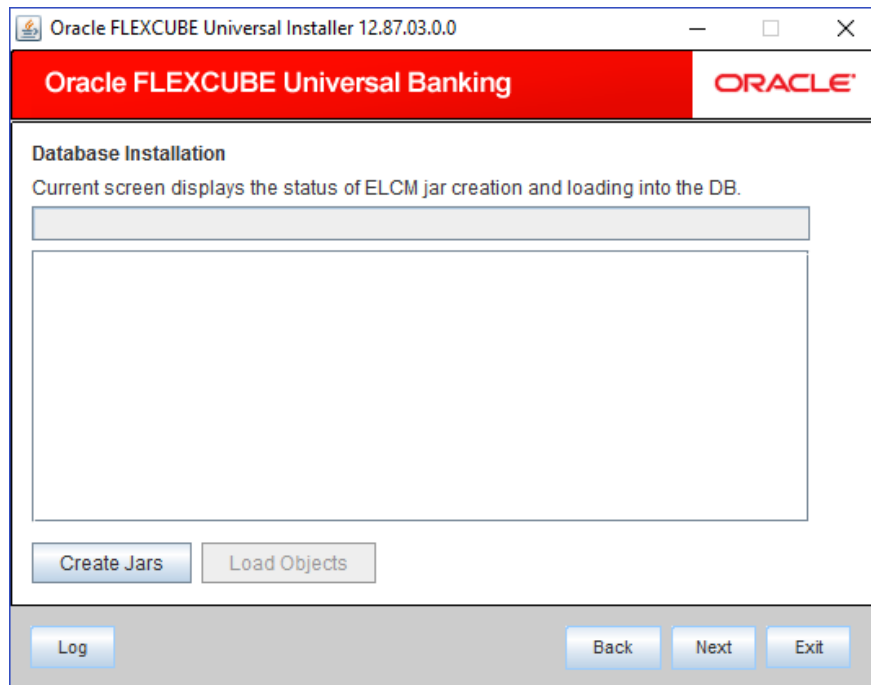
Specify the Oracle Java home location. This is required for ELCM POJO compilation.

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

**Note:** You need to set the following two environment variables for the successful compilation of ELCM POJO JAR files.

- ORACLE\_HOME (Eg: 'D:\InstalledApps\Oracle\DB\12.1\product\12.1.0\client\_1')
- Path (append the path variable with ORACLE\_HOME\BIN (Eg: 'D:\InstalledApps\Oracle\DB\12.1\product\12.1.0\client\_1\BIN')

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

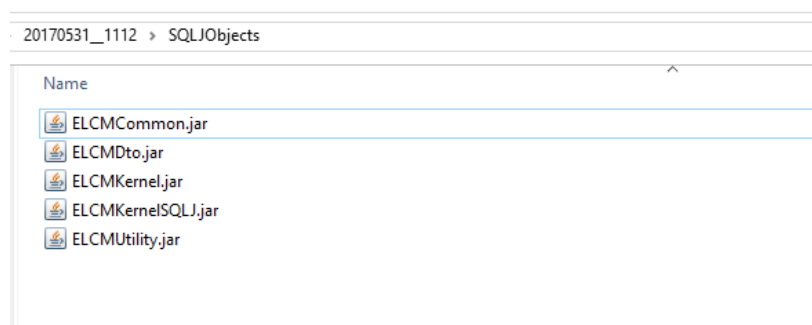


39. This screen displays the status of ELCM JAR file creation. The following JAR files are created for ELCM POJO in the folder 'SQLJObjects' inside the destination directory.

- ELCMCommon.jar
- ELCMDto.jar
- ELCMKernel.jar
- ELCMKernelSQLJ.jar
- ELCMUtility.jar

**Example**

If the destination directory is '20170531\_1112\SQLJObjects', then the JAR files will be created as shown below:



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

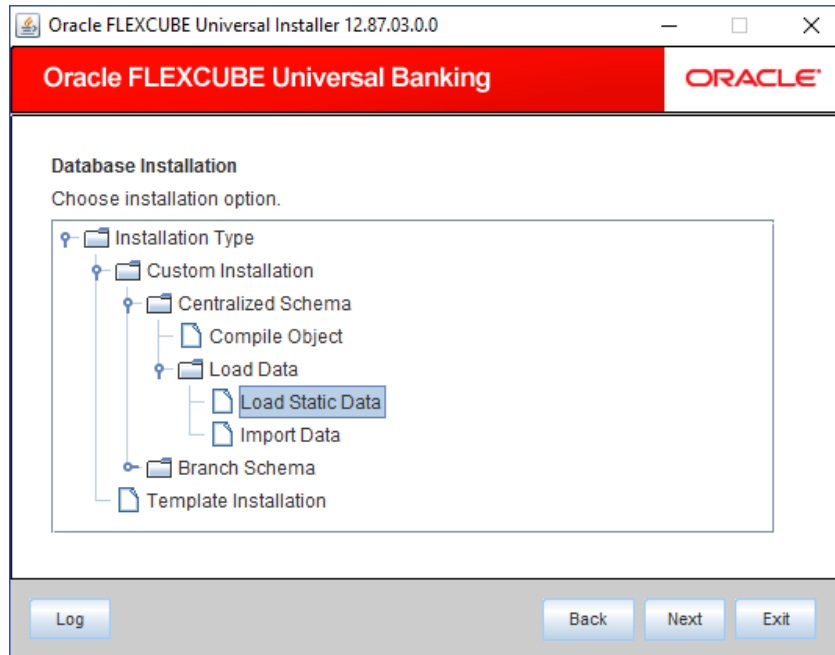
## 3.4 Loading Data

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

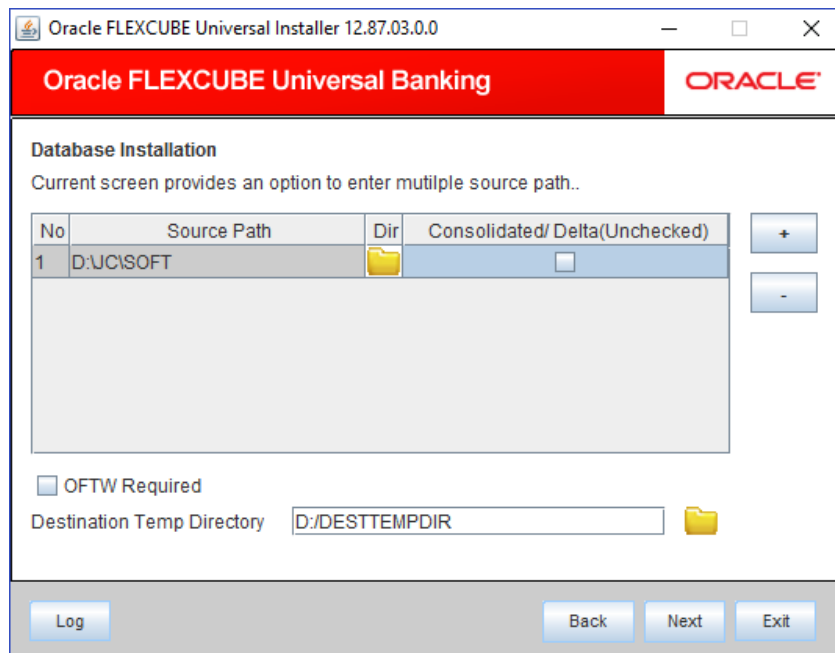
This section explains the steps to load static data into the database and the basic setup to be done.

Follow the steps given below:

1. Launch Oracle FLEXCUBE Universal Banking Solutions 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'.

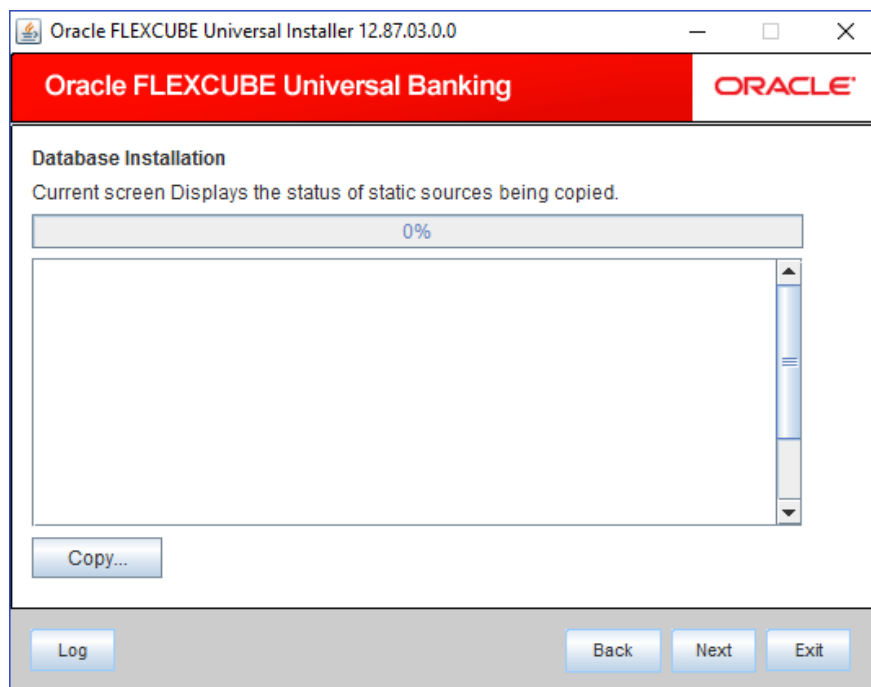
#### '+' Button

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 files from multiple source directories by clicking this button.

4. Click 'Next' to start objects copy.



5. 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. Once the copy process is completed, the Installer navigates you to the following screen.

Name	Value
Username	installer
Password	••••••••
Service Name	testdb
IP Address	10.10.10.10
Port	1521
TNS Connect Descriptor	testdb.world

No of parallel process

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.

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

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

S.No	Parameter	Current Value	Expected Value
1	_optimizer_connect_by_cost_based	FALSE	FALSE
2	_allow_level_without_connect_by	TRUE	TRUE
3	_unnest_subquery	FALSE	FALSE
4	_hash_join_enabled		FALSE
5	ALWAYS_SEMI_JOIN		NESTED_LOOPS
6	_optimizer_cost_based_transformation	OFF	off
7	audit_trail	DB	NONE
8	blank_trimming	TRUE	TRUE
9	cursor_sharing	FORCE	EXACT

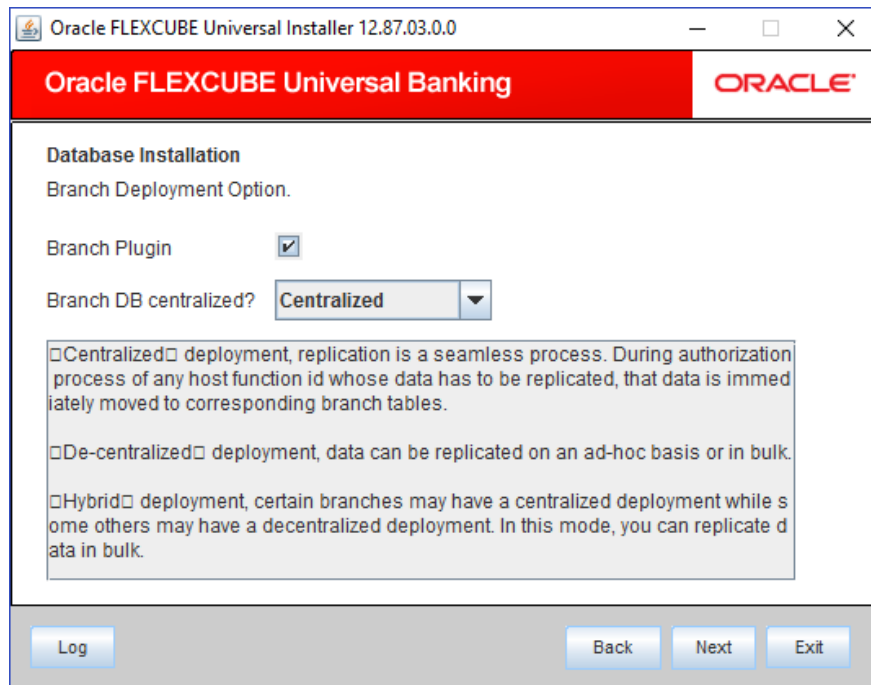
10. This screen displays the parameter details of the database. This is for information purpose.

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

S.No	Grant Privilege Required	Grant provided
1	CREATE SESSION	Y
2	CREATE TYPE	Y
3	CREATE TRIGGER	Y
4	CREATE TABLE	Y
5	CREATE DATABASE LINK	Y
6	CREATE LIBRARY	Y
7	CREATE SYNONYM	Y
8	CREATE SEQUENCE	Y

12. 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.

Click 'Next'. The following screen is displayed.



13. 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.

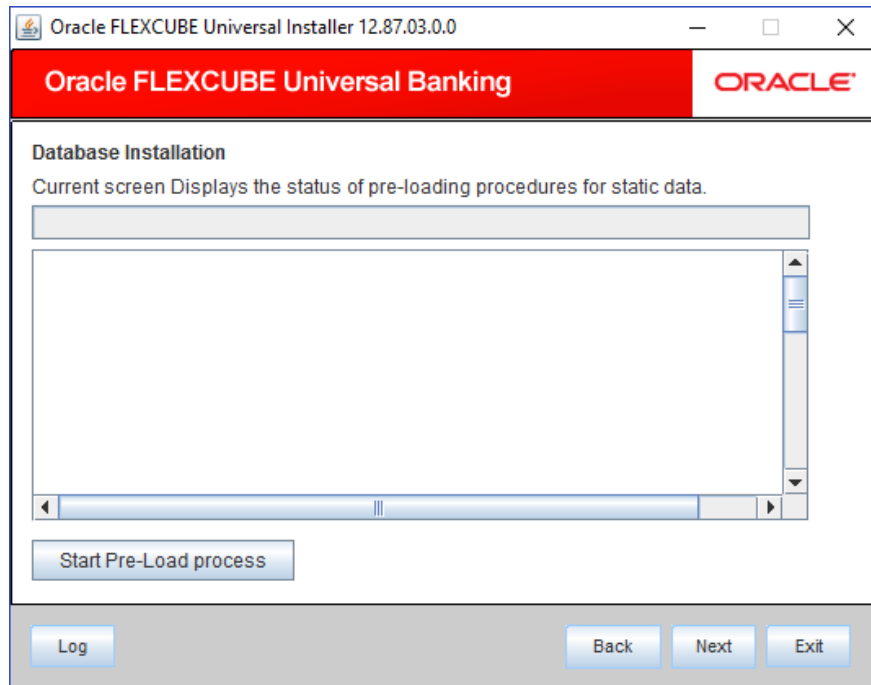
### Branch DB Centralized?

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

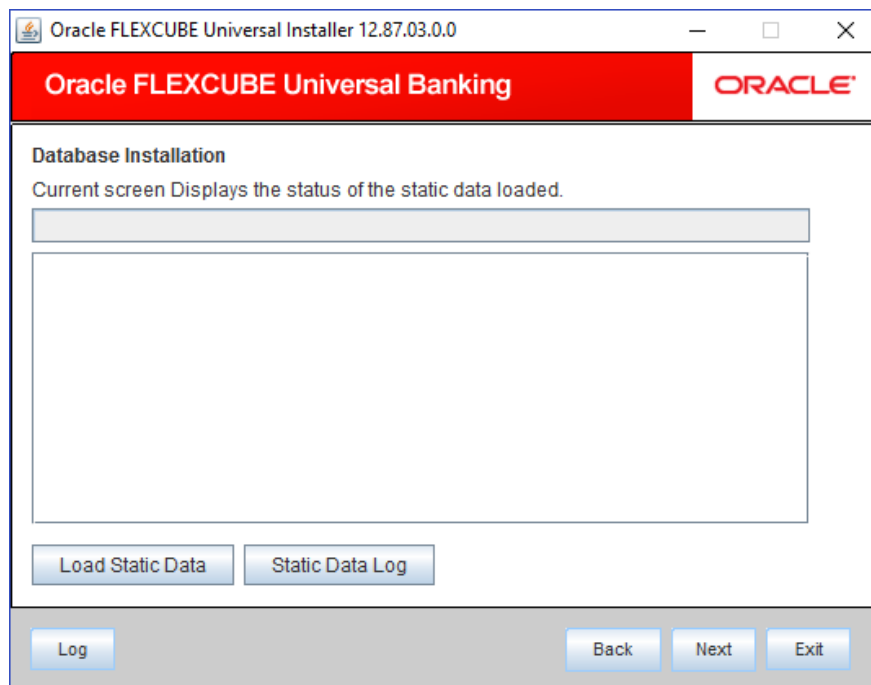
- Centralized
- Decentralized
- Hybrid



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



14. 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.
15. One 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.

S.No.	Param Name	Param value
1	KIR_UPLOAD_DIR	/everest/jay
2	BRANCH_PROFITABILITY	Y
3	EIM_TOLERANCE_DECIMALS	15
4	TRACK_LIABILITY	Y
5	PROJFINCMTRATE	INTEREST_RATE
6	ELCM_USER_ID	SYSTEM
7	LAST_LIQD_DATE	N
8	VDBAL_UPDATE	OFFLINE

18. Here, you can do the basic maintenances for the table 'CSTB\_PARAM'.

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

Bank Code: CH0

Bank Name: City Head Office

Branch Code: 001

Cheque Number Mask: NNNNNN

RM\_HIERARCHY\_SETUP: N

20. Here you can do the basic maintenances for the tables 'STTM\_BANK' and 'STTM\_BRANCH'.

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

The screenshot shows the 'Basic Setup Details' window of the Oracle FLEXCUBE Universal Installer 12.87.03.0.0. The window has a red header bar with 'Oracle FLEXCUBE Universal Banking' and the 'ORACLE' logo. Below the header, the title 'Basic Setup Details' is followed by the instruction 'Basic details about dates. The Date Format must be yyyy/mm/dd.' There are four input fields for dates: 'Input Date' (2017/06/05), 'Current Business Date' (2017/06/05), 'Previous Business Date' (2017/06/04), and 'Next Business Date' (2017/06/06). At the bottom, there are three buttons: 'Log', 'Back', 'Next', and 'Exit'.

Field	Value
Input Date	2017/06/05
Current Business Date	2017/06/05
Previous Business Date	2017/06/04
Next Business Date	2017/06/06

22. Here, you can do the basic maintenances for the table 'STTM\_DATES'.

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

The screenshot shows the 'Basic Setup Details' window of the Oracle FLEXCUBE Universal Installer 12.87.03.0.0. The window has a red header bar with 'Oracle FLEXCUBE Universal Banking' and the 'ORACLE' logo. Below the header, the title 'Basic Setup Details' is followed by the instruction 'Currency Details.' There are six input fields for currency configuration: 'Local Currency Code' (USD), 'Local Currency Name' (US Dollar), 'Current Fin Cycle' (2011), 'Current Fin Period' (QT1), 'ISO Currency Code' (294), and 'Currency Decimals Allowed' (2). At the bottom, there are three buttons: 'Log', 'Back', 'Next', and 'Exit'.

Field	Value
Local Currency Code	USD
Local Currency Name	US Dollar
Current Fin Cycle	2011
Current Fin Period	QT1
ISO Currency Code	294
Currency Decimals Allowed	2

24. Here, you can do the basic maintenances for the table 'CYTM\_CCY\_DEFN'.

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

Oracle FLEXCUBE Universal Installer 12.87.03.0.0

**Oracle FLEXCUBE Universal Banking** ORACLE

**Basic Setup Details**  
User Creation with SMS role for login into the Oracle FLEXCUBE.

☐ External Password

No	User Name	Password or LDAP User name
1	ADMINUSER1	*****
2	ADMINUSER2	*****

Log Back Next Exit

26. Here you can do the basic maintenances for the table 'SMTB\_USER' and 'SMTB\_USER\_ROLE'.

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

Oracle FLEXCUBE Universal Installer 12.87.03.0.0

**Oracle FLEXCUBE Universal Banking** ORACLE

**Basic Setup Details**  
Current screen Displays the status of the Basic Setup.

0%

Start Setup SMS users Log

Log Back Next Exit

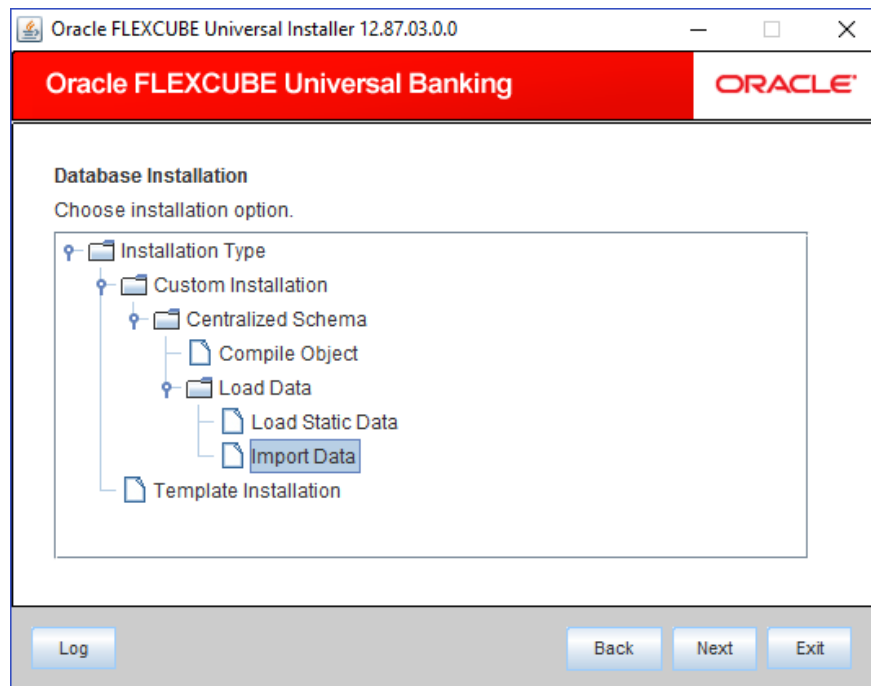
28. Click 'Start Setup' button to compile the entries.

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

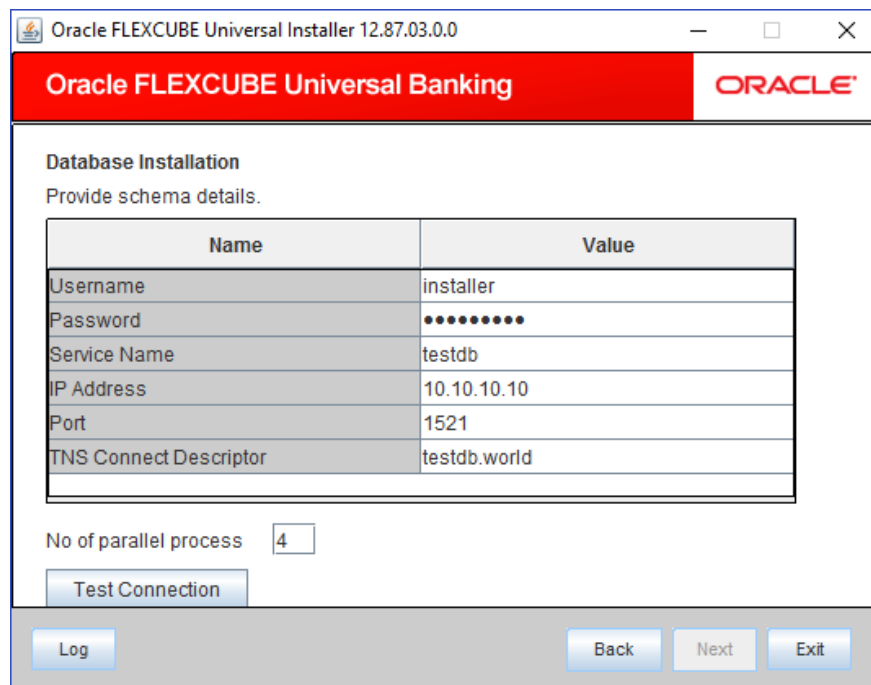
### 3.4.1 Import Database Installation

Data import is an alternative method of loading static data into the database. This section describes the process of Import DB installation.

1. Launch Oracle FLEXCUBE Universal Banking Solutions Installer.



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



3. Specify the following schema details:

### User Name

Specify the user name to access the database schema.

### Password

Enter the database 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.

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

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

Oracle FLEXCUBE Universal Banking

ORACLE

Database Installation

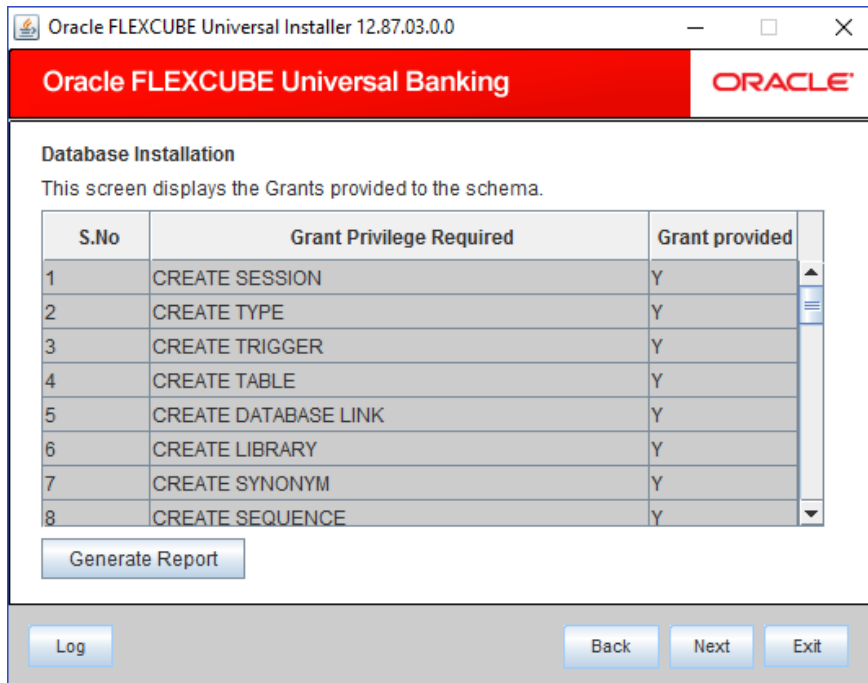
This screen displays the parameters to be configured in v\$parameter table.

S.No	Parameter	Current Value	Expected Value
1	_optimizer_connect_by_cost_based	FALSE	FALSE
2	_allow_level_without_connect_by	TRUE	TRUE
3	_unnest_subquery	FALSE	FALSE
4	_hash_join_enabled		FALSE
5	ALWAYS_SEMI_JOIN		NESTED_LO...
6	_optimizer_cost_based_transformation	OFF	off
7	audit_trail	DB	NONE
8	blank_trimming	TRUE	TRUE
9	cursor_sharing	FORCE	EXACT

Log Back Next Exit

6. This screen displays the parameter details of the database. This is for information purpose.

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



Oracle FLEXCUBE Universal Installer 12.87.03.0.0

Oracle FLEXCUBE Universal Banking ORACLE

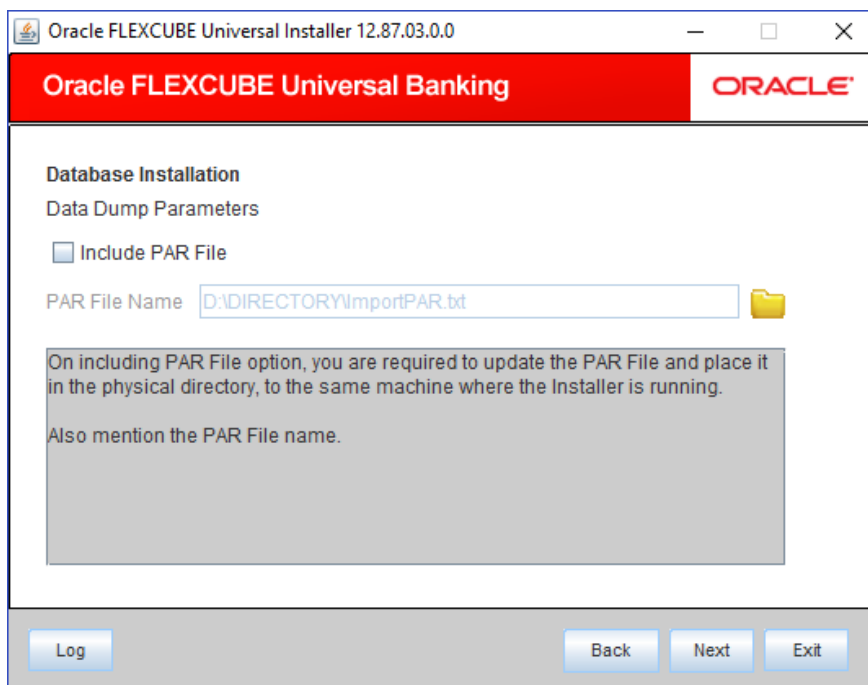
**Database Installation**  
This screen displays the Grants provided to the schema.

S.No	Grant Privilege Required	Grant provided
1	CREATE SESSION	Y
2	CREATE TYPE	Y
3	CREATE TRIGGER	Y
4	CREATE TABLE	Y
5	CREATE DATABASE LINK	Y
6	CREATE LIBRARY	Y
7	CREATE SYNONYM	Y
8	CREATE SEQUENCE	Y

Generate Report

Log Back Next Exit

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.




Oracle FLEXCUBE Universal Installer 12.87.03.0.0

Oracle FLEXCUBE Universal Banking ORACLE

**Database Installation**  
Data Dump Parameters

☐ Include PAR File

PAR File Name  

On including PAR File option, you are required to update the PAR File and place it in the physical directory, to the same machine where the Installer is running.

Also mention the PAR File name.

Log Back Next Exit

10. Specify the following details:

### Include PAR File

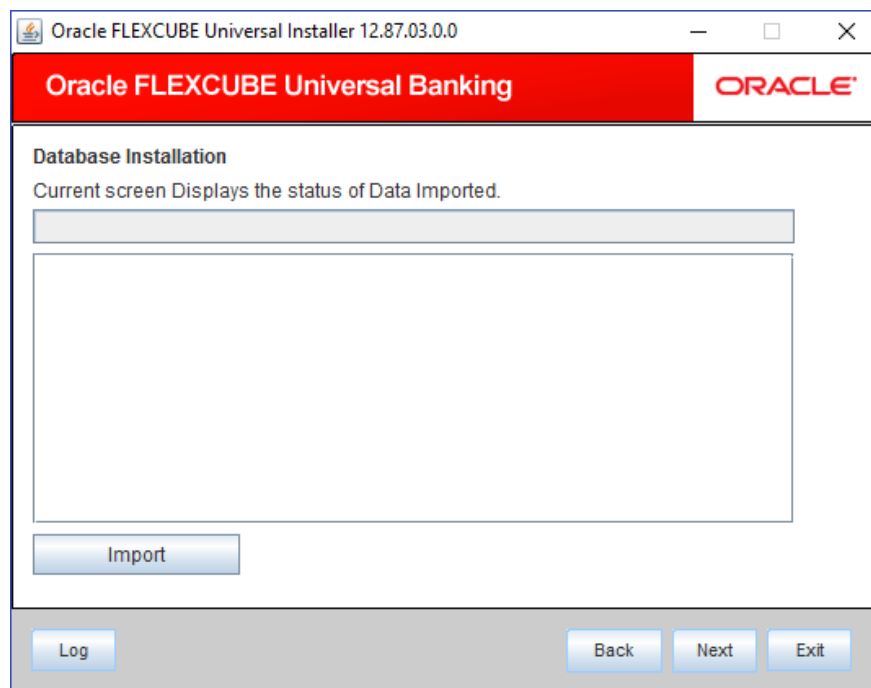
Check this box to include the PAR file. If you check this box, you need to specify the PAR file name.

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. Click 'Import' button to import the database with the PAR file parameters.



If you have not checked the box 'Include PAR File',

Oracle FLEXCUBE Universal Installer 12.87.03.0.0

**Oracle FLEXCUBE Universal Banking** **ORACLE**

**Database Installation**  
Data Dump Parameters

Oracle Directory Name

Please ensure that the Oracle Directory name mentioned above is created in the server.  
Also, ensure that the physical directory, the Oracle directory is pointing to is also present.

Log Back Next Exit

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

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

Oracle FLEXCUBE Universal Installer 12.87.03.0.0

**Oracle FLEXCUBE Universal Banking** **ORACLE**

**Database Installation**  
Data Dump Parameters

Dump File Name

Export Schema Name

Export Schema Tablespace

Please ensure that the Dump file name mentioned is present in the Oracle Directory in the server.  
For more details refer the log file associated with the dump file present in the baseline area.

Log Back Next Exit

15. 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.

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

The screenshot shows a window titled "Oracle FLEXCUBE Universal Installer 12.87.03.0.0". The window has a red header bar with "Oracle FLEXCUBE Universal Banking" and the "ORACLE" logo. Below the header, the main content area is titled "Database Installation" and "Data Dump Parameters". It contains two input fields: "Import Schema Name" with the value "FCTEST" and "Import Schema Tablespace" with the value "FCTEST". Below these fields is a text box with the instruction: "Provide the schema name and schema tablespace which has been created to import through Datapump." At the bottom of the window, there are four buttons: "Log", "Back", "Next", and "Exit".

17. Specify the following details:

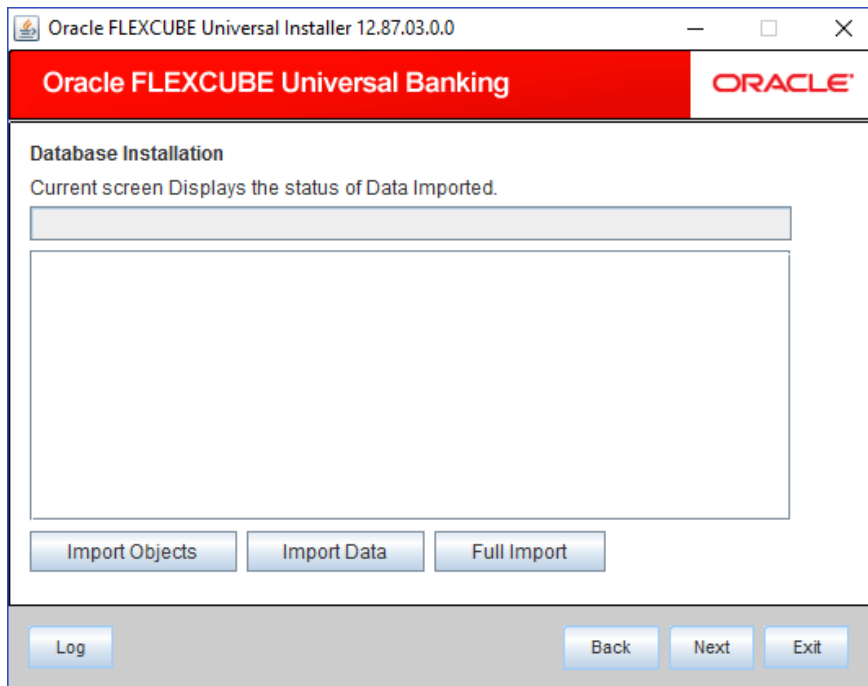
**Import Schema Name**

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

**Import Schema Table space**

Specify the import schema table space to which the import file is loaded.

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

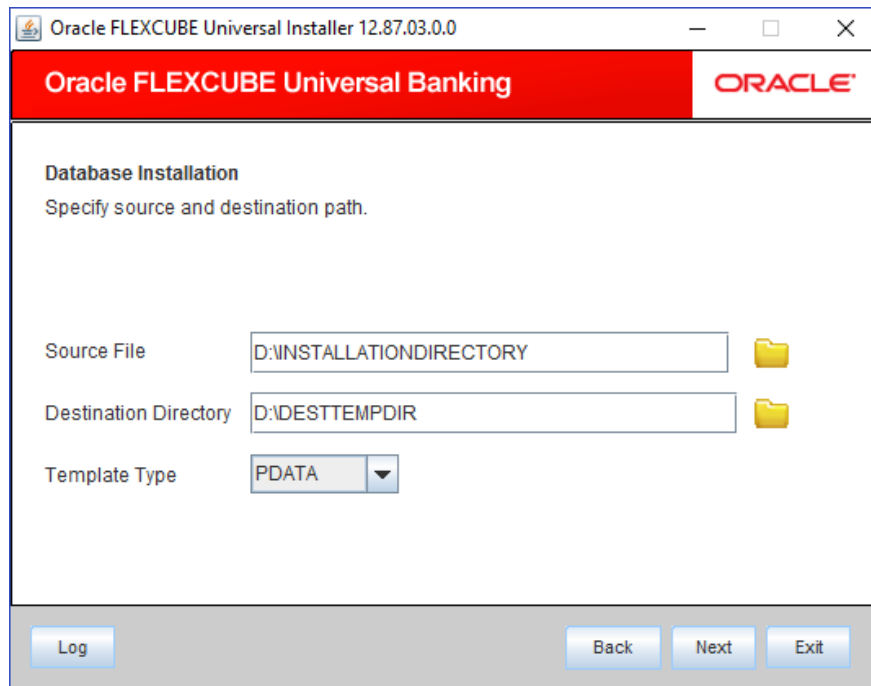


19. This triggers the import operation. You can optionally import the objects, data or full set by using 'Import Objects', 'Import Data' or 'Full Import' buttons respectively.

### 3.4.2 Template Database Installation

Template database installation is an alternative method to setup the database. Oracle DBCA tool is used in this process. This section describes the process of template database installation.

1. Launch Oracle FLEXCUBE Universal Banking Solutions Installer.
2. Select 'Template Installation' and click 'Next'. The following screen is displayed.



The screenshot shows the 'Oracle FLEXCUBE Universal Banking Solutions Installer 12.87.03.0.0' window. The title bar includes the Oracle logo and window controls. The main window has a red header with 'Oracle FLEXCUBE Universal Banking' and the 'ORACLE' logo. Below the header, the 'Database Installation' section is titled 'Specify source and destination path.' It contains three input fields: 'Source File' with the value 'D:\INSTALLATIONDIRECTORY', 'Destination Directory' with the value 'D:\DESTTEMPDIR', and 'Template Type' with a dropdown menu showing 'PDATA'. To the right of each text field is a yellow folder icon. At the bottom of the window, there are four buttons: 'Log', 'Back', 'Next', and 'Exit'.

3. Specify the following details:

#### **Source File**

Specify the location of the source file. You can use the directory icon to browse to the appropriate file location.

#### **Destination Directory**

Specify the destination. You can use the directory icon to browse to the appropriate file location.

#### **Template Type**

Specify the template type. You can choose one of the following destination types.

- PDATA
- MDATA

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

Oracle FLEXCUBE Universal Installer 12.87.03.0.0

**Oracle FLEXCUBE Universal Banking** ORACLE

**Database Template Installation**  
Following screen takes up the DB Unique Name and the SID for the DB used.

DB Unique Name

SID

Provide the DB Name and the SID.

5. Specify the following details:

**DB Unique name**

Specify a unique name of the database.

**SID**

Specify the SID of the database.

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

Oracle FLEXCUBE Universal Installer 12.87.03.0.0

**Oracle FLEXCUBE Universal Banking** ORACLE

**Database Template Installation**  
The following screen Launches the Oracle DBCA tool.

Oracle Database Home

☒ Copy FCUBS Database Template  
☒ Auto Launch Oracle DBCA

Enter the location of ORACLE\_HOME for Oracle Database home

7. Specify the following details:

#### **Oracle Database Home**

Specify the Oracle database home directory. You can use the 'Browse' button to browse and select the appropriate directory.

#### **Copy FCUBS Database Template**

Check this box to use the existing FCUBS template.

#### **Auto Launch Oracle DBCA**

Check this box to launch the Oracle DBCA tool. If you check this button and click next, the installer will start Oracle DBCA tool, from which you can proceed with the database installation.

---

## 4. Oracle FLEXCUBE Branch Schema Installation

### 4.1 Introduction

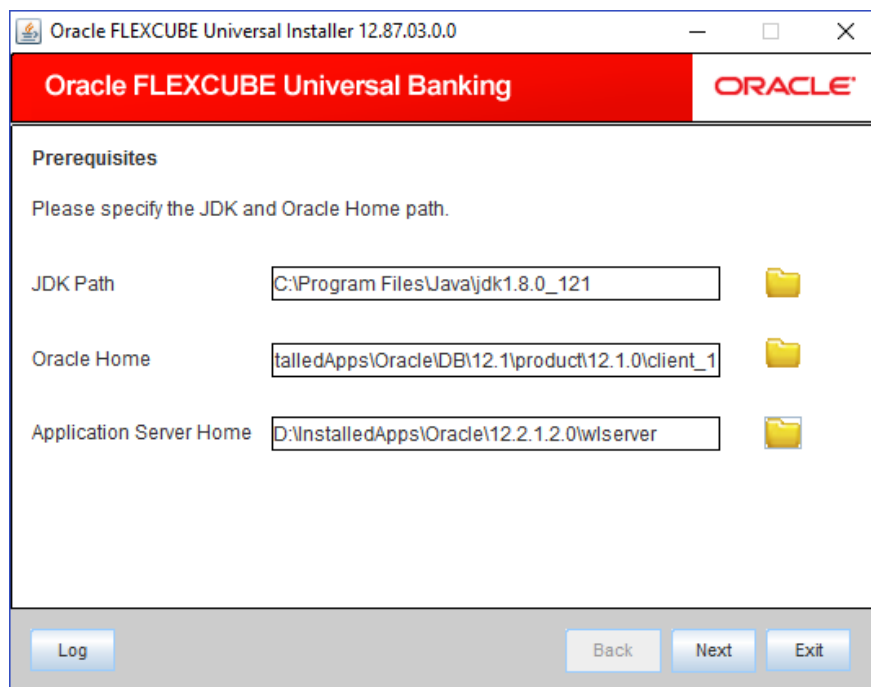
This document explains the steps to install Oracle FLEXCUBE UBS branch schema using installer. The installation of the branch schema includes the following steps:

1. Compiling branch objects
2. Loading branch data
3. Hosting data replication

### 4.2 Compiling Branch Objects

To compile the branch objects, follow the instructions below:

1. Double-click 'FCUBSInstaller.bat' batch file to launch Oracle FLEXCUBE Universal Installer. The following screen is displayed.



2. Specify the following details:

#### **JDK Path**

Specify the location of the JDK. You can use the directory button to browse to the JDK location.

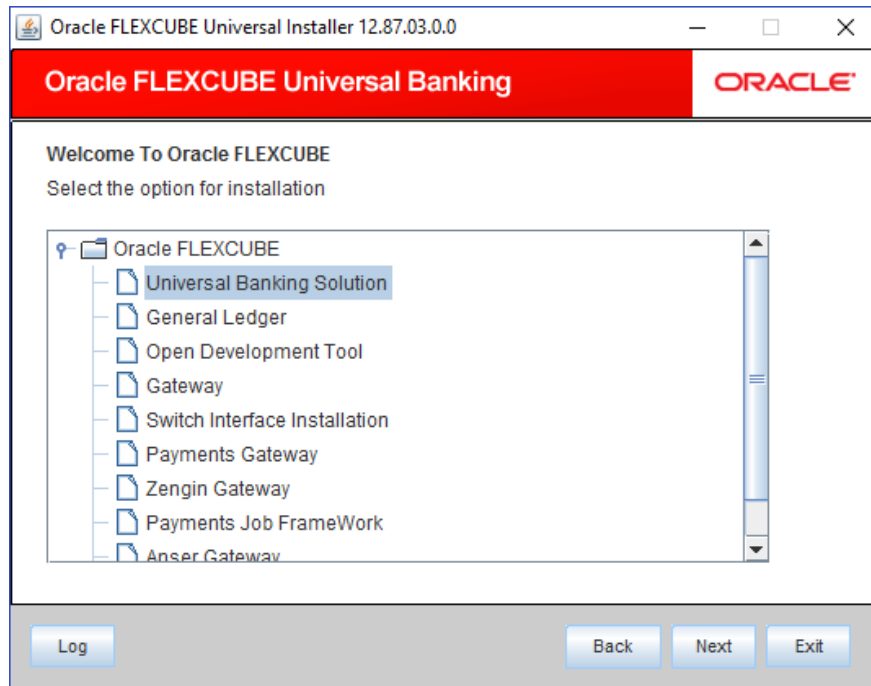
#### **Oracle Home**

Specify the location of the Oracle Home installation. You can use the directory button to browse to the location.

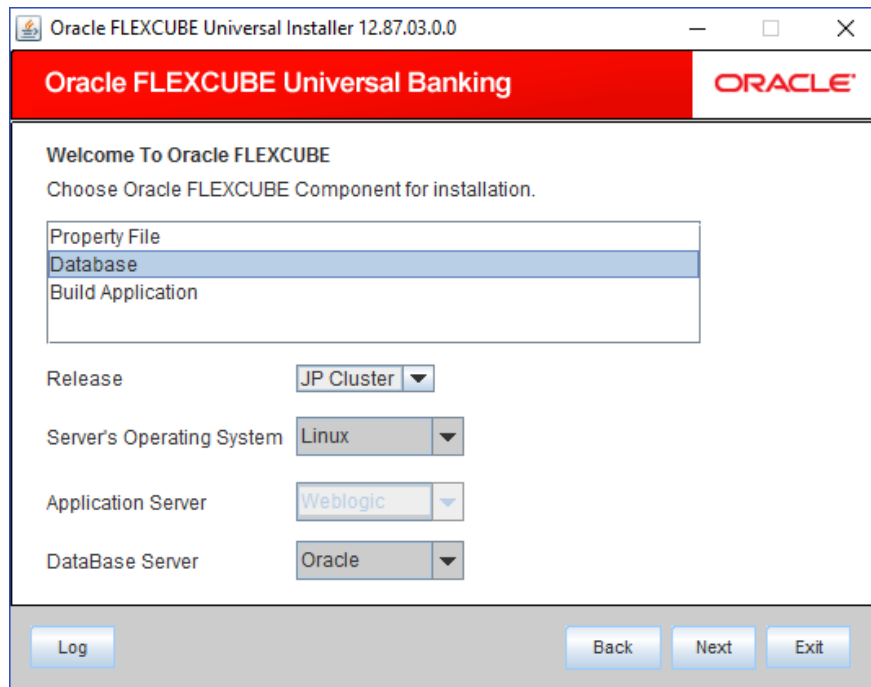
## Weblogic Home

Specify the location of the Weblogic Home installation. You can use the directory button to browse to the location

3. Click 'Next' to proceed. The following screen is displayed.



4. Choose 'Universal Banking Solution' and click 'Next'. The following screen is displayed.





5. Choose 'Database' as component for installation. You also need to specify the following details:

### Operating System and Version

Select the operating system in which you are building the Application from the drop-down list. You also need to specify the version of the selected operating system.

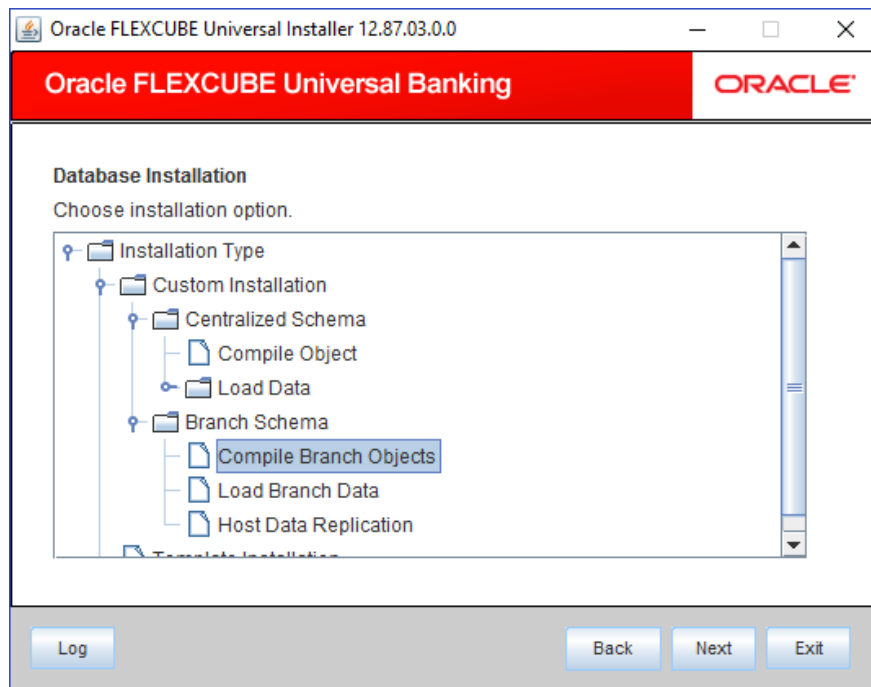
### Database Server and Version

Select the database server in which you are building the Application from the drop-down list. You also need to specify the version of the selected database server.

### Release

Specify the release which you want to install.

6. Click 'Next' to continue. The database installation options are displayed.



7. Go to Installation Type > Custom Installation > Branch Installation and select 'Compile Branch Objects'. Click 'Next'. The following screen is displayed.

Oracle FLEXCUBE Universal Installer 12.87.03.0.0

**Oracle FLEXCUBE Universal Banking** ORACLE

**Branch Schema Installation**  
Current screen provides an option to enter mutiple source path..

No	Source Path	Dir	Consolidated/ Del...
1	D:/1202Src		<input type="checkbox"/>

Destination Temp Directory:

Log Back Next Exit

8. Specify the following details:

### 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'.

### Source Path

Specify the location of the source directory. You can use the directory button to browse to the required location.

### Destination Temp Directory

Specify the location of the destination directory. You can use the directory button to browse to the required location.

9. Click 'Next' to proceed. The following screen is displayed.

Name	Value
Username	installer
Password	.....
Service Name	testdb
IP Address	10.10.10.10
Port	1521
TNS Connect Descriptor	testdb.world

10. Specify the following branch 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**

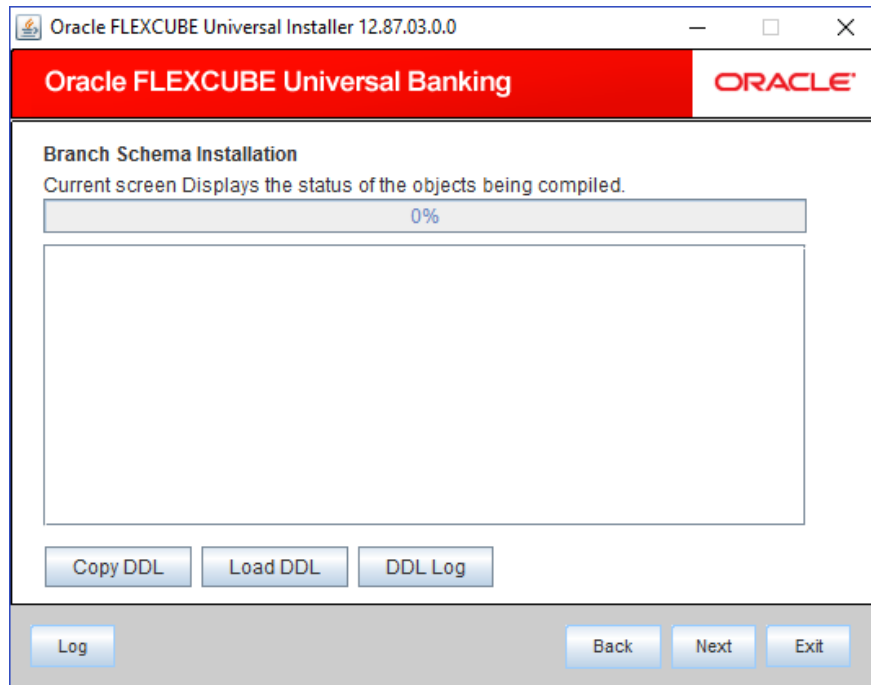
Specify the IP address of the system where the database schema is installed.

**Port**

Specify the port number.

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

12. After testing the connection, click 'Next' to proceed. The following screen is displayed.



13. Click 'Copy DDL' button to copy all the DDL files from source directory to the destination directory.

14. Click 'Load DDL' button to load the branch DDLs into the branch schema. The compilation status is displayed.

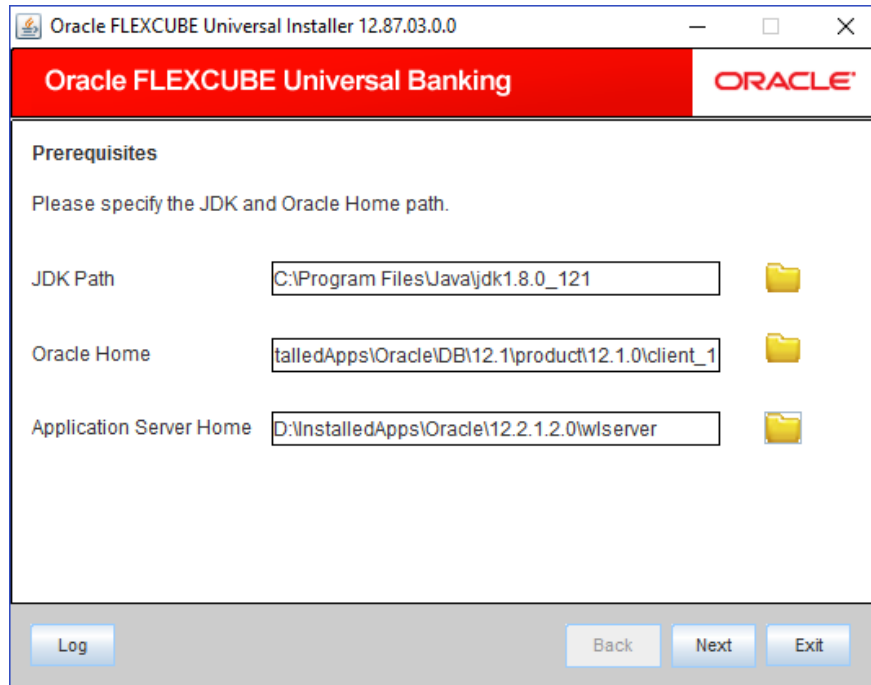
**Note:** You can click the 'DDL Log' button to view the DDL log.

This completes the process of compiling branch objects.

## 4.3 Loading Branch Data

Once you have compiled branch objects, you need to load the branch data. To load the branch data, follow the instructions below:

1. Double-click 'FCUBSInstaller.bat' batch file to launch Oracle FLEXCUBE Universal Installer. The following screen is displayed.



2. Specify the following details:

### **JDK Path**

Specify the location of the JDK. You can use the directory button to browse to the JDK location.

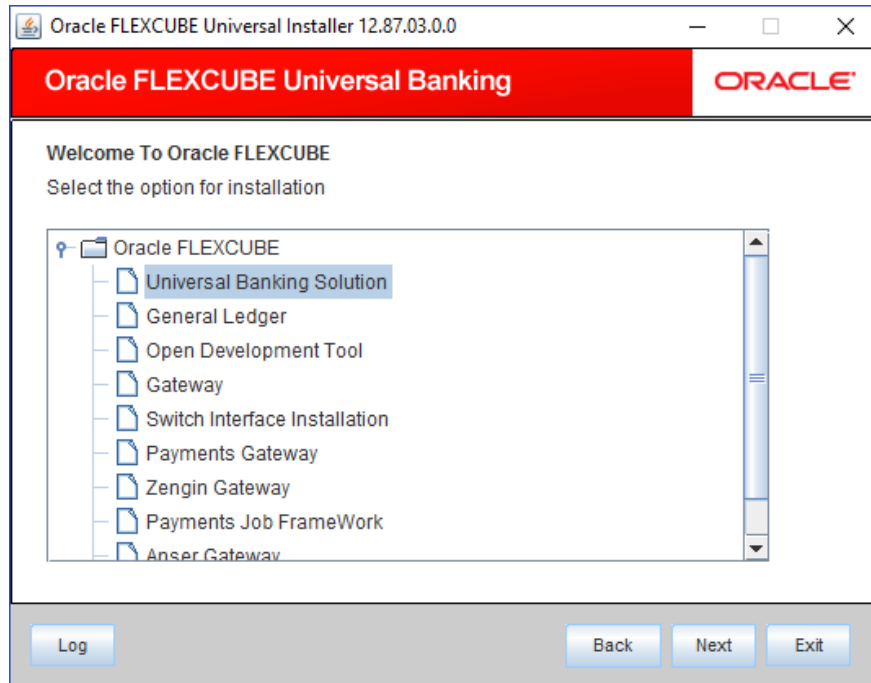
### **Oracle Home**

Specify the location of the Oracle Home installation. You can use the directory button to browse to the location.

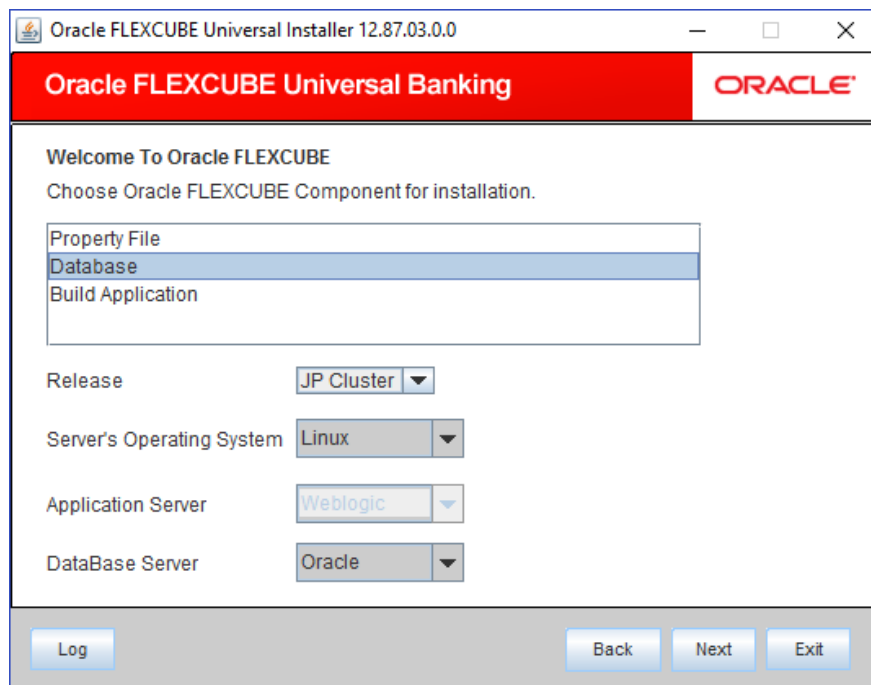
### **Weblogic Home**

Specify the location of the Weblogic Home installation. You can use the directory button to browse to the location

3. Click 'Next' to proceed. The following screen is displayed.



4. Choose 'Universal Banking Solution' and click 'Next'. The following screen is displayed.



5. Choose 'Database' as the component for installation. You also need to specify the following details

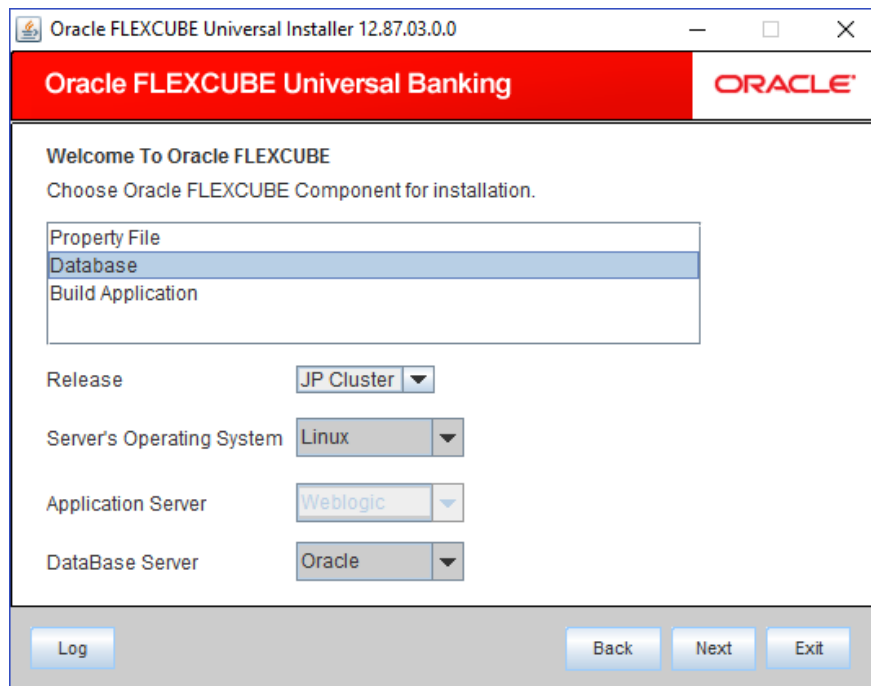
### Operating System and Version

Select the operating system in which you are building the Application from the drop-down list. You also need to specify the version of the selected operating system.

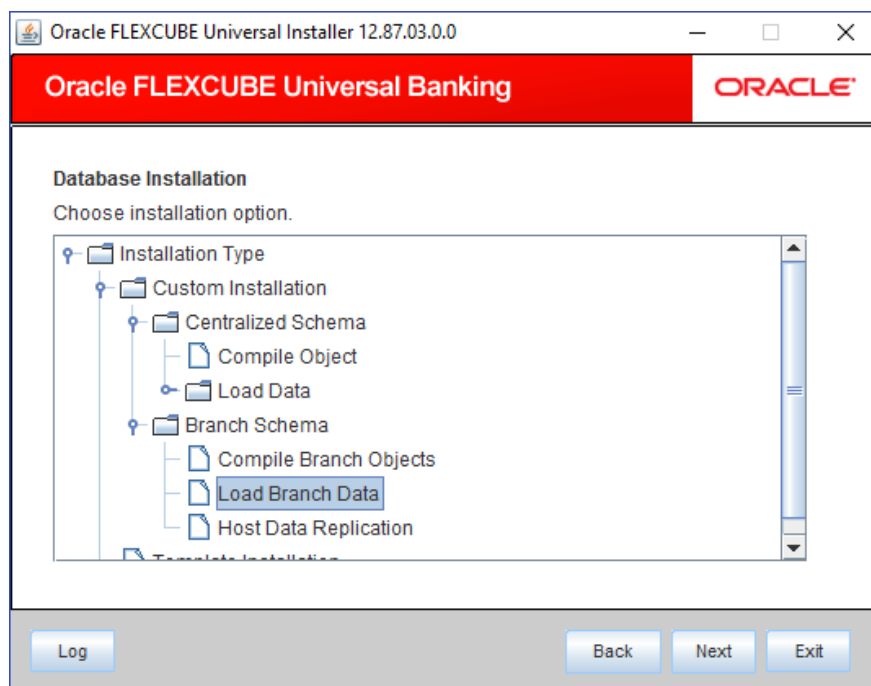
## Database Server and Version

Select the database server in which you are building the Application from the drop-down list. You also need to specify the version of the selected database server.

6. Click 'Next' to continue. The installer displays the database installation options.



7. Go to Installation Type > Custom Installation > Branch Installation and select 'Load Branch Data'. Click 'Next'. The following screen is displayed.



Oracle FLEXCUBE Universal Installer 12.87.03.0.0

**Oracle FLEXCUBE Universal Banking** **ORACLE**

**Branch Schema Installation**  
Current screen provides an option to enter mutiple source path..

No	Source Path	Dir	Consolidated/ Del...
1	D:\JC\SOFT		<input type="checkbox"/>

+

-

Destination Temp Directory

Log Back Next Exit

8. Specify the following details:

### 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'.

### Source Path

Specify the location of the source directory. You can use the directory button to browse to the required location.

### Destination Temp Directory

Specify the location of the destination directory. You can use the directory button to browse to the required location.



9. Click 'Next' to proceed. The following screen is displayed.

Name	Value
Username	installer
Password	••••••••
Service Name	testdb
IP Address	10.10.10.10
Port	1521
TNS Connect Descriptor	testdb.world

No of parallel process

10. Specify the following branch 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**

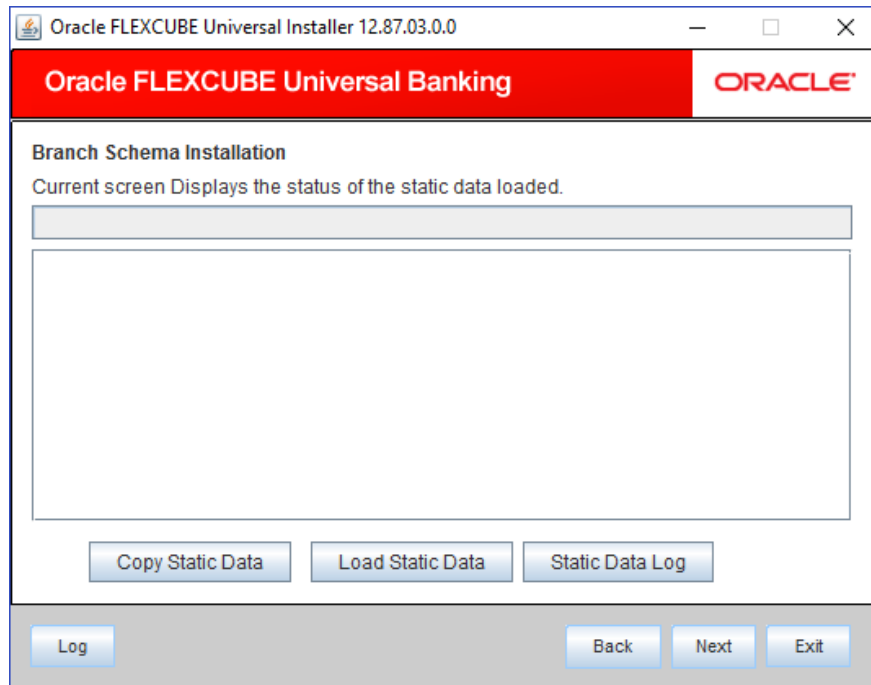
Specify the IP address of the system where the database schema is installed.

**Port**

Specify the port number.

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

12. Click 'Next' to proceed. The following screen is displayed. .



13. Click 'Copy Static Data' button to copy the branch INC files from source directory to the destination directory.

14. Click 'Load Static Data' button to load the branch related INCs in the Branch schema. The loading status of the static data is displayed.

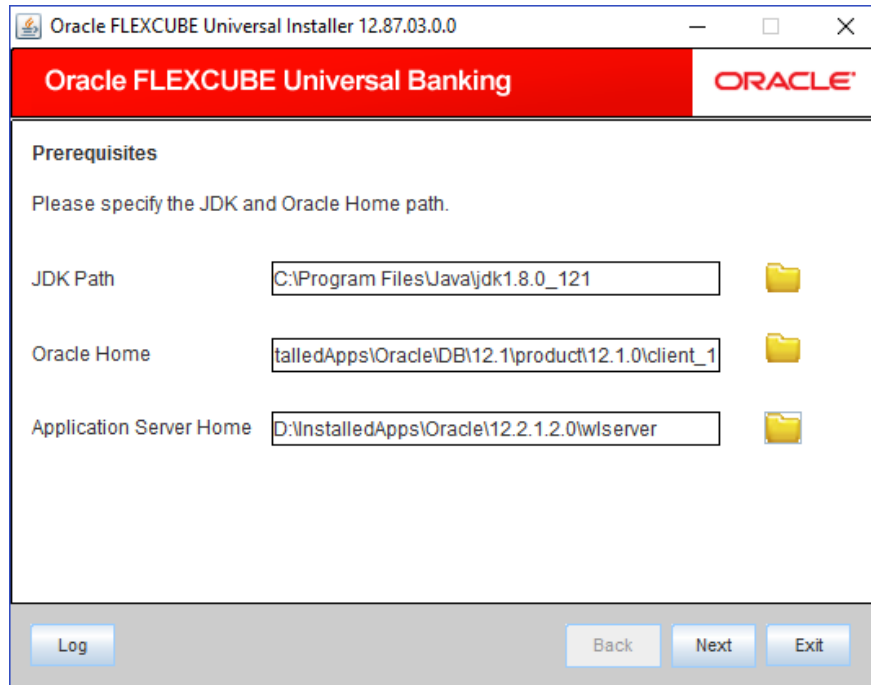
**Note:** You can click the 'Static Data Log' button to view the Static Data compilation log.

This completes the process of loading branch data.

## 4.4 Host Data Replication

After compiling branch objects and loading branch data, you need to host data replication. To host the data replication, follow the steps given below.

1. Double-click 'FCUBSInstaller.bat' batch file to launch Oracle FLEXCUBE Universal Installer. The following screen is displayed.



2. Specify the following details:

### **JDK Path**

Specify the location of the JDK. You can use the directory button to browse to the JDK location.

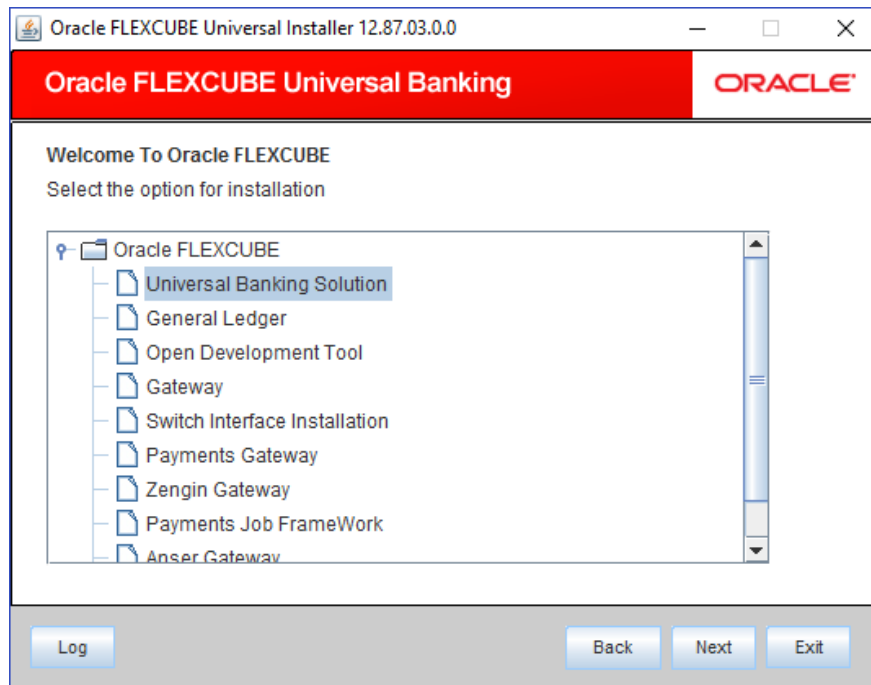
### **Oracle Home**

Specify the location of the Oracle Home installation. You can use the directory button to browse to the location.

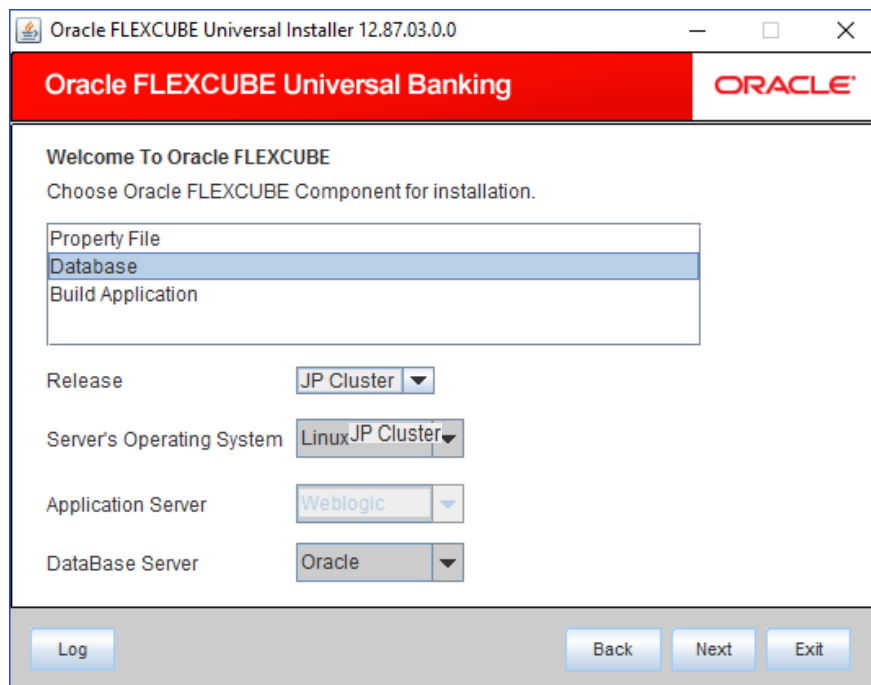
### **Weblogic Home**

Specify the location of the Weblogic Home installation. You can use the directory button to browse to the location

3. Click 'Next' to proceed. The following screen is displayed.



4. Choose 'Universal Banking Solution' and click 'Next'. The following screen is displayed.



5. Choose the option 'Database'. You also need to specify the following details

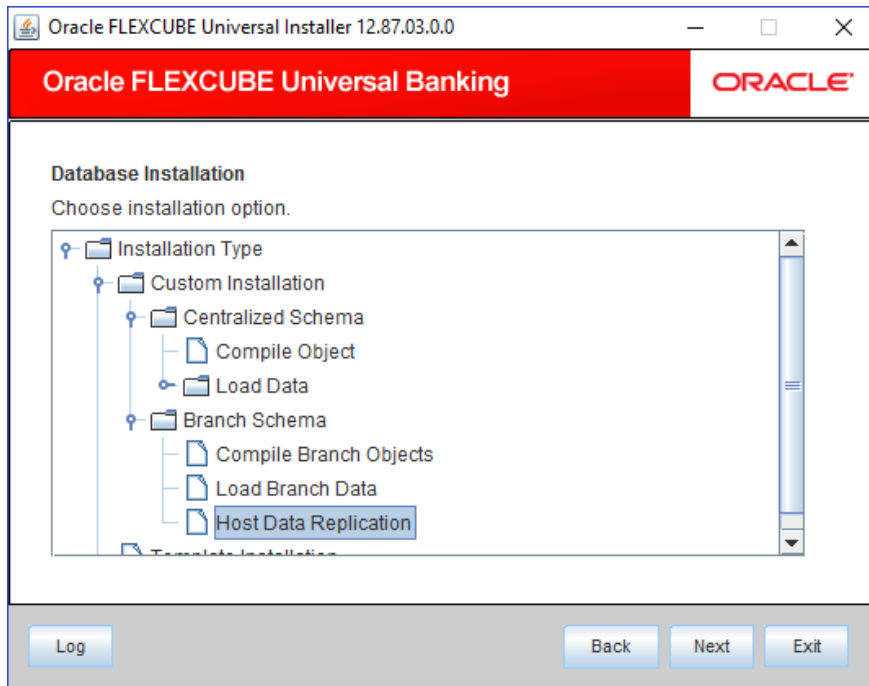
### Operating System and Version

Select the operating system in which you are building the Application from the drop-down list. You also need to specify the version of the selected operating system.

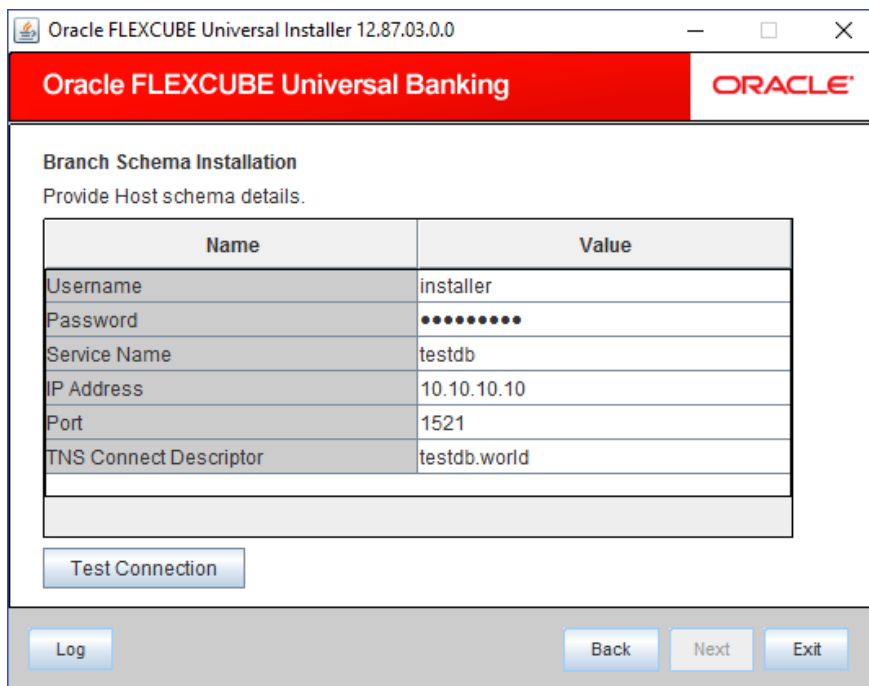
## Database Server and Version

Select the database server in which you are building the Application from the drop-down list. You also need to specify the version of the selected database server.

6. Click 'Next' to continue. The installer displays the database installation options.



7. Go to Installation Type > Custom Installation > Branch Installation and select 'Host Data Replication'. Click 'Next'. The following screen is displayed.



8. Specify the following host 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.

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

10. Click 'Next' to proceed. The following screen is displayed.

Oracle FLEXCUBE Universal Installer 12.87.03.0.0

**Oracle FLEXCUBE Universal Banking** ORACLE

**Branch Schema Installation**  
Provide the Branch details for which the data needs to be extracted

Branch Code	User Name	Password	Connection...	IP Address	Port
WB1	installer	●●●●●●●●	testdb	10.10.10.10	1521

Validate Branch Details

Log Back Next Exit

11. Specify the following details:

### Branch Code

In case of centralized mode of branch replication, you need to specify 'CN' as the branch code. Multiple branch replications are not allowed in centralized mode.

In decentralized mode, multiple branch replications are allowed. You can specify more branch codes by adding more rows to the list. In that case, you need to specify the schema details for each branch.

### User Name

Specify the user name to access the schema.

### Password

Enter the schema password.

### Connection String

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

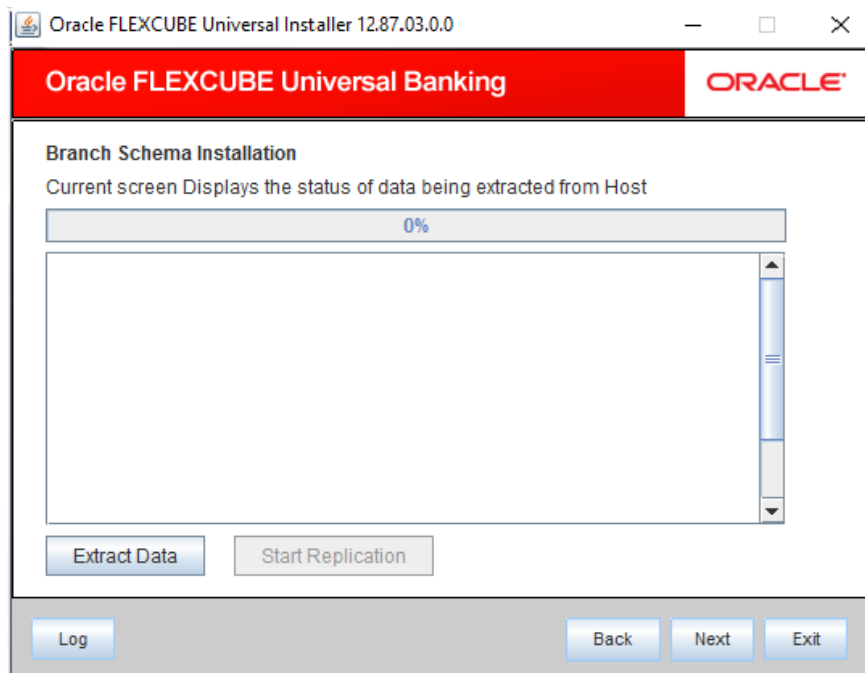
### IP Address

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

### Port

Specify the port number.

12. Click 'Validate Branch Details' button. When the details are successfully validated, the 'Next' button will be enabled. Click 'Next' to continue with the following screen.



13. Click 'Extract Data' button to extract data from the host schema. The data for each selected branch will be stored in temporary tables (INS\_BRANCHCODE\_BRANCHCODE and SEQ\_BRANCH\_CODE\_BRANCHCODE). Then, the Installer will extract the data to text files from the temporary tables. Once the data has been extracted, the temporary tables will be truncated.

The status of the data being extracted from the host schema is displayed in the above screen.

14. Click 'Start Replication' button to run the extracted files for each branch in its respective schema.

This completes the process of the branch schema installation.





Setting up Database  
[June] [2017]  
Version 12.87.03.0.0

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