Setting up Database
Oracle FLEXCUBE Universal Banking
Version-11.3.0
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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 that are available in the shipment media.

1.2 Prerequisites

Following are the prerequisites for installing decentralize branch database:

Prerequisite	Description
Operating System	Windows 2000/XP, UNIX
Software	You will require the following software: 1. JDK1.6 or later version (Update 17 or higher for JDK1.6) 2. Oracle 11g Client or later version (Refer the release certificate)

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 11g 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
FLEXCUBE version	Oracle Database 11g Enterprise Edition Release 11.2.0.2.0 - 64bit Production

1.3.2 Setting up Database for Oracle FLEXCUBE

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

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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

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Kernel Parameter	Suggested Starting Value	Description
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
Fsasync	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)
- 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	DATA	128 1024	UNIFORM	AUTO

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TABLESPACES	Storage %	Table Space Name	Table Space Type	Extent Size (KB)	Extent Allocation Type	Segment Space Management
		FCCDATAMED 25% or 20 GB		5120		
		FCCDATALAR 60%				
FCC Index	40%	FCCINDXSML 15% or 4 GB	INDEX	128 512 5120	UNIFORM	AUTO
		FCCINDXMED 25% or 20 GB				
		FCCINDXLAR 60%				
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' in the folder 'INSTALLER/DOCS'.

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 11G 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 in the folder 'INSTALLER/DOCS'.

Listener and Tnsentries setup

Create the listener and tnsentries using Oracle net manager utility.

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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)

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 in the folder 'INSTALLER/DOCS'.

1.3.2.3 Environment Monitoring Procedures

Once Oracle FLEXCUBE database is created and being used, a set of regular monitoring steps should be carried out by the DBA. This section outlines a set of such daily, weekly and monthly tasks.

Daily Procedures

Following are the daily tasks:

- **Verify whether all instances are up**: Check whether the database instance status is up and running.
- **Review alert log**: Check Oracle FLEXCUBE instance alert log file of for error messages.
- **Verify the success of backup**: Check whether the backup taken by using database utility is successful.
- **Verify free space in table spaces**: Check whether there is enough free space to handle the day's expected growth in each table space.
- **Review contention for CPU, memory, network or disk resources**: Use OS related tool to get report on above statistics and analyze the details.

Weekly Procedures

Following are the weekly tasks:

- **Table space violations**: All indexes should lay on the appropriate index table spaces as specified at the design stage. If there are invalid indexes, those should be rebuilt to the index tablespace.
- **Security violations**: Review the client and server side network and the audit logs to for security violations.
- **Cleanup actions**: The log files of the database instance such as the alert logs, trace files and listener logs should be cleared on a weekly basis. If required, these can be archived prior to cleanup.

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)

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Suppose that you are connecting to a schema FCUBS (schema_name). The password is FCUBS and connect string is FCUBS.WORLD (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 10.2.0.0 or above.

1.5 <u>Installer Switches</u>

The installer switch is required in case of RMAN/TEMPLET based DB installations. The installation steps are maintained depending on the tag of FCUBS-ENV-CHECK.xml. This is available under the folder '<INSTALLER_PATH>/InstallOptions/Database/Config'.

    <ENVIRONMENT>

   <INSTOPT>**VER**</INSTOPT>

  </ENVIRONMENT>

Based on the following tag values, the installer will navigate to different screens:

1. **DEV**: For Development, a folder based database creation.

2. **VER**: For Vercon, a restoration of the database provided by DBA's and customization of the modules according to customer's requirements. Take a backup after the customization. The files are then ready to be shipped to the customer.

3. **TMP**: For Template, the concept remains the same as it was in the previous release of our Installer.
   Note: In case of template based DB setup, the tag value of DBCA_TEMPLATE in folder '<INSTALLER_PATH>/InstallOptions/Database/Config/FCUBS-ENV-CHECK.xml' should be the name of the template given by DBA team.
   <DBCA_TEMPLATE>FCUBS_ModelBank</DBCA_TEMPLATE>

4. **PRD**: For Customers, the RMAN backup is bundled in the installer. This will restore the database at customer site.

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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.

$ 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.

2.3 Creating Schema from Shipment Media

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

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2.3.1 Load 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.

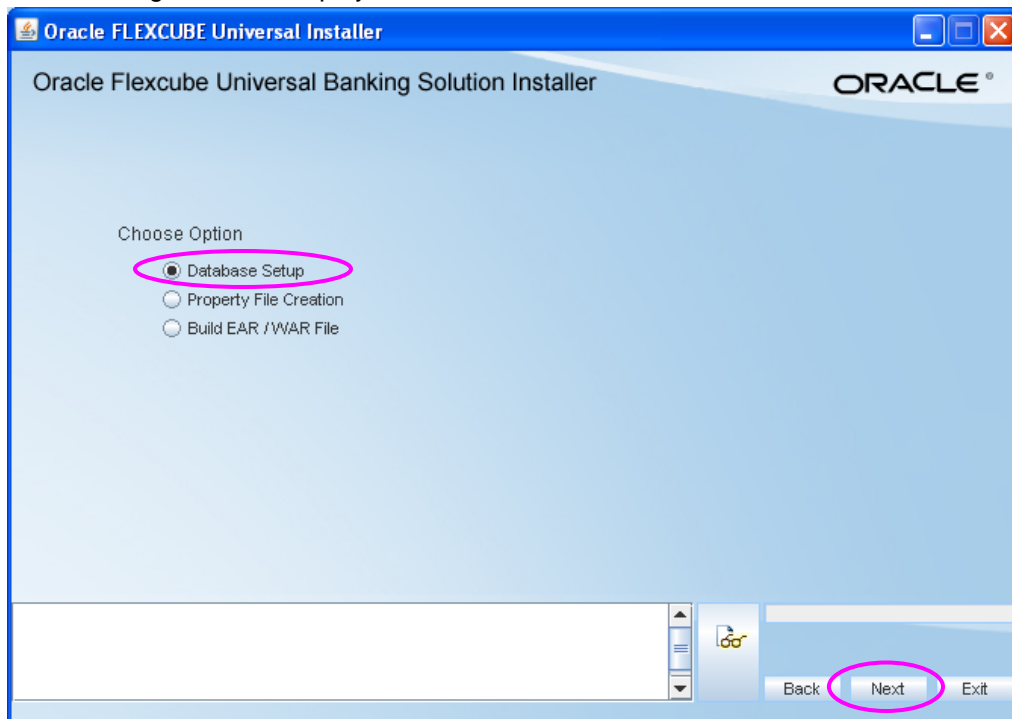### 2.3.1.1 Loading Objects from Shipment Media

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

1. Launch Oracle FLEXCUBE Universal Banking Solution Installer.
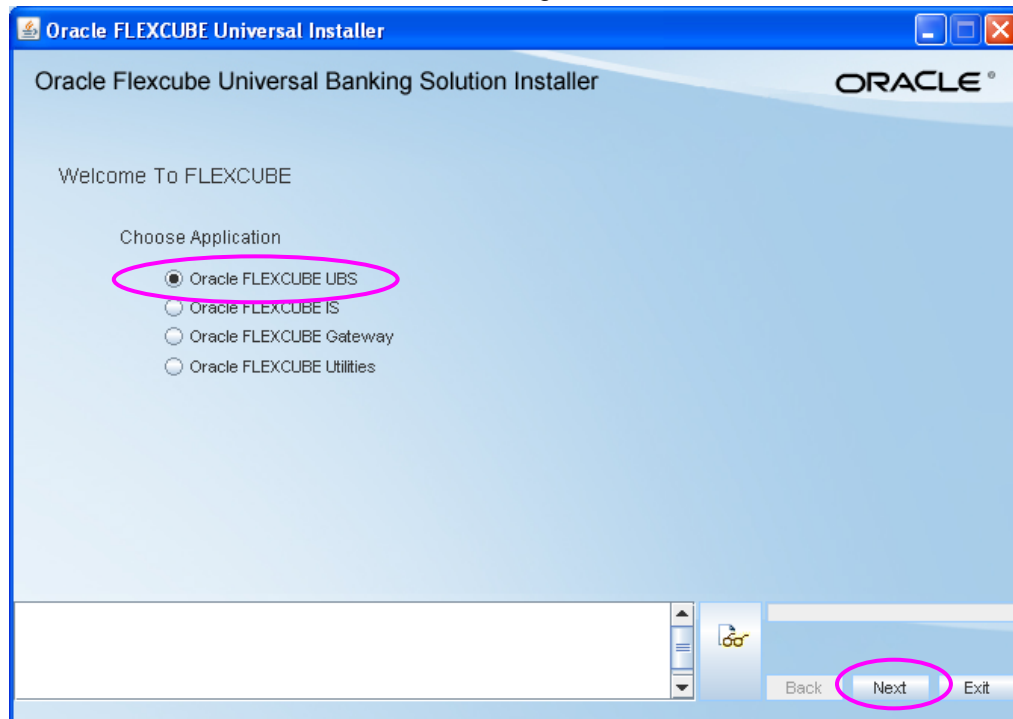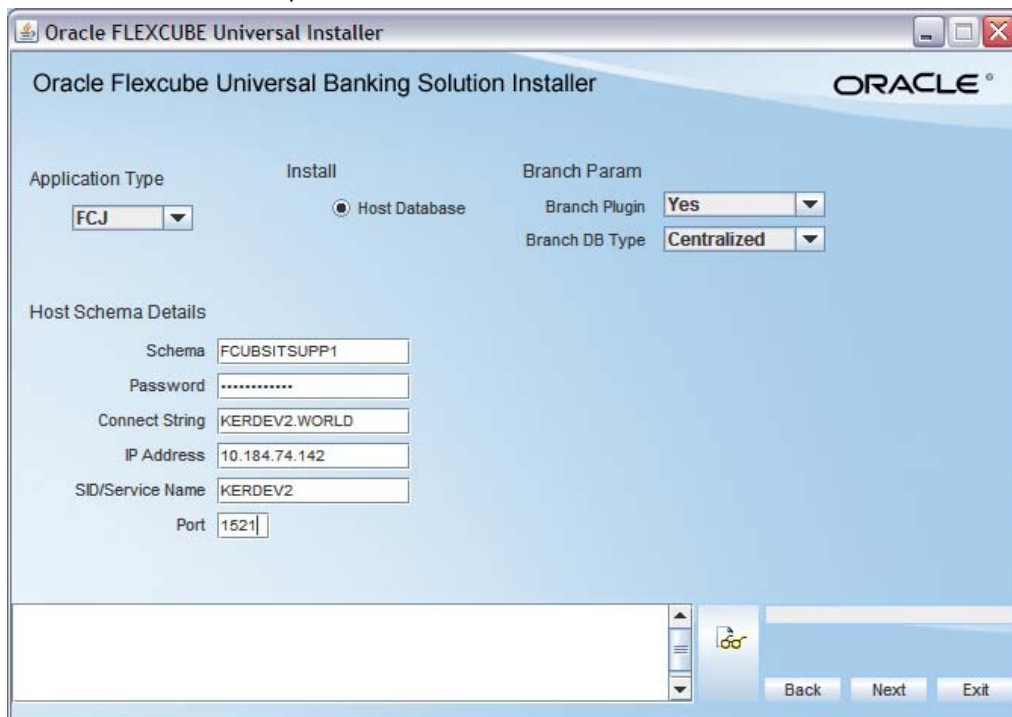

2. Choose 'Oracle FLEXCUBE UBS'. Click 'Next'.

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The following screen is displayed:

3. Choose 'Database Setup' and click 'Next'.

4. Specify the following details:

Application Type

Select FCJ as the application type.

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Install

If you select 'Host Database' radio button, the Installer loads both Host and Branch objects together.

Branch Plug-in

If you require branch plug-in, select 'Yes'. By default 'Yes' is selected.

Branch DB Type

Choose the DB type based on your requirement. Following deployment types are available:

- Centralized (default)
- Decentralized
- Hybrid

Schema

Specify the schema name into which database components are installed.

Password

Specify the schema password.

Connect String

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

IP Address

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

SID Service Name

Specify the SID/service name.

Port

Specify the port number of the schema.

5. Click 'Next'.
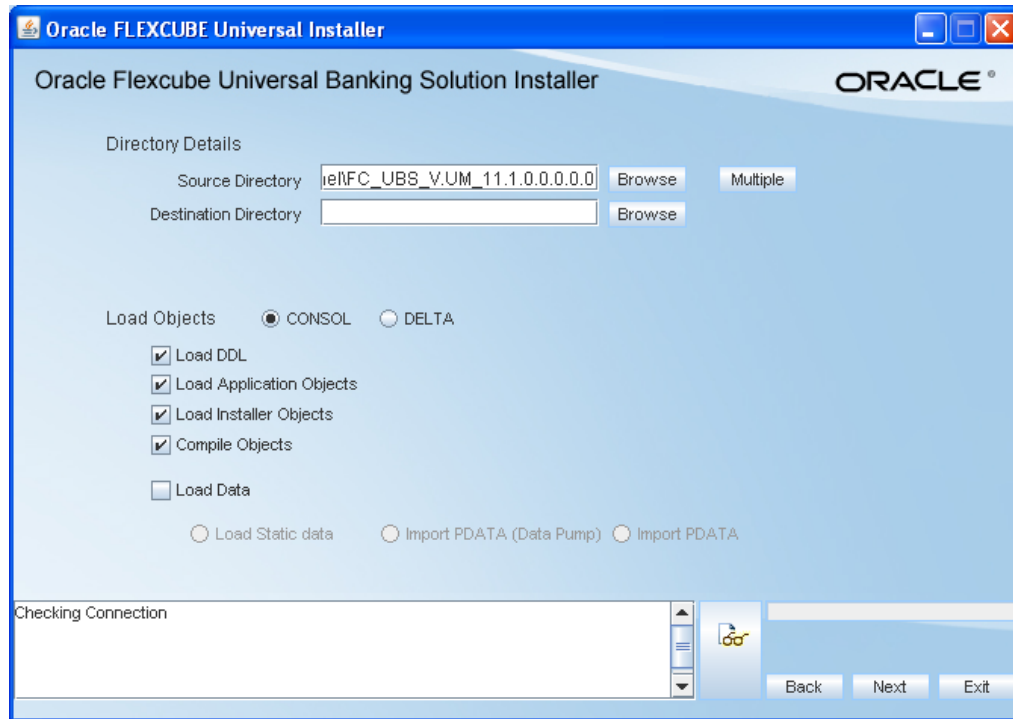
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The following screen is displayed:

6. Specify the following details:

Source Directory

Specify the source directory location. The source directory should have the 'MAIN' folder and the contents.

Destination Directory

Specify the destination directory.

This is optional. If you do not specify the destination directory, on clicking 'Next', the Installer displays a message 'Sources will be compiled from source directory'. If you want to proceed, click 'Yes'. The files will be taken directly from source directory for compilation. If you click 'No', you need to specify the destination directory.

(Refer point number 7 under 2.3.2 Using Multiple Source Directory)

The Installer will copy the source files from the source directory to the destination directory. The files are taken from this location for compilation.

Load DDL

If you check this box, the Installer will load the DDL scripts, types and sequences from the folders 'MAIN\DATABASE\Host\DDL', 'MAIN\DATABASE\Branch\DDL' and 'ELCM\MAIN\DATABASE\EL' to the source folder of the schema.

Load Application Objects

If you check this box, the Installer will load the views, procedures, functions, package bodies, package specifications and triggers to the schema, based on the modules that you select in the next screen.

Load Installer Objects

If you check this, the Installer will load the procedures required for running cyclic compilation, pre-import and post-import.

Compile Objects

If you check this option, the Installer will execute the cyclic compilation procedure compiled in the schema, which would have been compiled already, if you would have checked the Load Installer Objects option.

Load Data

Check this box after invalids have been reduced. This option can be selected after compiling the objects.

Load Static Data/Load PData

You have the f ollowing options:

- Load Static Data - For details on loading static data, refer to the section '2.4.1 Loading Static Data from Shipment media and Basic Setup'.
- Import PData (Data Pump) - If Oracle database version is 11g or later, you need to use this option. For other versions, you can use 'Import PData'. For details, refer to the section '2.4.3 Importing Data Dump with Data Pump'.

CONSOL/DELTA

Choose one of the following:

- CONSOL – Choose this for fresh installation of the sources.
- DELTA – Choose this for incremental releases

2.3.2 Using Multiple Source Directories

You can specify multiple source directories using 'Multiple' button. This is not required for creating EAR for Oracle FCUBS 11.3. This is meant only for consolidation purpose.

1. Invoke Oracle FLEXCUBE Installer.
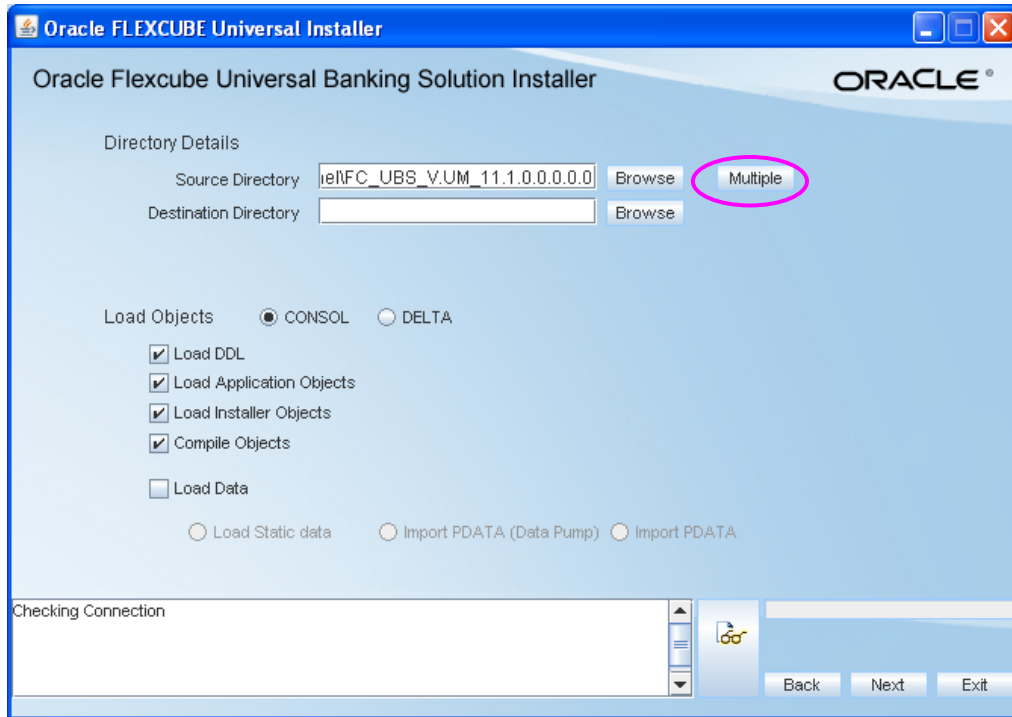
2. Specify the locations of the source and the destination directories.

3. Click 'Multiple' button. The 'Incremental Source' screen is displayed.
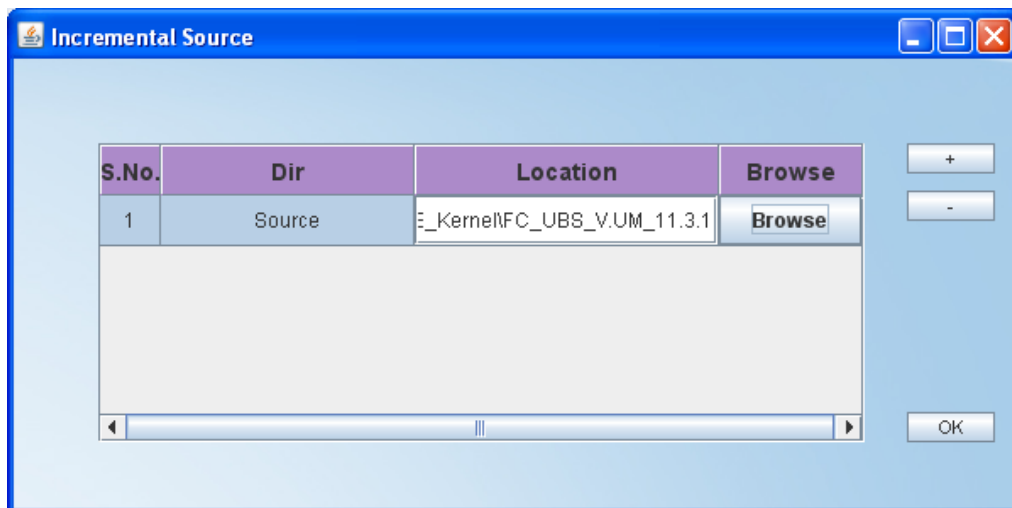
4. You can add multiple source directories using '+' button. You may also delete a row from the list using '-' button.

5. Use 'Browse' button to browse the source directory.

6. Click 'OK' button. The Installer will copy the sources from the multiple locations into the destination directory. You can have consolidated sources in the destination directory.

Note: In case you have already consolidated the sources manually, then specify that folder as the sources directory and leave the destination directory blank.

7. Click 'Next'. The following screen will be displayed.
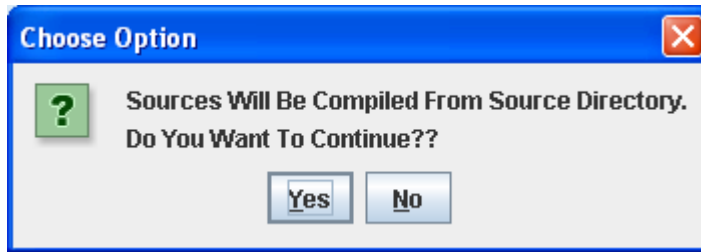
8. Click 'Yes'. You will be navigated to the following screen:
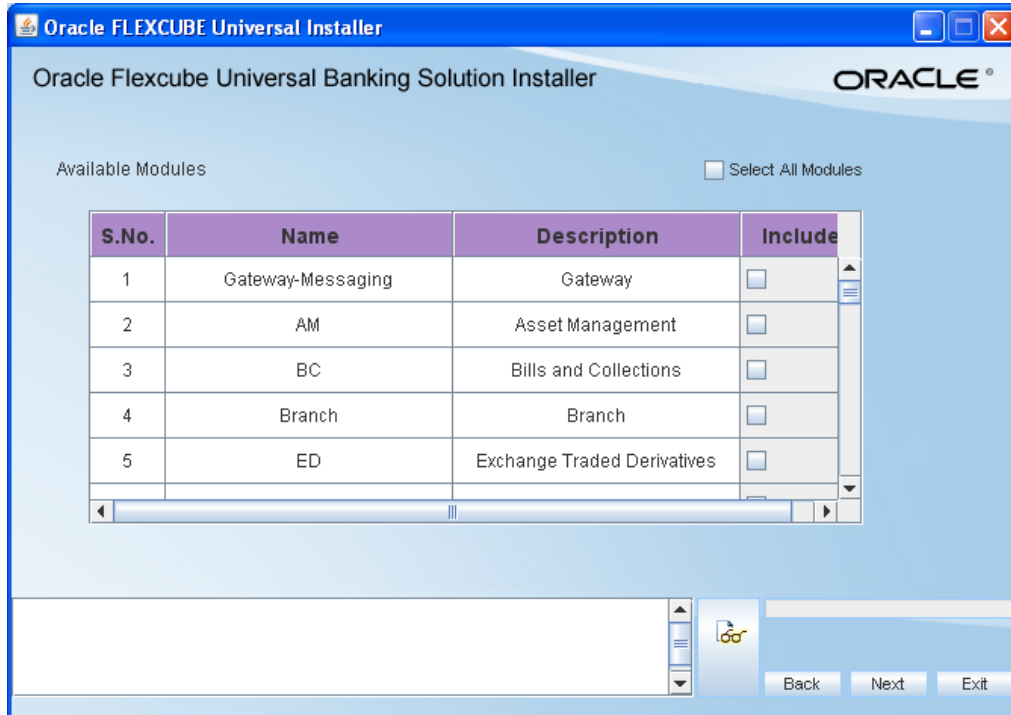
9. Select the modules to be included. In case you need to include all the modules, check the box 'Select All Modules'. The modules **SMS**, **Core** and **EL** are lot listed in the screen. These modules are loaded by default.

10. Click 'Next' to create DB objects and to process the compilation.

The following screen is displayed:

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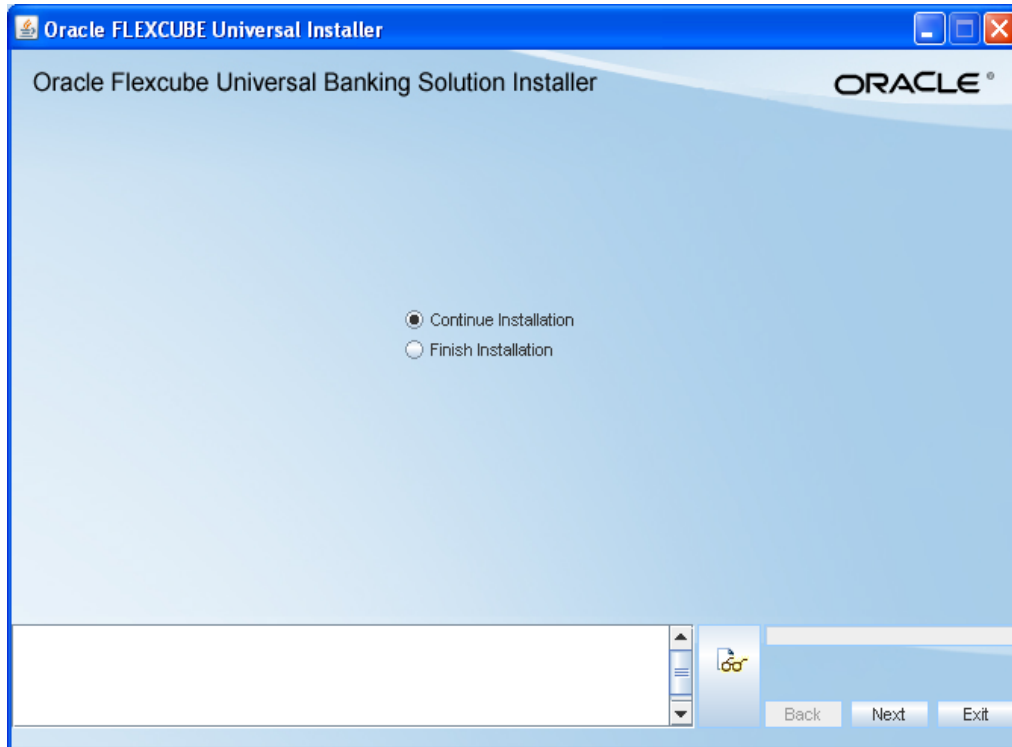
You can choose to continue or finish. This step completes the DB object creation and compilation processes.

2.4 Loading Data

Once the objects are loaded, you need to insert data into the tables. This task can be completed in three ways.

2.4.1 Loading Static Data from Shipment media and Basic Setup

This section explains the steps to load static data into the database and the basic setup to be done. You need to provide the details of the schema and the location of source objects.

Further, you need to run the INC scripts that are available in the folders 'MAIN\DATABASE\Host\INC' and 'MAIN\\DATABASE\Branch\INC' from the source to the schema. Once the INCs are loaded, you can proceed to the basic setup. The basic setup process adds the basic entries into some of main tables of Oracle FLEXCUBE to enable its basic functionalities.

Note: In case of PDATA import, you need not perform the above activity

Before loading the INCs, the Installer updates the following tables for duplication of records in the branch:

- CSTB_PARAM table – updates the param value of 'BRANCH_INSTALLED' based on Branch Plugin (Yes/No)
- CSTB_PARAM table – updates the param value of 'DEPLOYMENT_MODE' based on the deployment type (Centralized/Decentralized/Hybrid)
- STTB_BRN_REFRESH_FUNC table – updates FUNCTION_ID= STDSTAFN and REFRESH_REQD = Y

- CSTB_PARAM table – updates the param value of ELMS_USER_ID based on the user ID specified
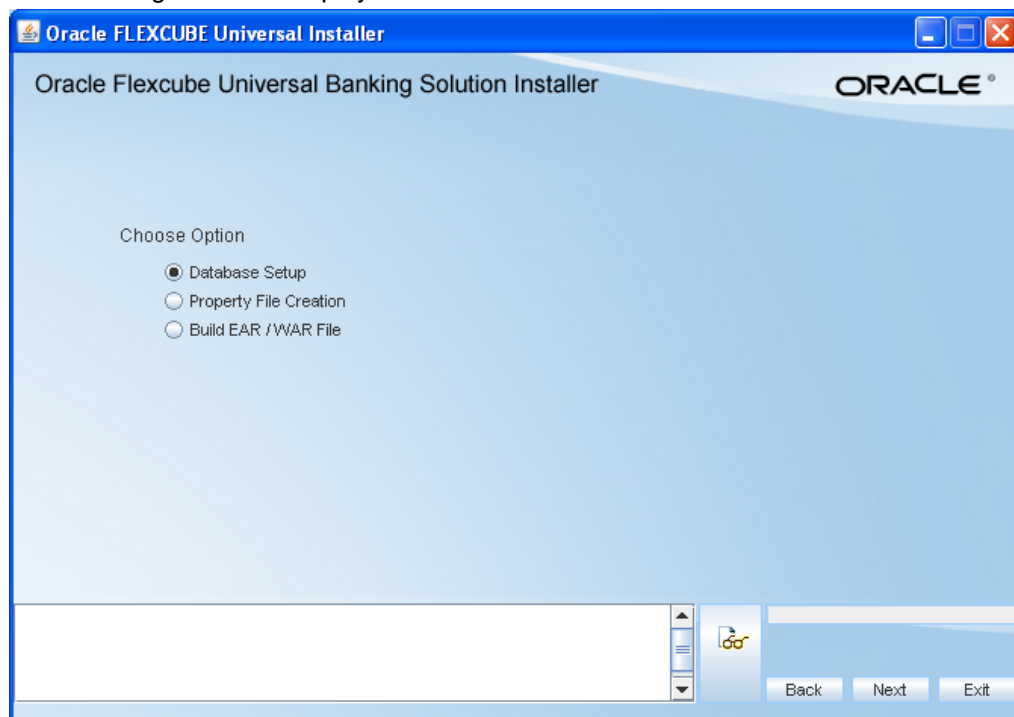
Follow the steps given below:

1. LaunchOracle FLEXCUBE Universal Banking Solution Installer.
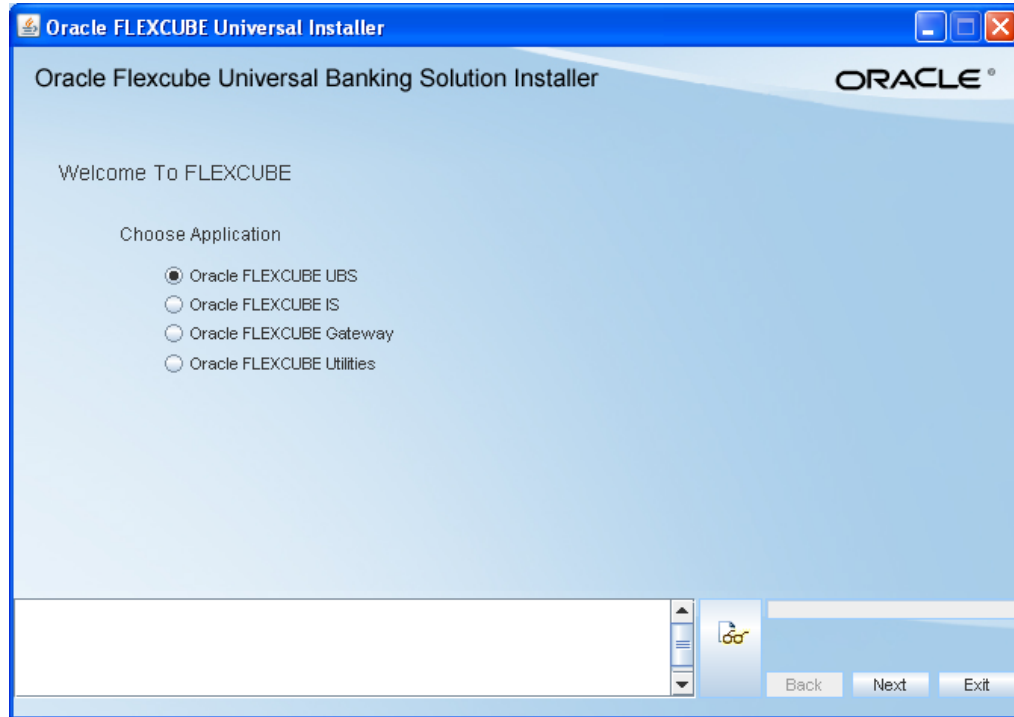
2. Select 'Oracle FLEXCUBE UBS' and click 'Next'.

The following screen is displayed:

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3. Select 'Database Setup' and click 'Next'. The following screen is displayed:

4. Specify the following details:

Application Type

Select 'FCJ' from the drop-down list.

Branch Plugin

If you need to include branch plug-in, select 'Yes' from the drop-down list. Otherwise, select 'No'. By default, Installer sets it to 'Yes'.

Branch DB Type

Specify the branch database type. You can choose one of the following options:

- Centralized
- Decentralized
- Hybrid

Schema

Specify the schema name into which the components are to be installed.

Password

Enter the schema password.

Connect String

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

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IP Address

Specify the IP address of the system where the database schema is installed.
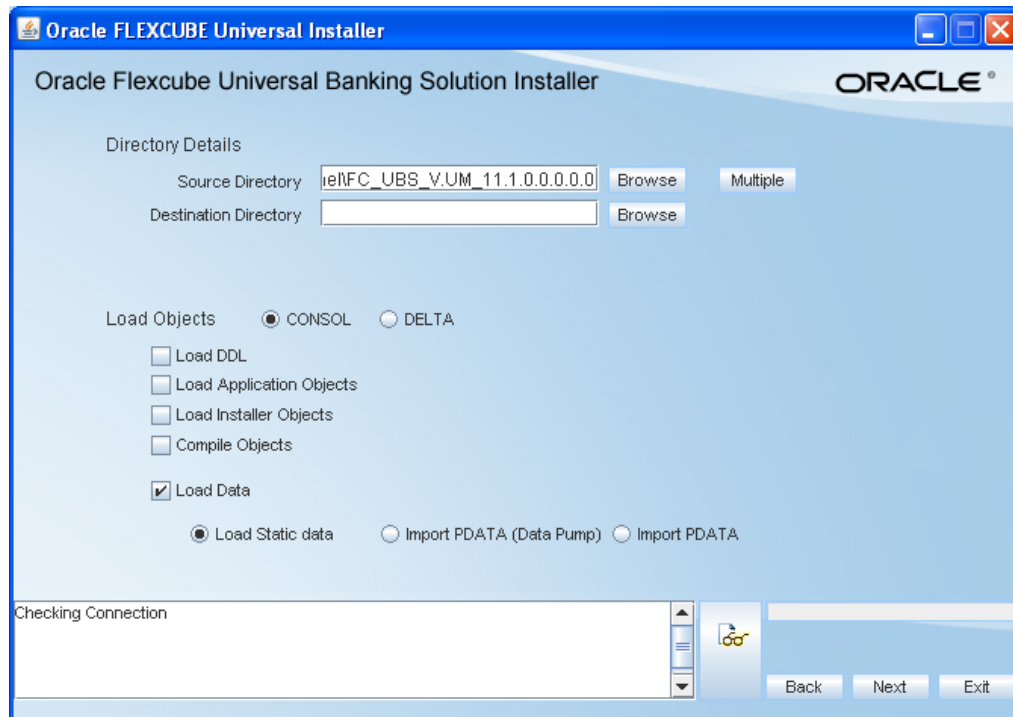
SID/Service Name

Specify SID/Service name.

Port

Specify the port number.

5. Once you have set the details, click 'Next'.

The following screen is displayed:

6. Specify the following details:

Source Directory

Specify the location of the source directory.

Destination Directory

Specify the location of the destination directory.

This is an optional field. If the source folder is there in the local machine, you need not specify the source directory.

CONSOL/DELTA

Choose one of the following:

- CONSOL: If this is a fresh installation of sources, you need to select 'CONSOL'.
- DELTA: If this is an Incremental release, you need to select 'DELTA'.

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Load Data

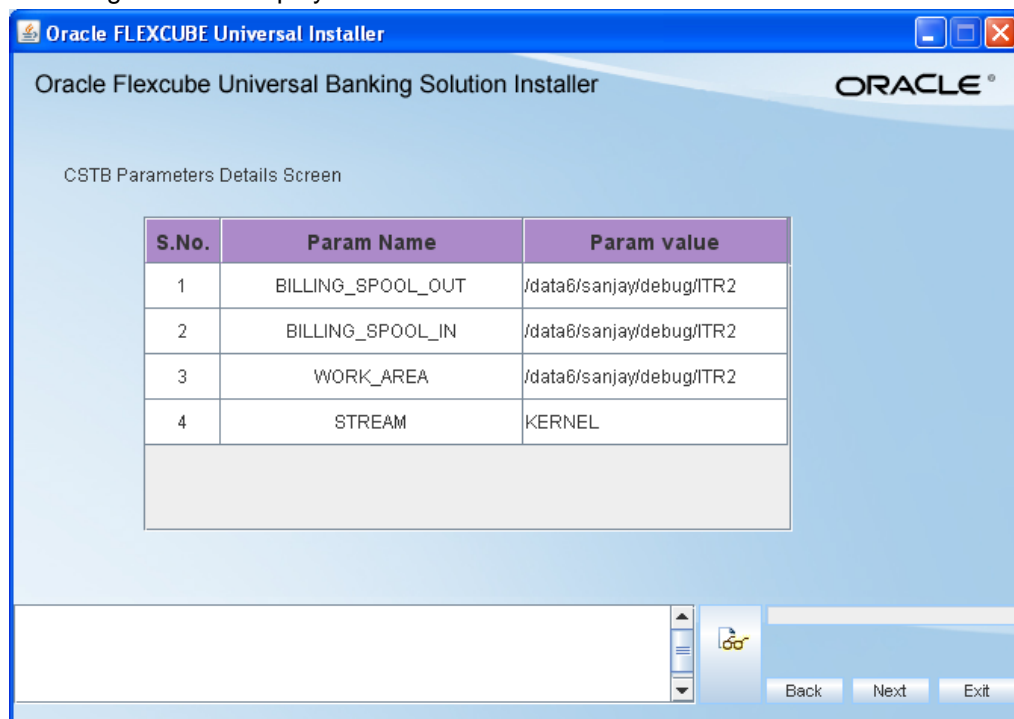Check this box.

Load Static Data

Check this box.

7. Click 'Next'. The Installer will execute all INCs. Further, it will execute the basic setup procedures.

2.4.2 Basic Setups

You will be navigated to the screen given below.

8. Following screen is displayed:

9. The screen displays the entries found in CSTB_PARAM table for MODIFY_FIELD='Y'. In addition to the fields shown in the above screen, you will find another field 'ELMS_USER_ID'. You need to enter the user ID for triggering ELCM from Oracle FLEXCUBE. This table lists out all fields and their values, which can be modified. The modified values are updated in the CSTB_PARAM table.

10. Click 'Next'.

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The following screen is displayed:

11. Specify the following details.

Bank Code

Specify a valid bank code. The bank code should have three characters in uppercase.

Eg: CHO

Bank Name

Specify a valid bank name. The bank name can have maximum 120 characters. It can be numeric or alpha numeric and may contain special characters.

Eg: Citi Head Office

Branch Code

Specify a valid branch code. The branch code can have numeric or alphanumeric characters.

Eg: CHO, 001

Input Date

Specify the input date in 'DD-MMM-YYYY' format.

Eg: 04-SEP-2009

Current Business Date

Specify the current business date in DD-MMM-YYYY format. The alphabets should be in uppercase.

Eg: 04-SEP-2009

Previous Business Date

Specify the previous business date in DD-MMM-YYYY format. The alphabets should be in uppercase.

Eg: 03-SEP-2009

Next Business Date

Specify the next business date in DD-MMM-YYYY format. The alphabets should be in uppercase.

Eg: 05-SEP-2009

Local Currency Code

Specify the local currency code. The currency code should have three characters in uppercase.

Eg: USD

Local Currency Name

Specify the local currency name.

Eg: U.S. DOLLAR

Current Fin Cycle

Specify the name of the current financial cycle. The format should be 'FY' followed by the year.

Eg: FY2009

Current Fin Period

Specify the current financial period. This should have three characters. The format should be 'QT' followed by the quarter number.

Eg: QT3

Debug Area

Specify a valid path for debug.

Operating System

Choose the Operating System on which the DB is installed.

On clicking 'Next', the Installer executes the basic setup procedure.

Installer inserts the records into the following tables:

- STTM_BANK
- STTM_BRANCH
- SMTB_USER
- SMTB_USER_ROLE
- STTM_DATES
- SMTB_ROLE_MASTER

- SMTB_PARAMETERS---Updating with HO Branch
- CYTM_CCY_DEFN
- SMTB_ROLE_DETAIL

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

13. You can create the User IDs and set passwords to login to Oracle FLEXCUBE. Specify the user name and password. These details are updated in the tables STTM_BANK, STTM_BRANCH, SMTB_USER, SMTB_USER_ROLE and CYTM_CCY_DEFN.

Note: Use Enter key after entering the user name and password to register the values. If any of the field is in editing state, the Installer will not consider that.

2.4.3 Importing Data Dump with Data Pump

Manual steps in case of import PDATA Dump (with data pump)

Earlier, importing of PData was carried out in Installer by using IMP.exe executable file. Oracle does not support EXP.exe and IMP.exe from 11g onwards. You need to do the Export and Import using DataPump Utility (EXPDP.exe and IMPDP.exe).

Importing the PData using Installer is not supported as the process requires creation of a directory (ORACLE DIRECTORY) on the Database server, giving grants to that directory. The .DMP file should be copied into that directory for importing. These processes are not automated and the import of PData is a manual activity.

Follow the steps given below:

1. Create Oracle Directory in the database server. Use the following command:
   SQL>create or replace directory <ORACLE_DIR_NAME> as '<OS_DIR>';

2. Grant privileges to the directory.
   SQL>grant read, write on DIRECTORY <ORACLE_DIR_NAME> to <DB_ACCOUNT>;
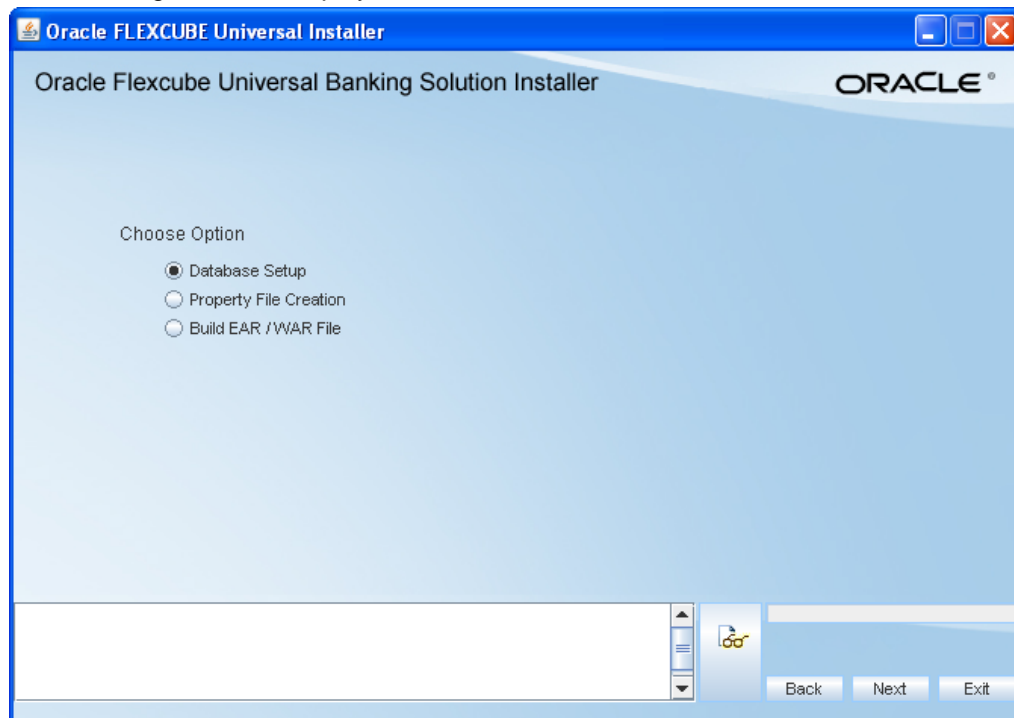
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Note: The above steps are carried out by DBA. If the database is on a local system, then you need to login as SYSDBA user to execute these commands.

3. Copy the .DMP file to the <ORACLE_DIR_NAME> directory.

4. Run the installer to complete the import process. Launch Oracle FLEXCUBE Universal Banking Solution Installer.
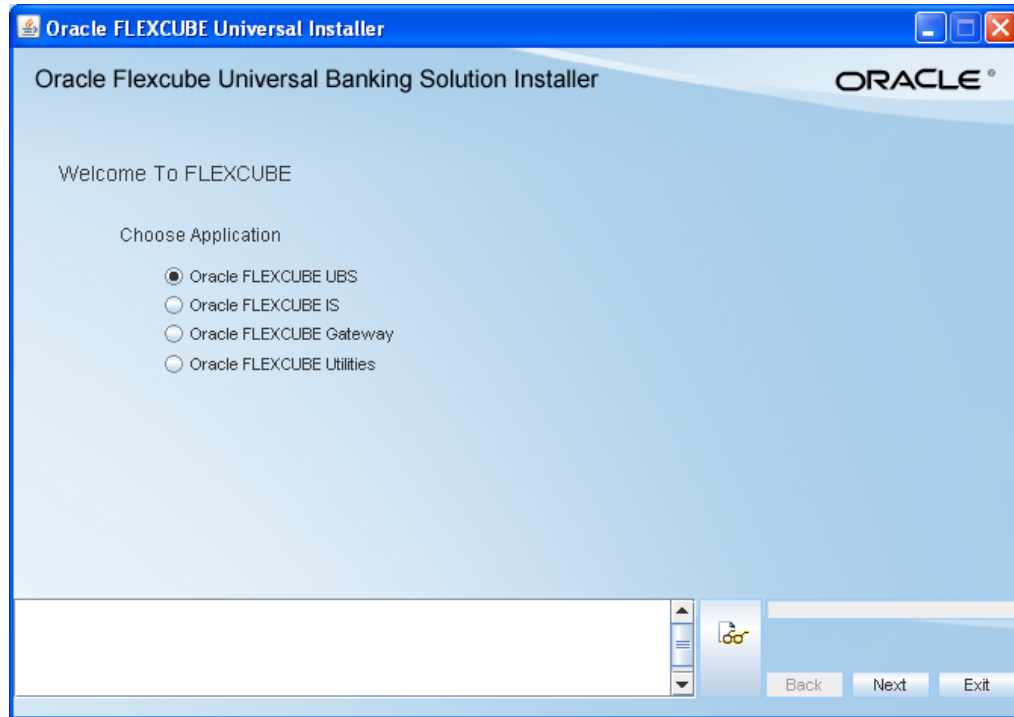
5. Choose Oracle FLEXCUBE UBS and click 'Next'.

The following screen is displayed:

6. Choose Database Setup and click 'Next'.

7. Specify the following details:

Schema

Specify the schema name into which the P-data dump needs to be imported.

Password

Enter the password of the schema.

Connect String

Enter the Host or connect string. This is needed for connecting to the database (TNSNAMES.ORA).

IP Address

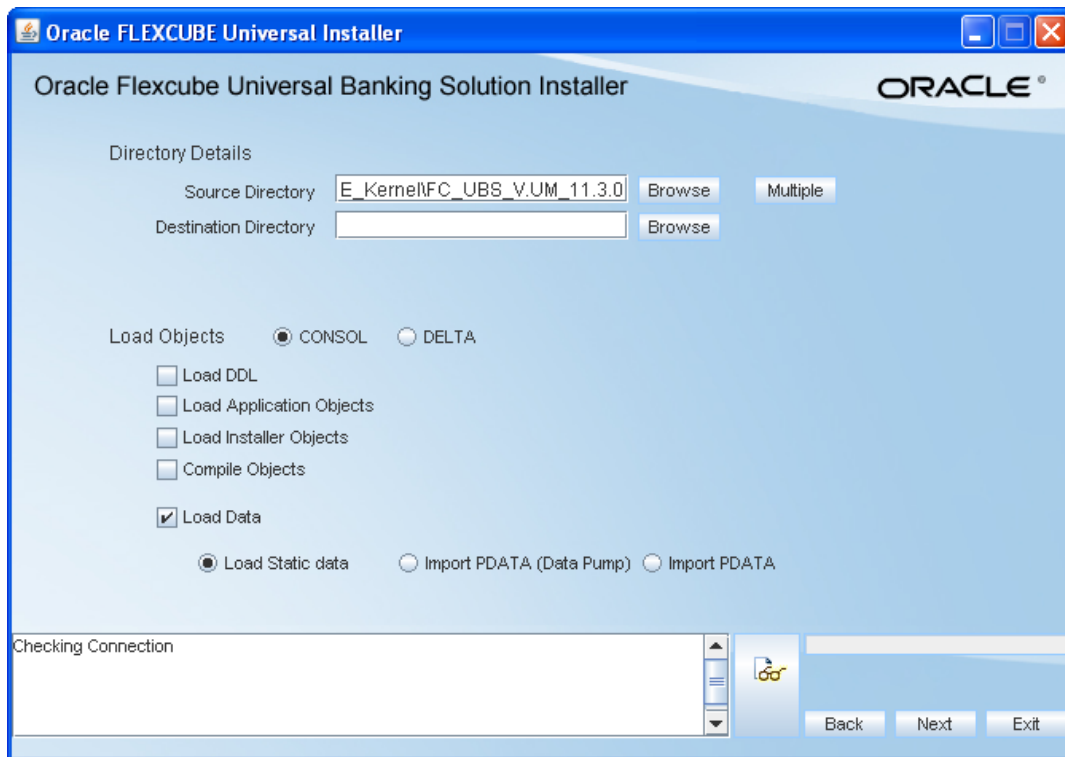Specify the IP address of the system where the database schema is installed.

SID/Service Name
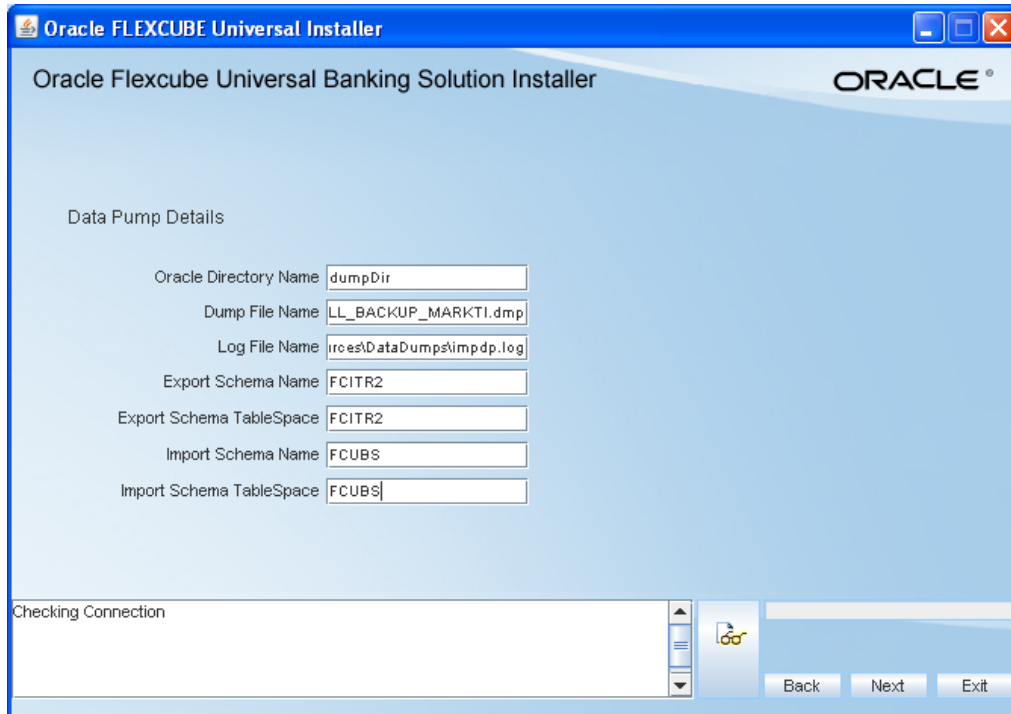
Enter the SID/Service Name.

Port

Enter the port number.

Click 'Next'. The following screen is displayed.

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8. Check the Load Data option, Select the Import PDATA(Data Pump) radio. Click Next.

Following screen is displayed.

9. Specify the following details:

Oracle Directory Name

Enter the name of the Oracle directory created at the database server where the dump file are copied. On this screen, 'dumpDir' is the name of the Oracle directory given while executing this command.

SQL>create or replace directory dumpDir as 'D:\oracle11g\DATAPUMP';

Dump File Name

Enter the dump file name.

Log File Name

Enter the log file name. The logs will be written in the Oracle directory on this file.

Export Schema Name

Enter the name of the schema from which the dump are exported.

Export Schema Tablespace

Enter the name of the schema table space from which the dump are exported.

Import Schema Name

Enter the name of the schema to which the dump should be imported.

Import Schema Tablespace

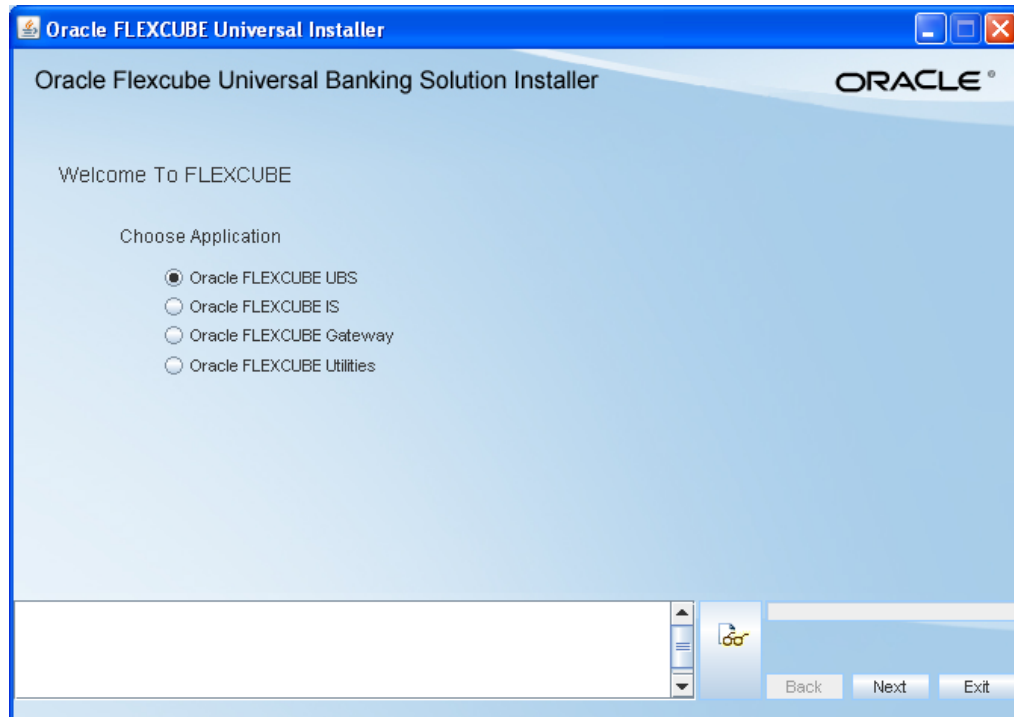Enter the name of the schema table space to which the dump should be imported.

Click 'Next'. The DataPump import process will be initiated.

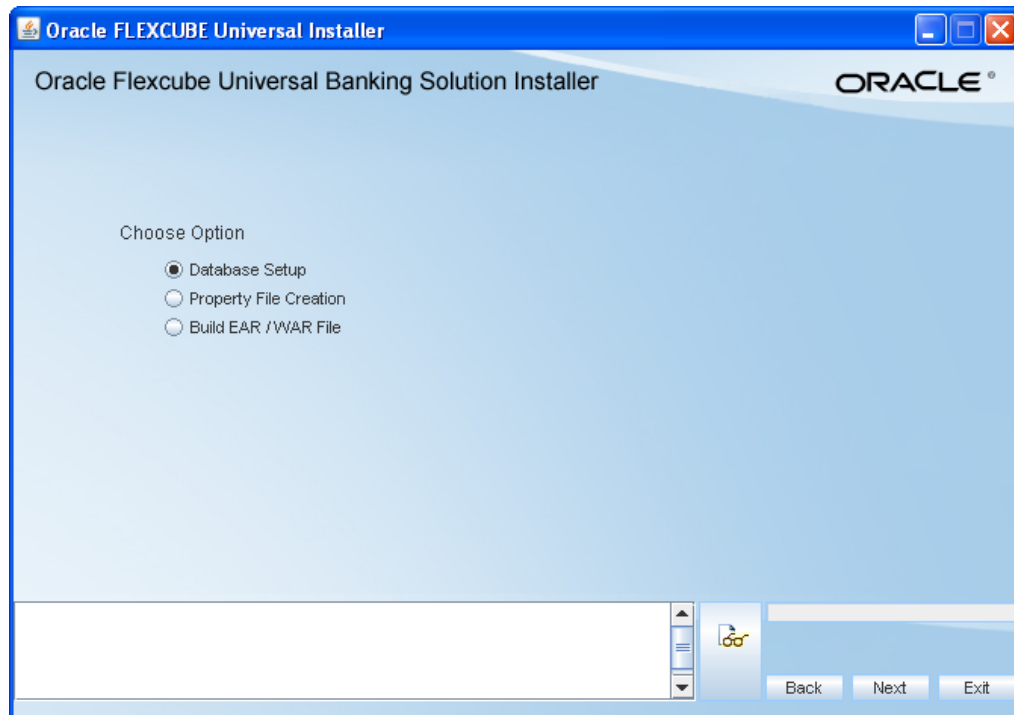This completes the import PDATA using DataPump.

2.4.4 <u>Importing PDATA</u>

Follow the steps below:

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1. Launch Oracle FLEXCUBE Universal Banking Solutions Installer.

2. Choose Oracle FLEXCUBE UBS and click 'Next'.

3. Choose Database Setup and click 'Next'.

4. Specify the following details:

Schema

Specify the schema name into which the P-data dump needs to be imported.

Password

Enter the password of the schema.

Connect String

Enter the Host or connect string. This is needed for connecting to the database (TNSNAMES.ORA).

IP Address

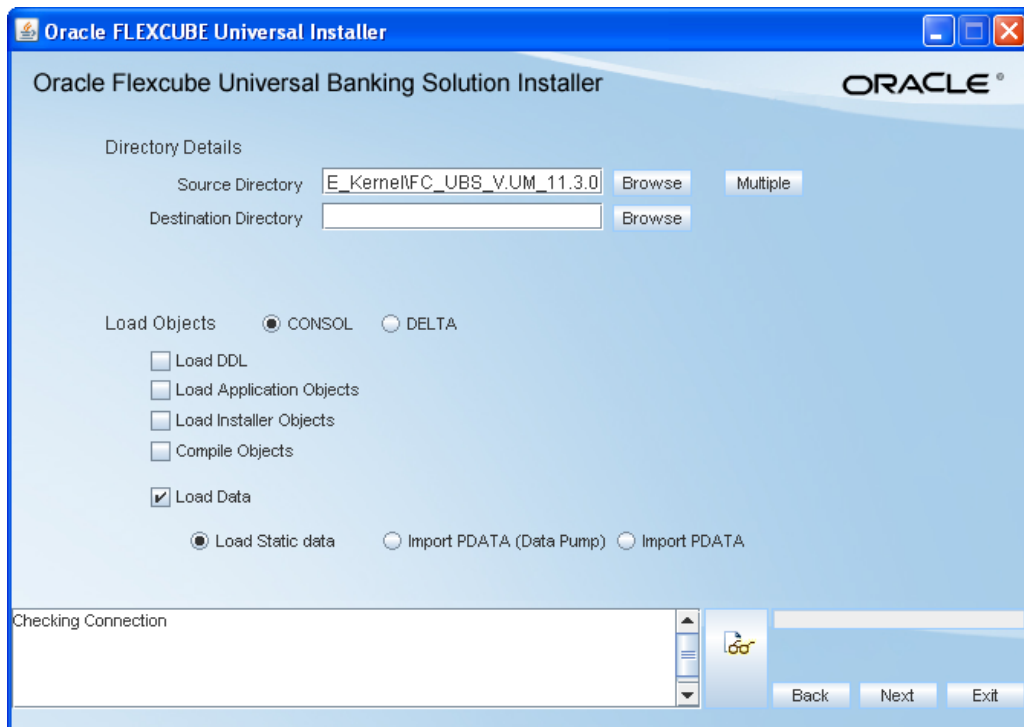Specify the IP address of the system where the database schema is installed.

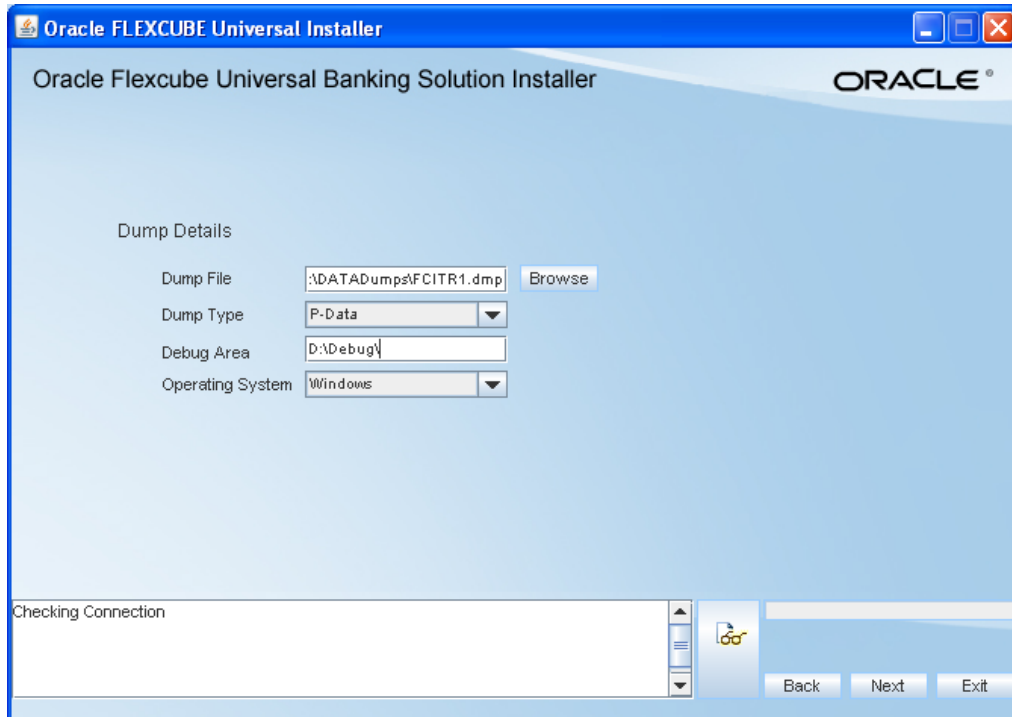**SID/Service Name**

Enter the SID/Service Name.

Port

Enter the port number.

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

ORACLE®

6. Check the Load Data option , select the Import PDATA radio button and click Next.

   The following screen is displayed:

7. Specify the following details:

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Dump File

Specify the dump (.dmp) file location. Use the 'Browse' button to browse the file.

Dump Type

Select the dump type.

Debug Area

Specify the location of the debug area.

Operating System

Select the Operating System of the machine on which the database is installed.

8. Once you have specified the details, click 'Next'. This process imports the selected P-Data Dump into the schema.

This completes Oracle FLEXCUBE database installation process.

2.5 Creating Oracle FLEXCUBE Schema using Clone Database or Template Based Setup

As part of clone, you need to copy the latest clone database templates to the location '<INSTALLER_SOURCE> \InstallOptions\Template'.

Follow the steps given below:

1. Launch Oracle LEXCUBE Universal Banking Solution Installer.
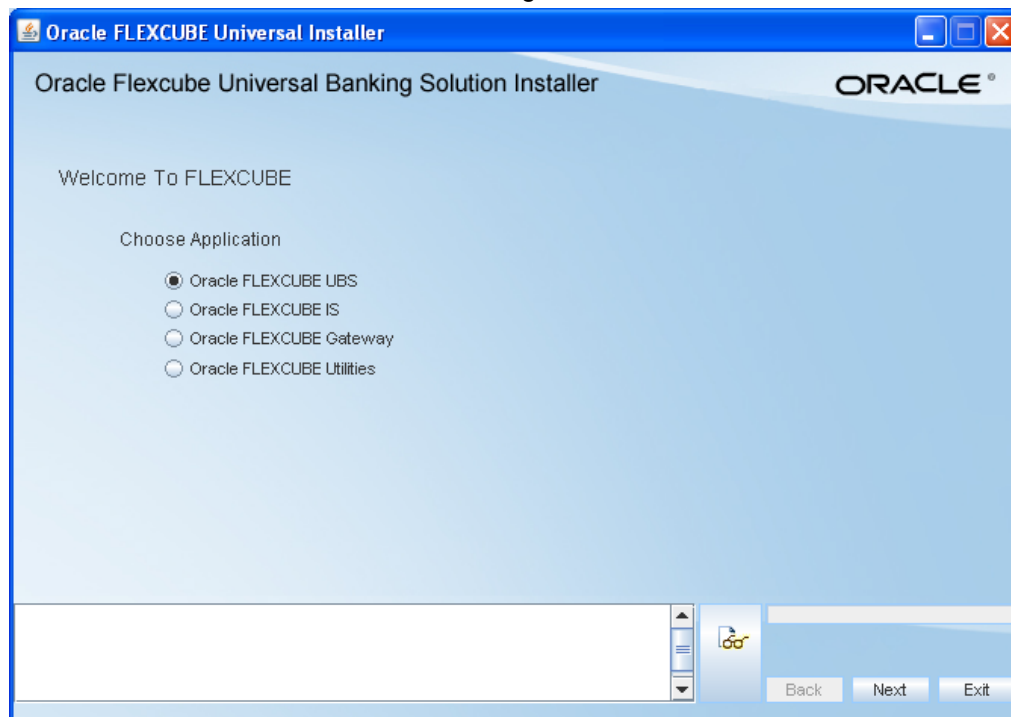
2. Choose Oracle FLEXCUBE UBS and click 'Next'.

3. Choose Database Setup and click 'Next'.

   The following screen is displayed:

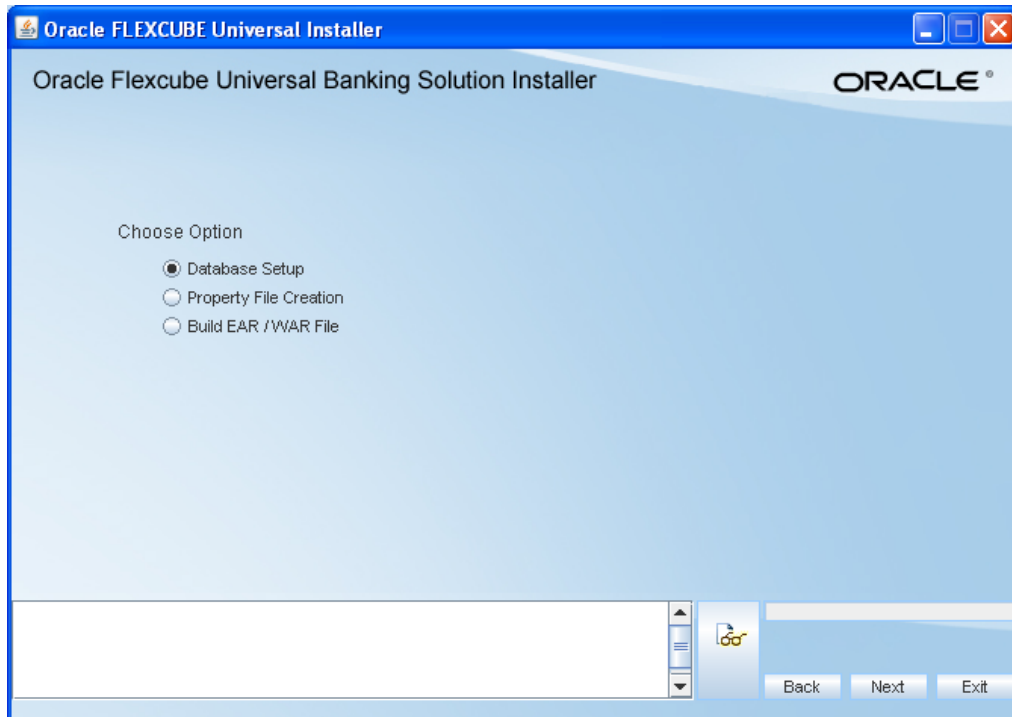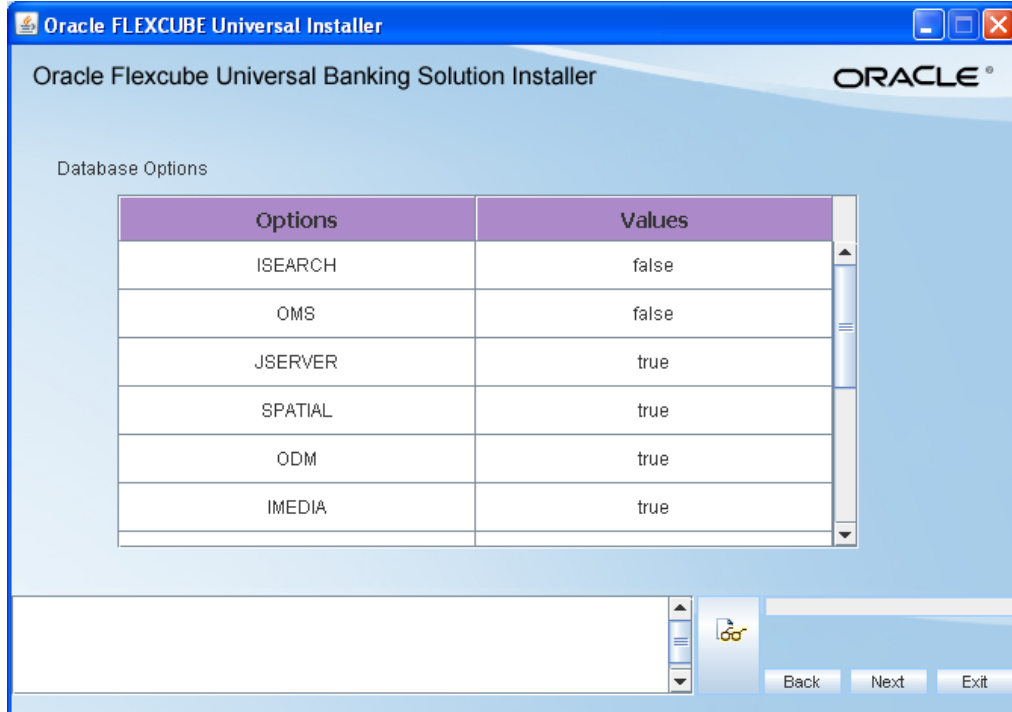4. This screen displays the database option that will be installed as part of this. Click 'Next'.
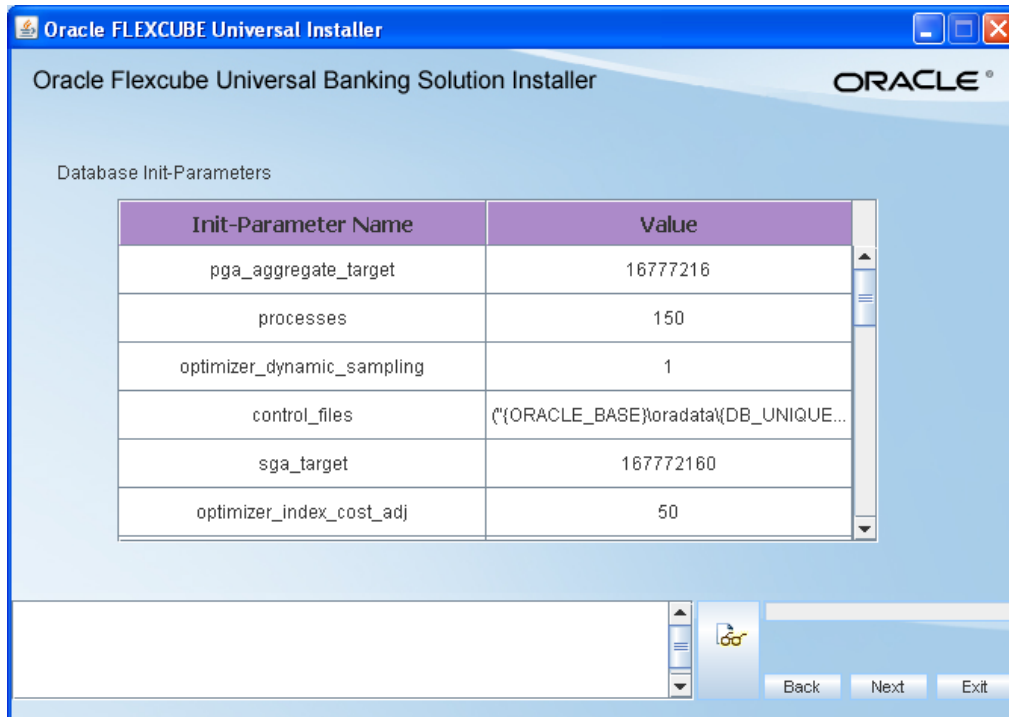
5. This screen displays the database parameters. Click 'Next'.

The following screen is displayed:
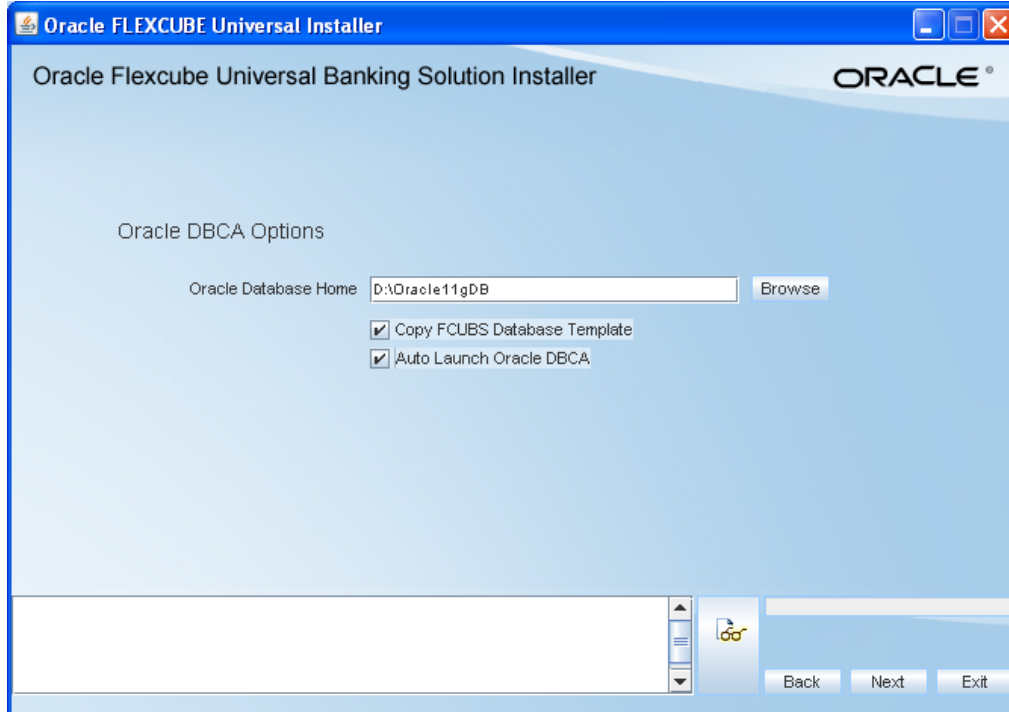
6. Specify the location of 'ORACLE_HOME'. Check the following checkboxes as shown:

- Copy FCUBS Database Template
- Auto Launch Oracle DBCA

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7. Oracle DBCA is automatically launched to install the database.
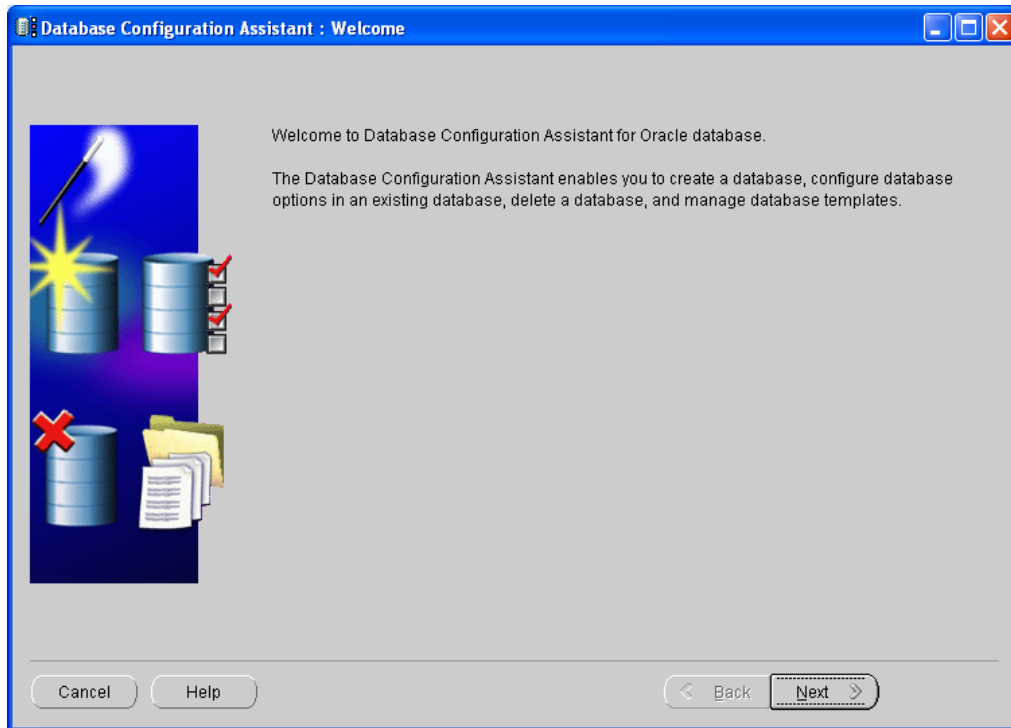
8. Click 'Next'.

The following screen is displayed:

9. Choose 'Create a Database'. Click 'Next'.

Database Configuration Assistant, Step 2 of 16 : Database Templates

Templates that include datafiles contain pre-created databases. They allow you to create a new database in minutes, as opposed to an hour or more. Use templates without datafiles only when necessary, such as when you need to change attributes like block size, which cannot be altered after database creation.

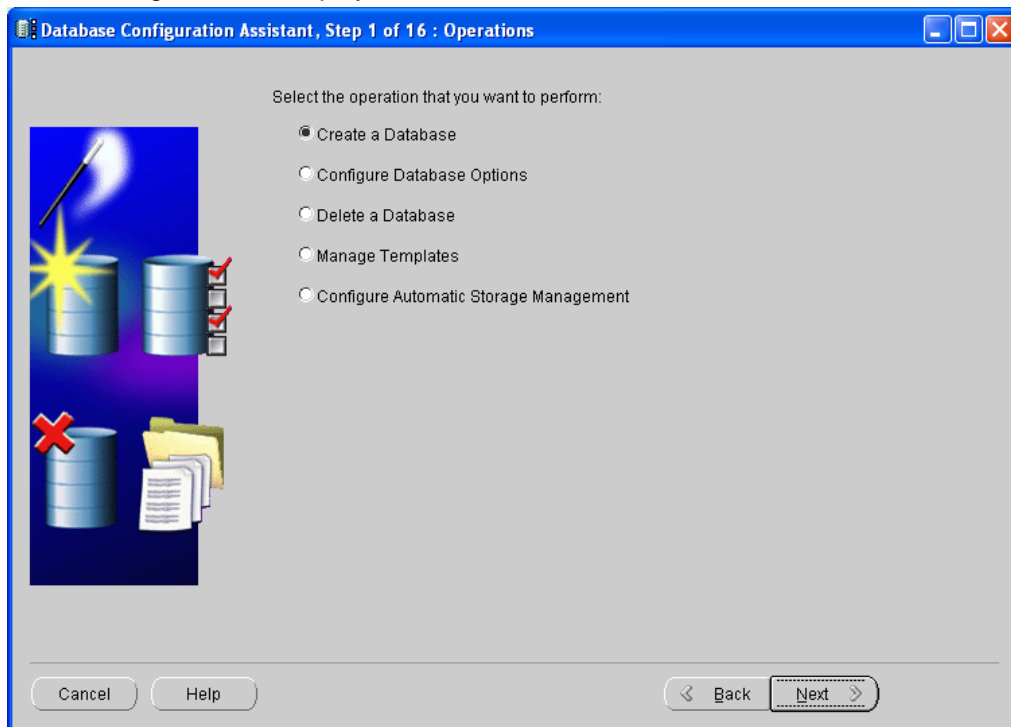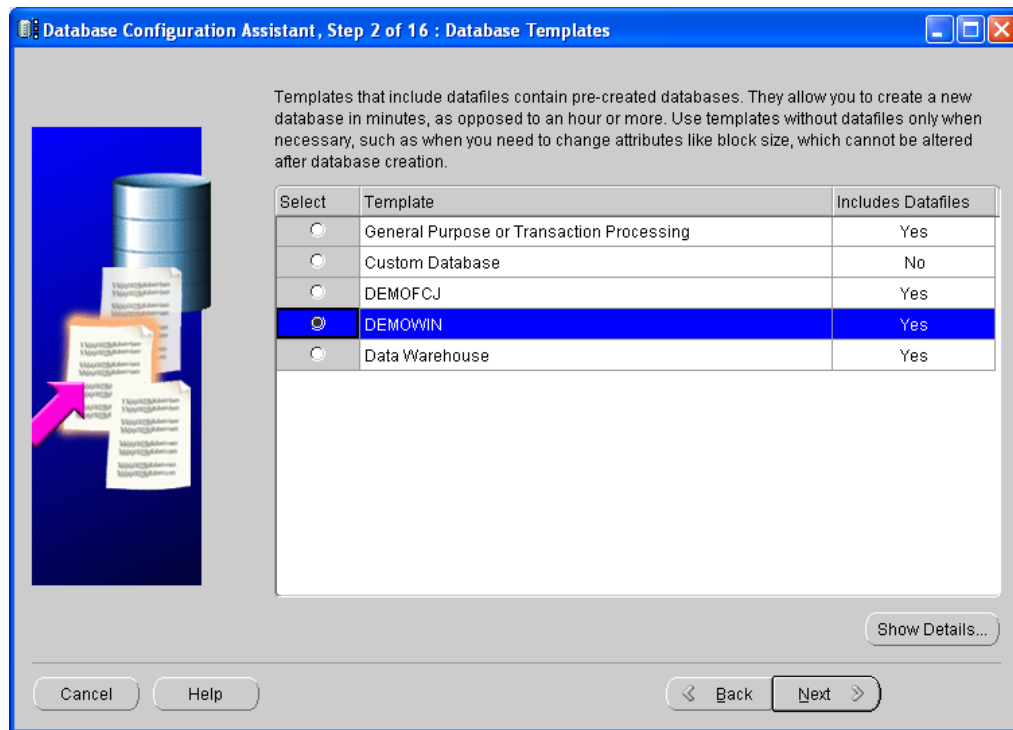| Select	Template	Includes Datafiles
○	General Purpose or Transaction Processing	Yes
○	Custom Database	No
○	DEMOFCJ	Yes
◉	DEMOWIN	Yes
○	Data Warehouse	Yes

Show Details...

Cancel   Help   Back   Next

10. Choose the template you need to install.

The following screen is displayed:

Database Configuration Assistant, Step 3 of 16 : Database Identification

An Oracle database is uniquely identified by a Global Database Name, typically of the form "name.domain".

Global Database Name: DEMOFCJ

A database is referenced by at least one Oracle instance which is uniquely identified from any other instance on this computer by an Oracle System Identifier (SID).

SID: DEMOFCJ

Cancel   Help   Back   Next

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11. Specify the global database name. Click 'Next'.
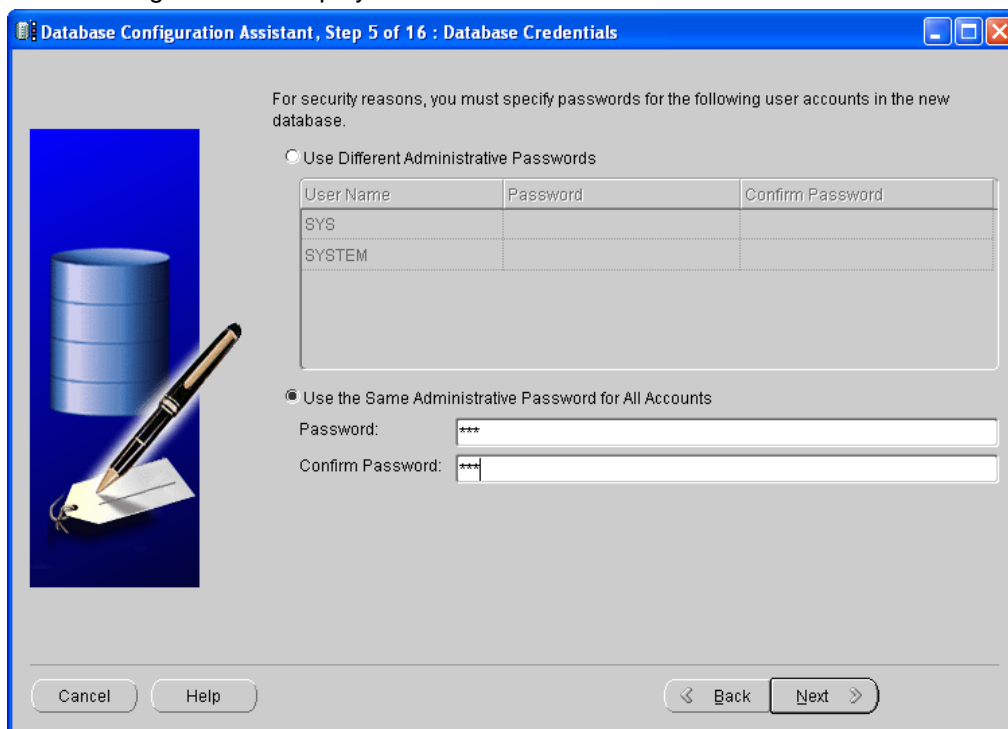
12. Retain the default management options. Click 'Next'.

The following screen is displayed:

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13. Enter the password for all the database accounts. Remember the password.

Database Configuration Assistant, Step 7 of 16 : Storage Options

Select the storage mechanism you would like to use for the database.

- ● File System
  Use the File System for Database storage.

- ○ Automatic Storage Management (ASM)
  Automatic Storage Management simplifies database storage administration and optimizes database layout for I/O performance. To use this option you must either specify a set of disks to create an ASM disk group or specify an existing ASM disk group.

- ○ Raw Devices
  Raw partitions or volumes can provide the required shared storage for Real Application Clusters (RAC) databases if you do not use Automatic Storage Management and a Cluster File System is not available. You need to have created one raw device for each datafile, control file, and log file you are planning to create in the database.

  ☐ Specify Raw Devices Mapping File [   ] [Browse...]

[Cancel] [Help]   [≪ Back] [Next ≫] [Finish]

14. Retain the default system options. Click 'Next'.

The following screen is displayed:

Database Configuration Assistant, Step 8 of 16 : Database File Locations

Specify locations for the Database files to be created:

- ● Use Database File Locations from Template

- ○ Use Common Location for All Database Files
  Database Files Location: [   ] [Browse...]

- ○ Use Oracle-Managed Files
  Database Area: [   ] [Browse...]
  [Multiplex Redo Logs and Control Files...]

  ⓘ If you want to specify different locations for any database files, pick any of the above options except Oracle-Managed Files and use the Storage page later to customize each file location. If you use Oracle-Managed Files, Oracle automatically generates the names for database files, which can not be changed on the Storage page.

[File Location Variables...]

[Cancel] [Help]   [≪ Back] [Next ≫] [Finish]

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15. Retain the default file locator options. You may change this in the upcoming steps.
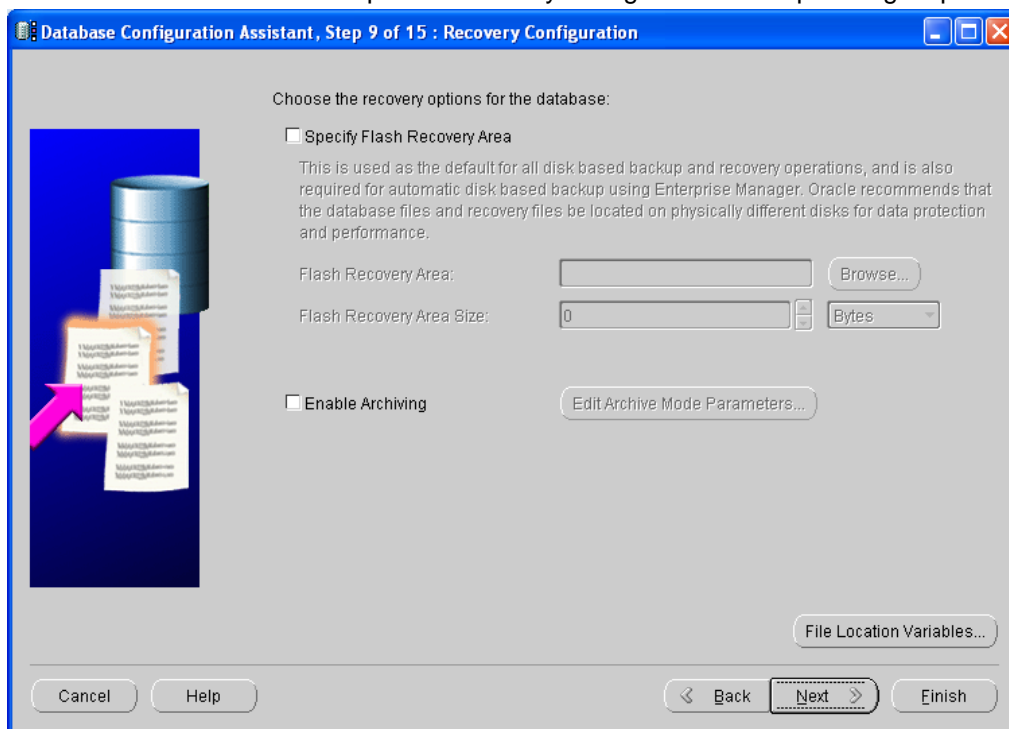
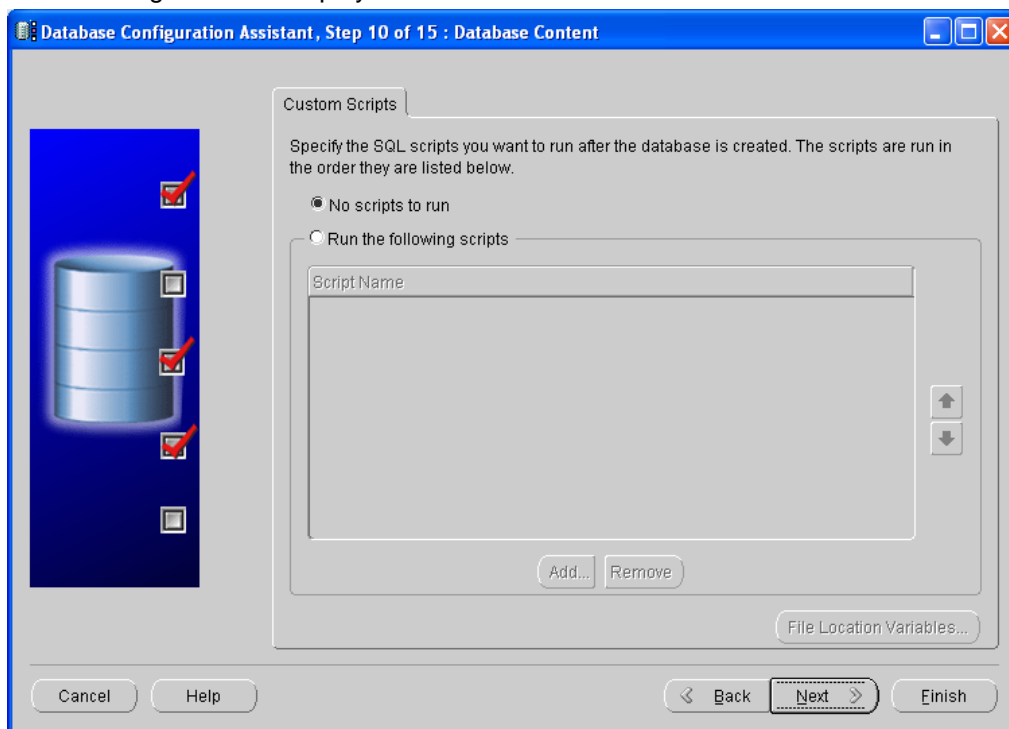16. Retain the default options. Click 'Next'.

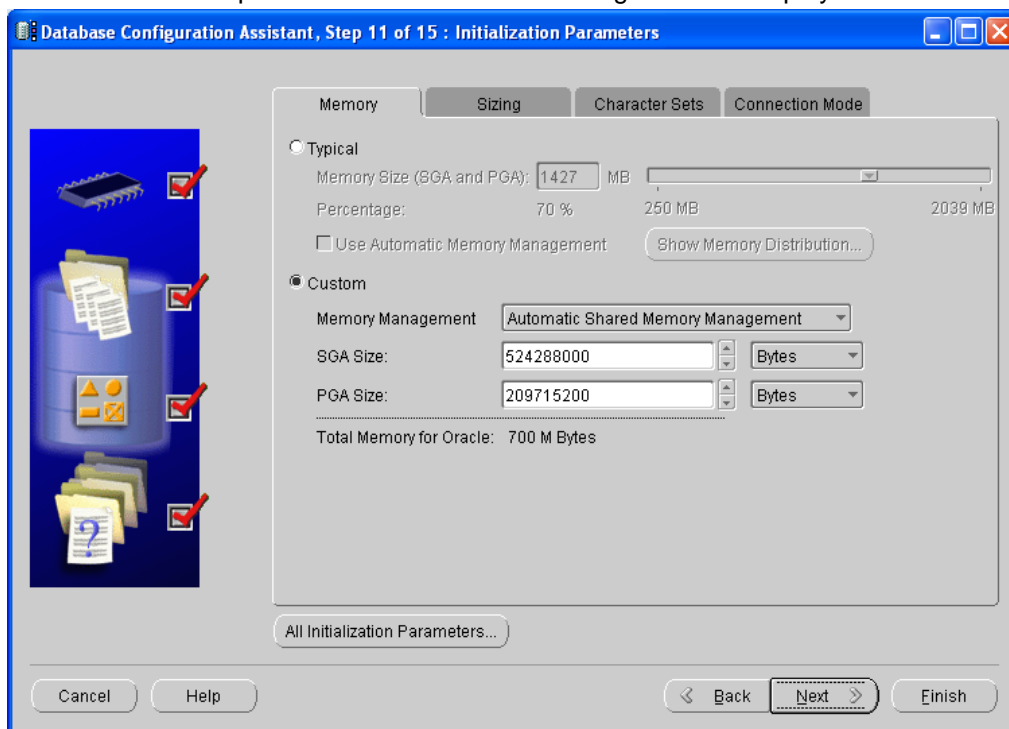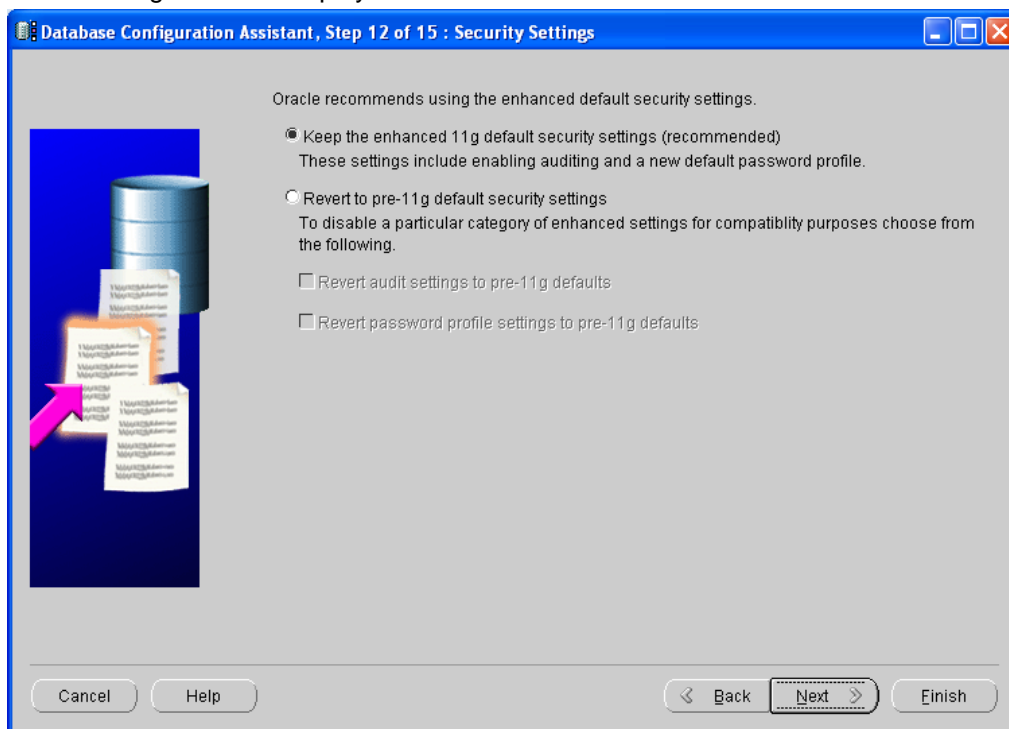   The following screen is displayed:

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17. Retain the default options. Click 'Next'. The following screen is displayed:

18. Retain the default options. Click 'Next'.
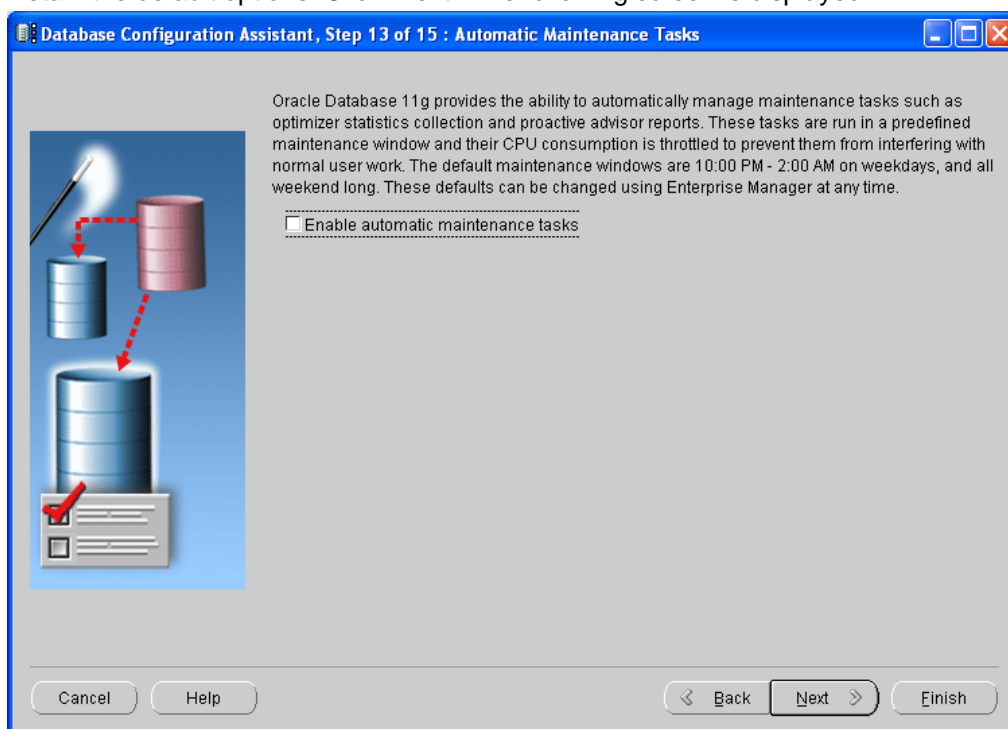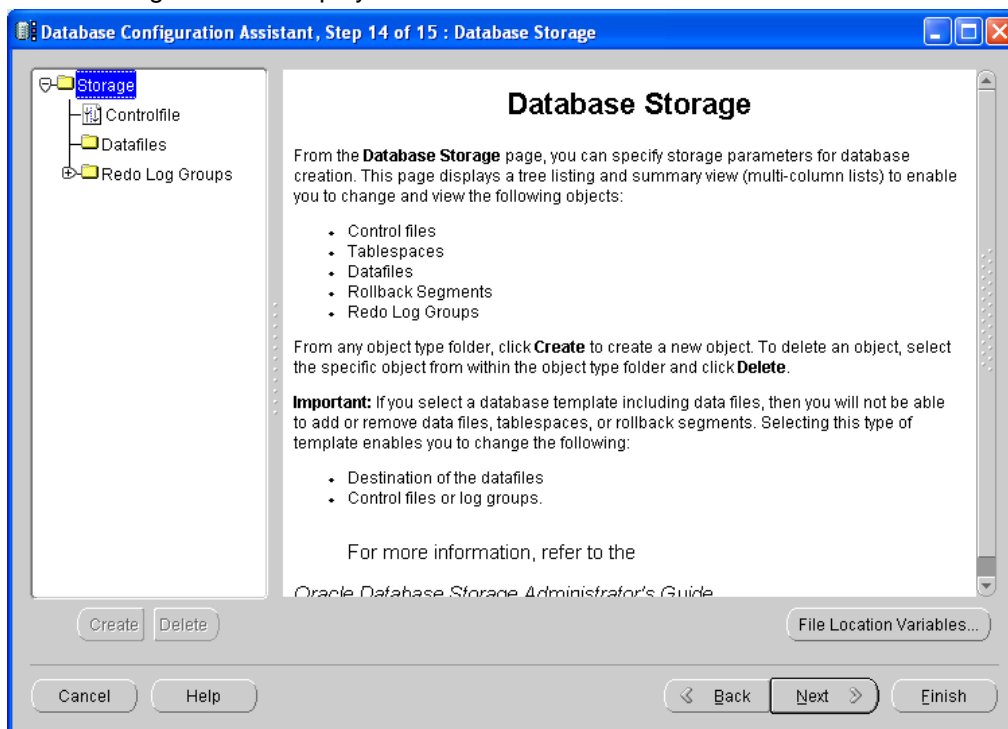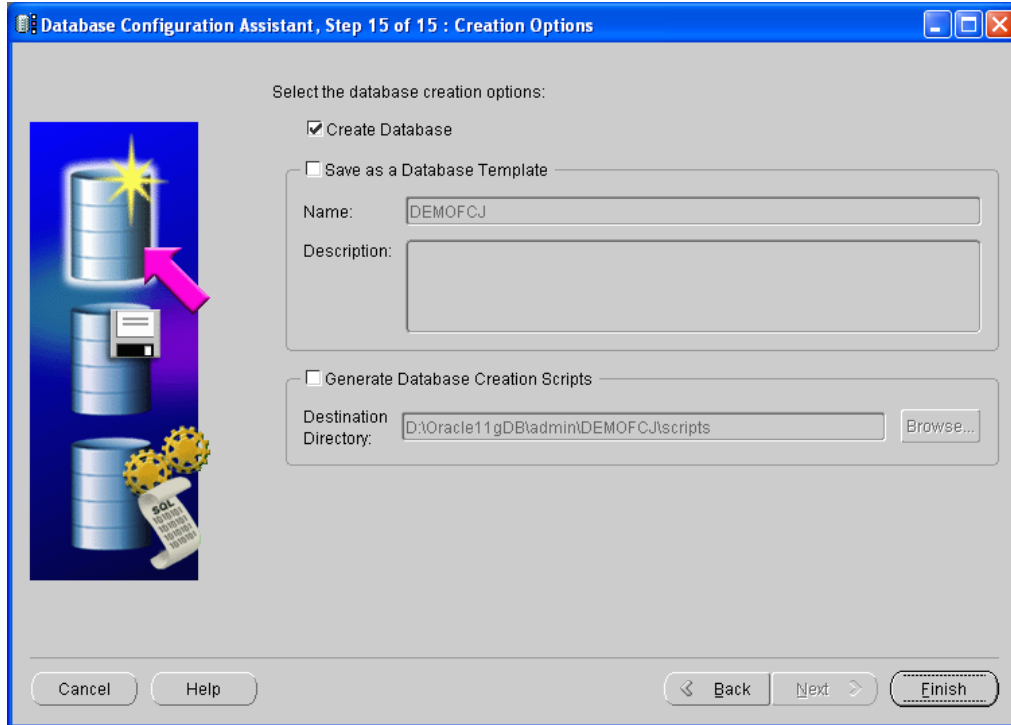
The following screen is displayed:

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19. Retain the default options. Click 'Next'. The following screen is displayed:

Database Configuration Assistant, Step 13 of 15 : Automatic Maintenance Tasks

Oracle Database 11g provides the ability to automatically manage maintenance tasks such as optimizer statistics collection and proactive advisor reports. These tasks are run in a predefined maintenance window and their CPU consumption is throttled to prevent them from interfering with normal user work. The default maintenance windows are 10:00 PM - 2:00 AM on weekdays, and all weekend long. These defaults can be changed using Enterprise Manager at any time.

☐ Enable automatic maintenance tasks

20. Retain the default options. Click 'Next'.

The following screen is displayed:

Database Configuration Assistant, Step 14 of 15 : Database Storage

Storage
  Controlfile
  Datafiles
  Redo Log Groups

Database Storage

From the **Database Storage** page, you can specify storage parameters for database creation. This page displays a tree listing and summary view (multi-column lists) to enable you to change and view the following objects:

- Control files
- Tablespaces
- Datafiles
- Rollback Segments
- Redo Log Groups

From any object type folder, click **Create** to create a new object. To delete an object, select the specific object from within the object type folder and click **Delete**.

Important: If you select a database template including data files, then you will not be able to add or remove data files, tablespaces, or rollback segments. Selecting this type of template enables you to change the following:

- Destination of the datafiles
- Control files or log groups.

For more information, refer to the

Oracle Database Storage Administrator's Guide

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21. Click 'Controlfile', 'Datafile' and 'Redo Log Groups' to change the installation location of database files. Click 'Next'.

22. Check the box 'Create Database'. Click 'Finish'. This completes the database installation process and starts the database.

23. Once you exit from DBCA, the Installer displays the following screen:
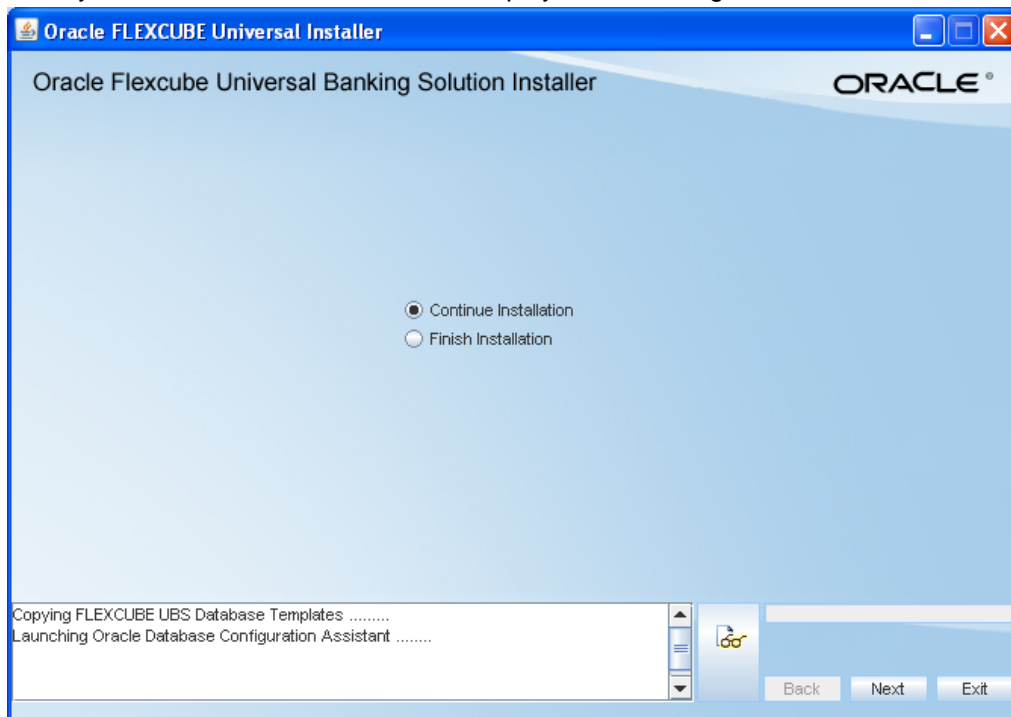
This completes the template based database installation process.

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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 '2.2   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

This section explains the steps to load objects for setting up the FGL database. Database installation includes the provision of schema details and source of objects.

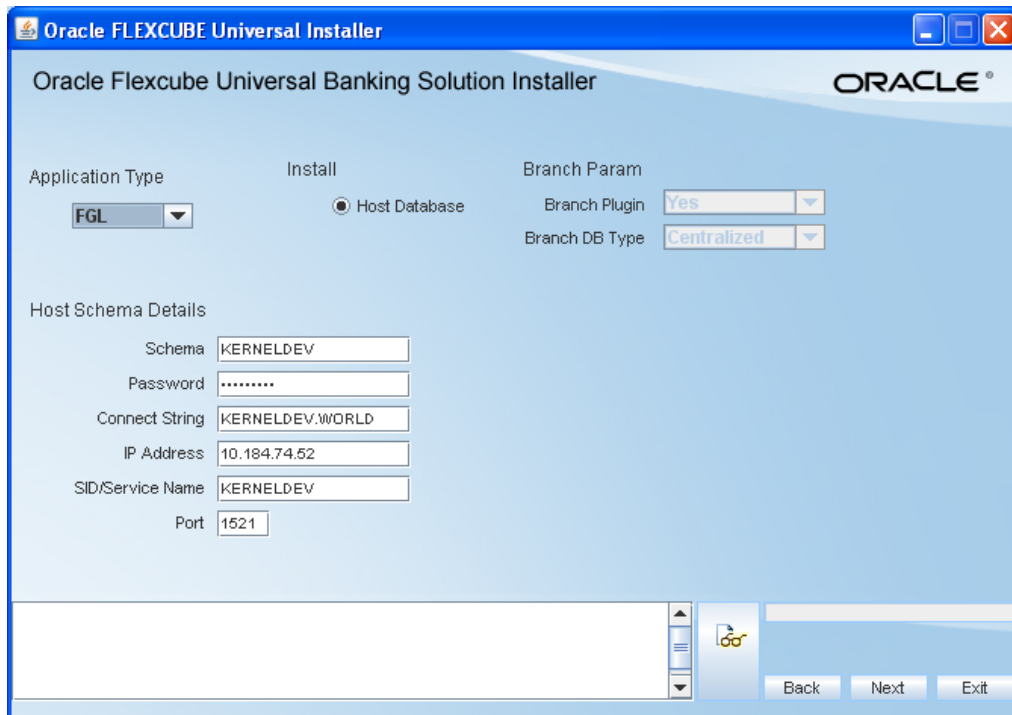1. Start Oracle FLEXCUBE Universal Banking Solutions Installer.
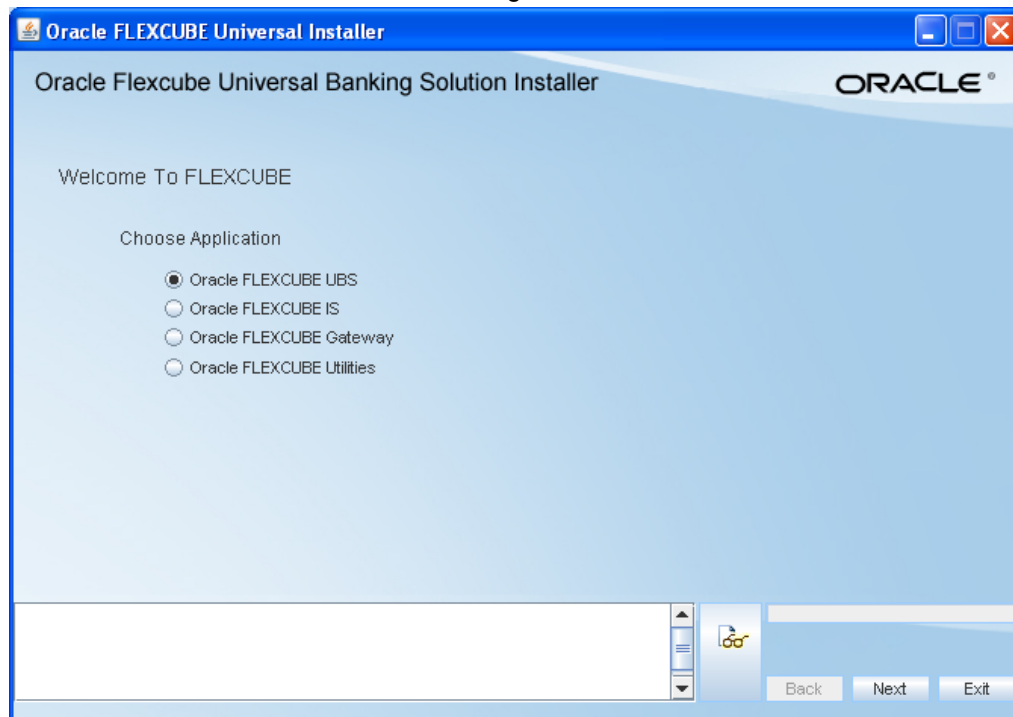
2. Choose Oracle FLEXCUBE UBS and click 'Next'.

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The following screen is displayed:
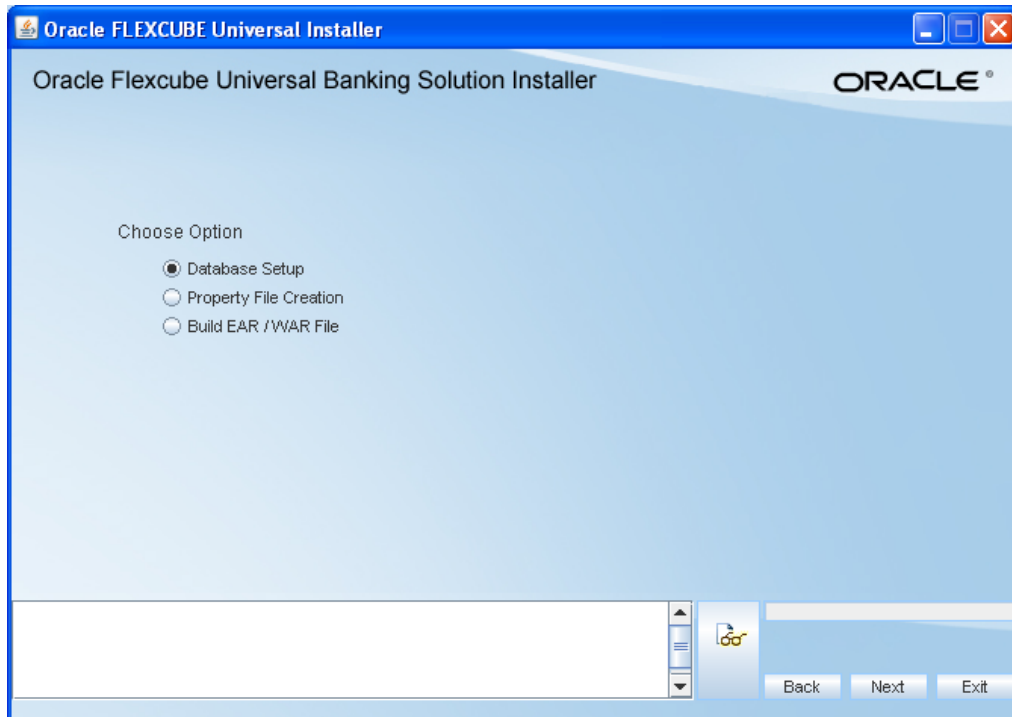
3. Choose Database Setup and click 'Next'.

4. Specify the following details:

Application Type

Choose FGL from the dropdown list.

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Schema

Specify the schema name into which the database components need to be installed.

Password

Enter the password of the schema.

Connect String

Specify the connect string. This is needed for database connectivity.

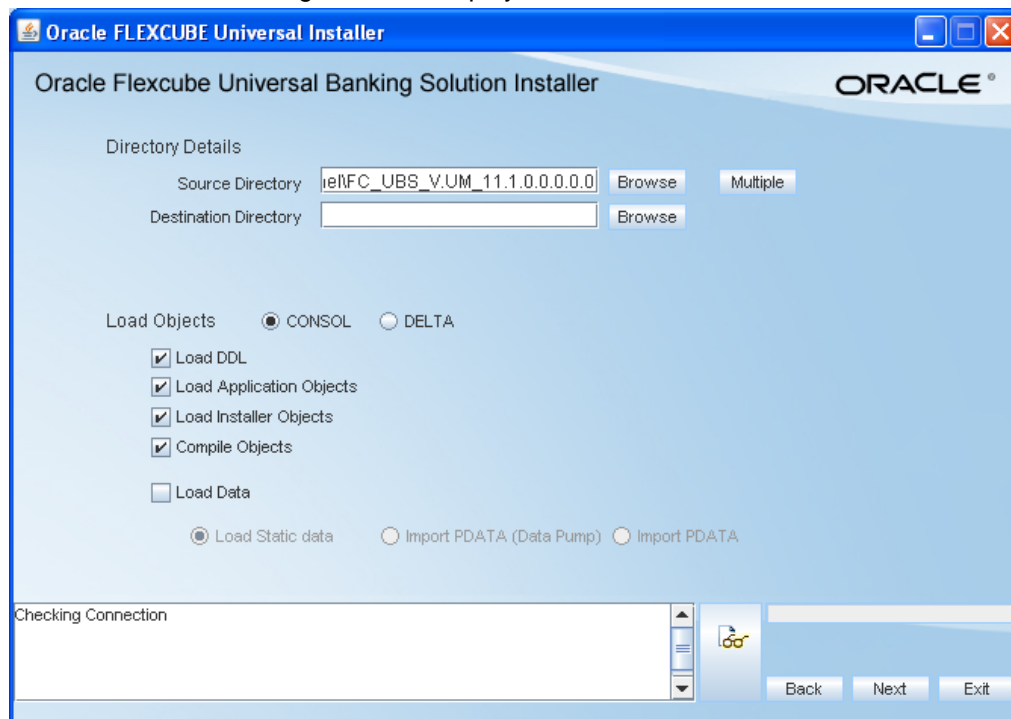**IP Address**

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

SID/Service Name

Enter the SID/Service Name.

Port

Enter the port number.

5. Click 'Next'. The following screen is displayed:

6. Specify the following details:

Source Directory

Specify the source directory location. The source directory will have the 'MAIN' folder and the contents.

Destination Directory

Specify the destination directory.

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This is optional. If you do not specify the destination directory, on clicking 'Next', the Installer displays a message 'Sources will be compiled from source directory'. If you want to proceed, click 'Yes'. The files will be taken directly from source directory for compilation. If you click 'No', you need to specify the destination directory.

The Installer will copy the source files from the source directory to the destination directory. The files are taken from this location for compilation.

Load DDL

If you check this box, the Installer will load the DDL scripts, types and sequences from the folders 'MAIN\\DATABASE\Host\DDL' and 'MAIN\\DATABASE\Branch\DDL' to the source folder of the schema.

Load Application Objects

If you heck this box, the Installer will load the views, procedures, functions, package bodies, package specifications and triggers to the schema, based on the modules that you select in the next screen.

Load Installer Objects

If you check this, the Installer will load the procedures required for running cyclic compilation, pre-import and post-import.

Compile Objects

If you check this option, the Installer will execute the cyclic compilation procedure compiled in the schema.

Load Data

Check this box after invalids have been reduced. This option can be selected after compiling the objects

Load Static Data/Load PData

You have the following options:

- Loa d Static Data - For details on loading static data, refer to the section '2.4.1   Loading Static Data from Shipment media and Basic Setup'.
- Import PData (Data Pump) - If Oracle database version is 11g or later, you need to use this option. For other versions, you can use 'Import PData'. For details, refer to the section '2.4.3   Importing Data Dump with Data Pump.
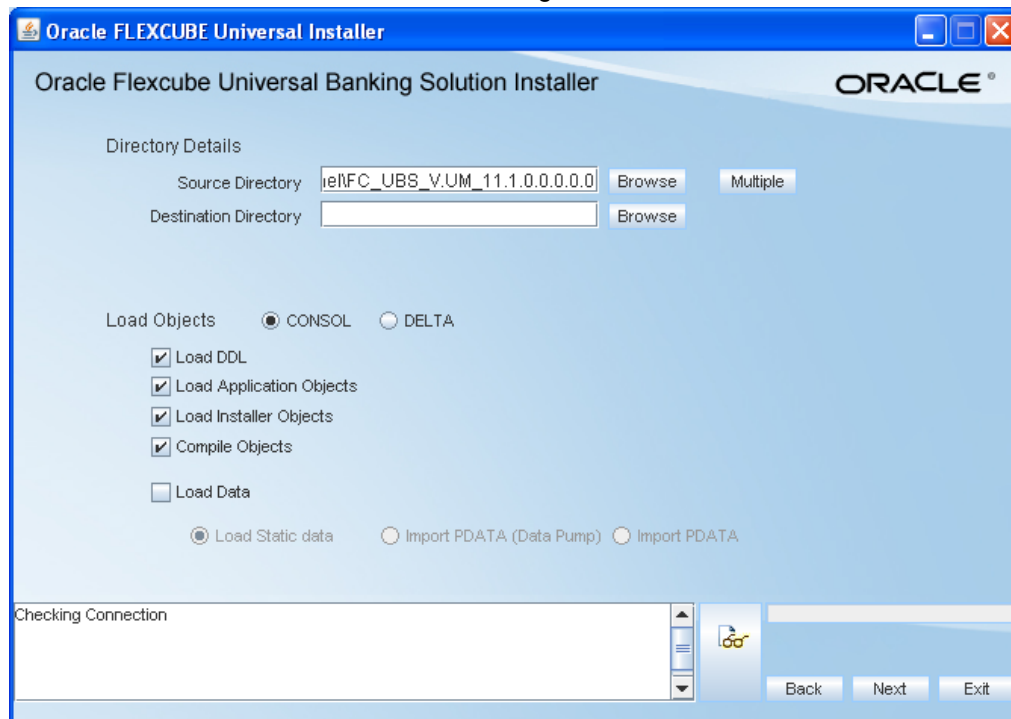
CONSOL/DELTA

Choose one of the following:

- CONSOL – Choose this for fresh installation of the sources.
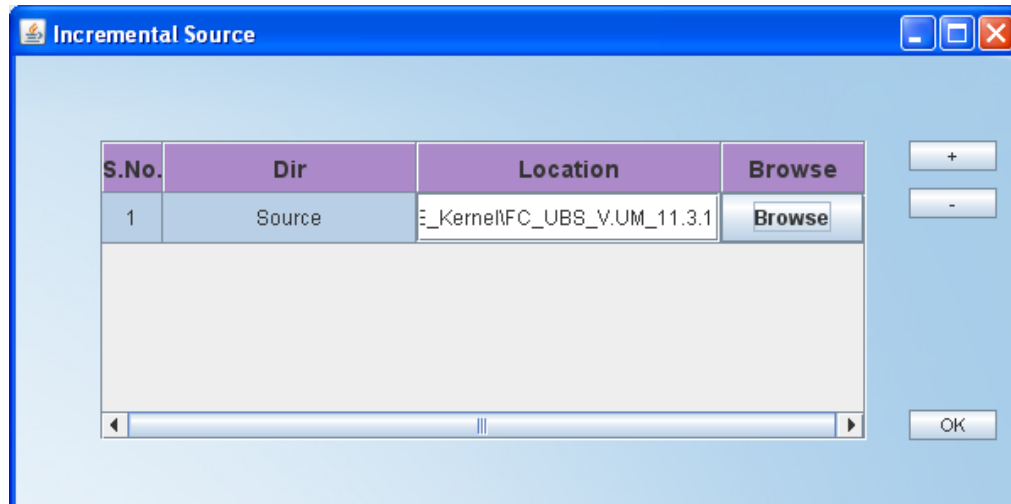- DELTA – Choose this for incremental releases

3.3.2 Using Multiple Source Directories

You can specify multiple source directories using 'Multiple' button. This is not required for creating EAR for Oracle FCUBS 11.3.

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7. Launch Oracle FLEXCUBE Universal Banking Solution Installer.


8. Specify the locations of the source and the destination directories.

9. Click 'Multiple' button. The 'Incremental Source' screen is displayed.

10. You can add multiple source directories using '+' button. You may also delete a row from the list using '-' button.

11. Use 'Browse' button to browse the source directory.

12. Click 'OK' button. The Installer will copy the sources from the multiple locations into the destination directory. You can have consolidated sources in the destination directory.

Note: In case you have already consolidated the sources manually, then specify that folder as the sources directory and leave the destination directory blank.

13. Click 'Next'. The following screen will be displayed.
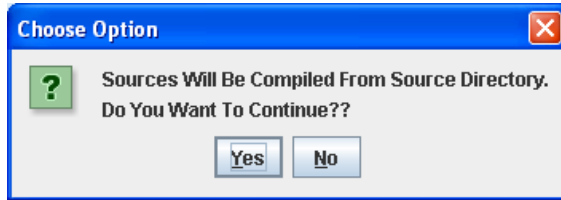
14. Click 'Yes'. If you have checked 'Load Application Objects', the Installer loads objects for SMS, EL, Core and FGL modules. After loading the objects, click 'Next'. The following screen is displayed:
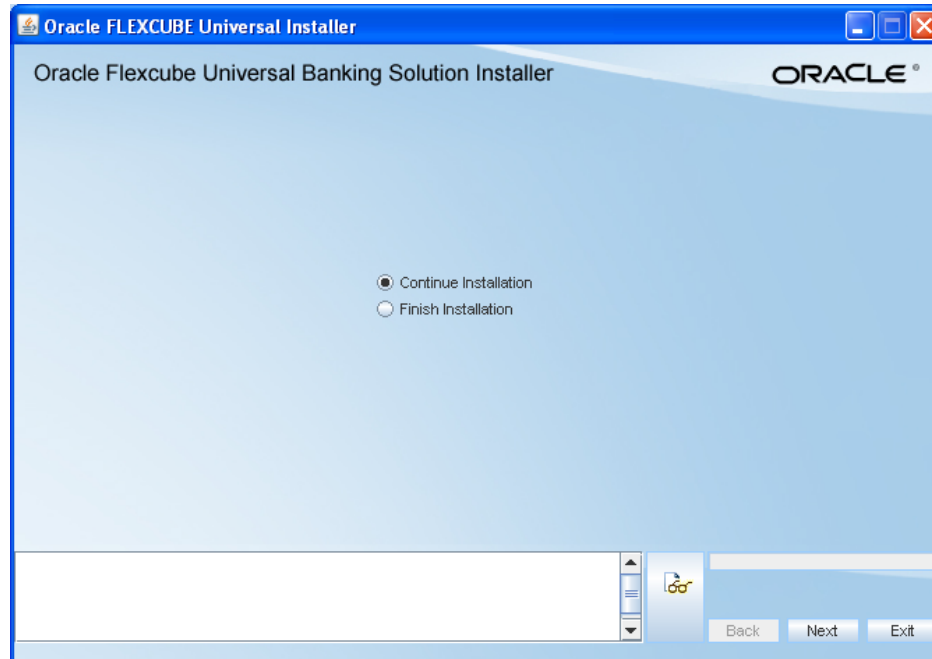
15. You can choose to continue or finish. This step completes the database objects compilation processes.

3.3.3 Loading Data

Once the objects are loaded, you need to insert data into the tables. This task can be completed in three ways.

- Loading Static Data from Shipment media
- Importing Data Dump with Data Pump
- Import PDATA

For details on loading data, refer to the section '2.4   Loading Data' in this user manual.

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4.   Setting up ELCM Database

4.1   Introduction

This chapter explains the steps to setup ELCM database.

4.2   Creating ELCM Schema by Importing Full Dump

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

4.3   Creating ELCM Schema from Shipment media

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

4.3.1.1 Loading Objects from Shipment media

This section explains the steps to load objects for setting up the ELCM database. Database installation includes the provision of schema details and source of objects.

1.   Launch Oracle FLEXCUBE Universal Banking Solutions Installer.
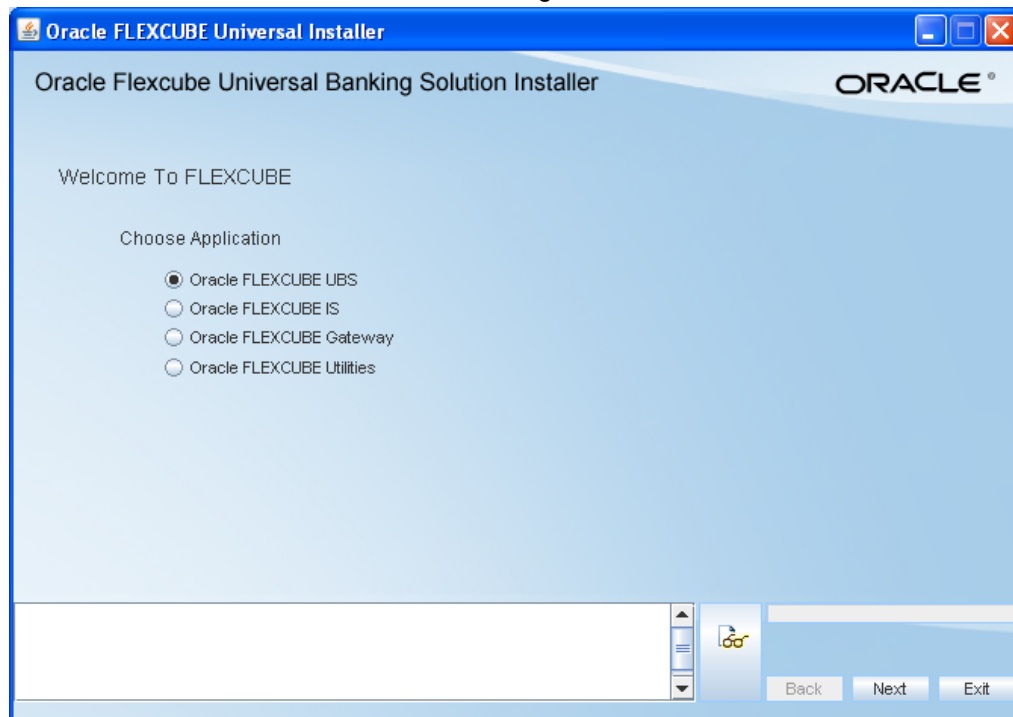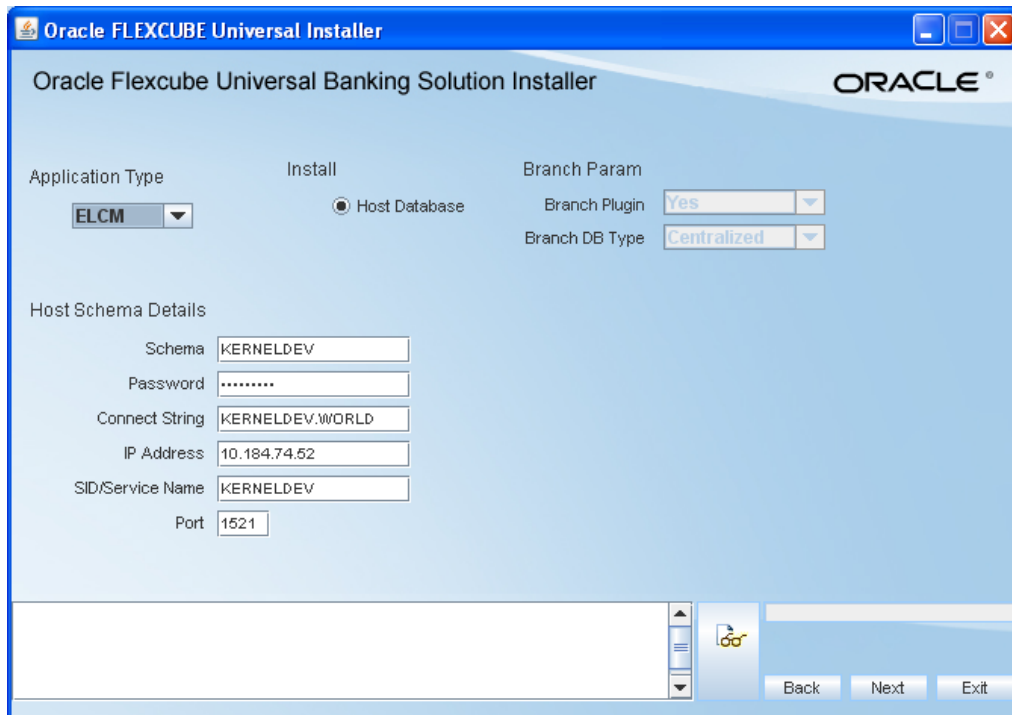

2.   Choose Oracle FLEXCUBE UBS and click 'Next'.

The following screen is displayed:
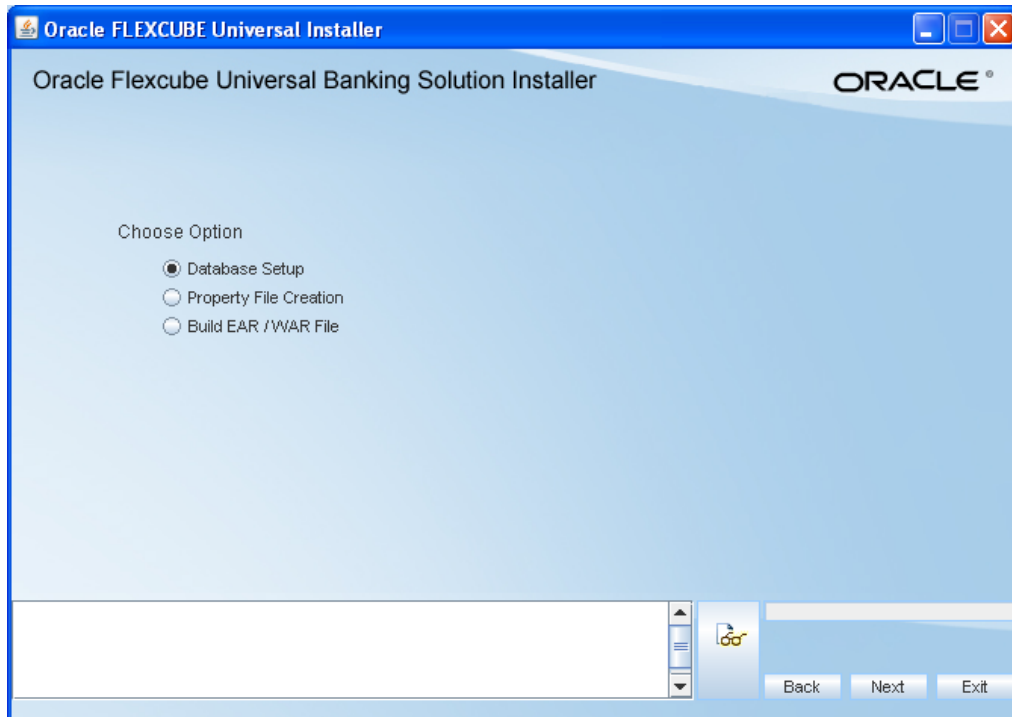
3. Choose Database Setup and click 'Next'.

4. Specify the following details:

Application Type

Choose ELCM from the dropdown list.

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Schema

Specify the schema name into which the database components need to be installed.

Password

Enter the password of the schema.

Connect String

Specify the connect string. This is needed for database connectivity.

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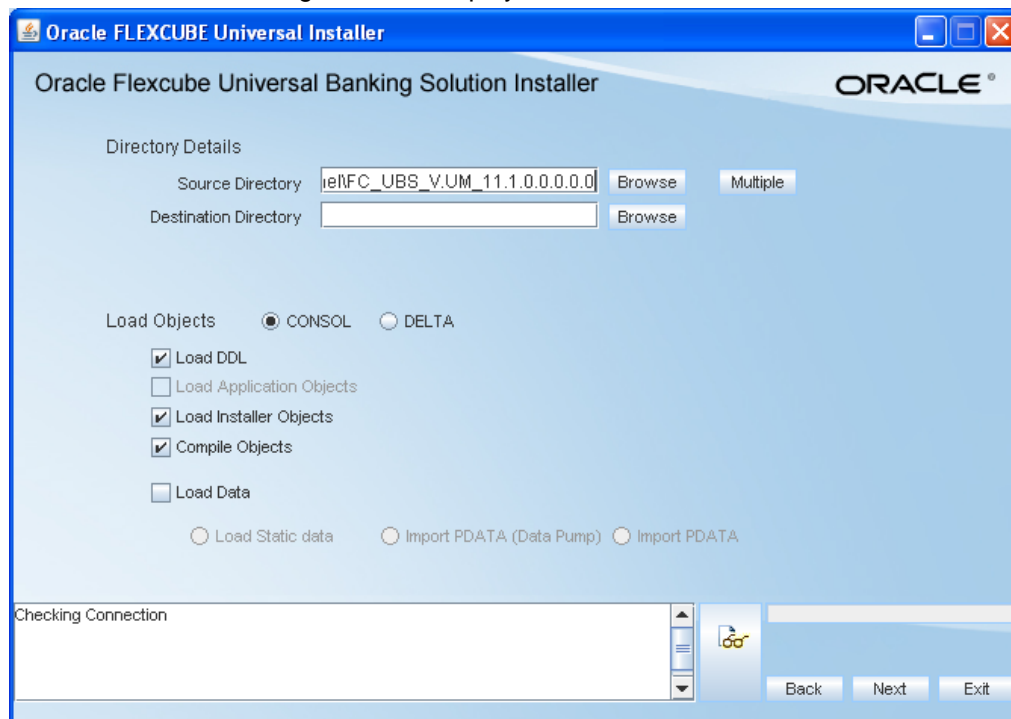
Specify the IP address of the system where the database schema is installed.

SID/Service Name

Enter the SID/Service Name.

Port

Enter the port number.

5. Click 'Next'. The following screen is displayed:

6. Specify the following details:

Source Directory

Specify the source directory location. The source directory will have the 'MAIN' folder and the contents.

Destination Directory

Specify the destination directory.

This is optional. If you do not specify the destination directory, on clicking 'Next', the Installer displays a message 'Sources will be compiled from source directory'. If you want to proceed, click 'Yes'. The files will be taken directly from source directory for compilation. If you click 'No', you need to specify the destination directory.

(Refer point number 13 under 4.3.2 Using Multiple Source Directory)

The Installer will copy the source files from the source directory to the destination directory. The files are taken from this location for compilation.

Load DDL

If you check this box, the Installer will load the DDL scripts, types and sequences from the folders 'MAIN\\DATABASE\Host\DDL' and 'MAIN\\DATABASE\Branch\DDL' to the source folder of the schema.

Load Application Objects

For ELCM, you need to leave it unchecked.

Load Installer Objects

If you check this, the Installer will load the procedures required for running cyclic compilation, pre-import and post-import.

Compile Objects

If you check this option, the Installer will execute the cyclic compilation procedure compiled in the schema.

Load Data

Check this box after invalids have been reduced. This option can be selected after compiling the objects

Load Static Data/Load PData

You have the following options:

- Load Static Data - For details on loading static data, refer to the section '2.4.1   Loading Static Data from Shipment media and Basic Setup'.
- Import PData (Data Pump) - If Oracle database version is 11g or later, you need to use this option. For other versions, you can use 'Import PData'. For details, refer to the section '2.4.3   Importing Data Dump with Data Pump'.
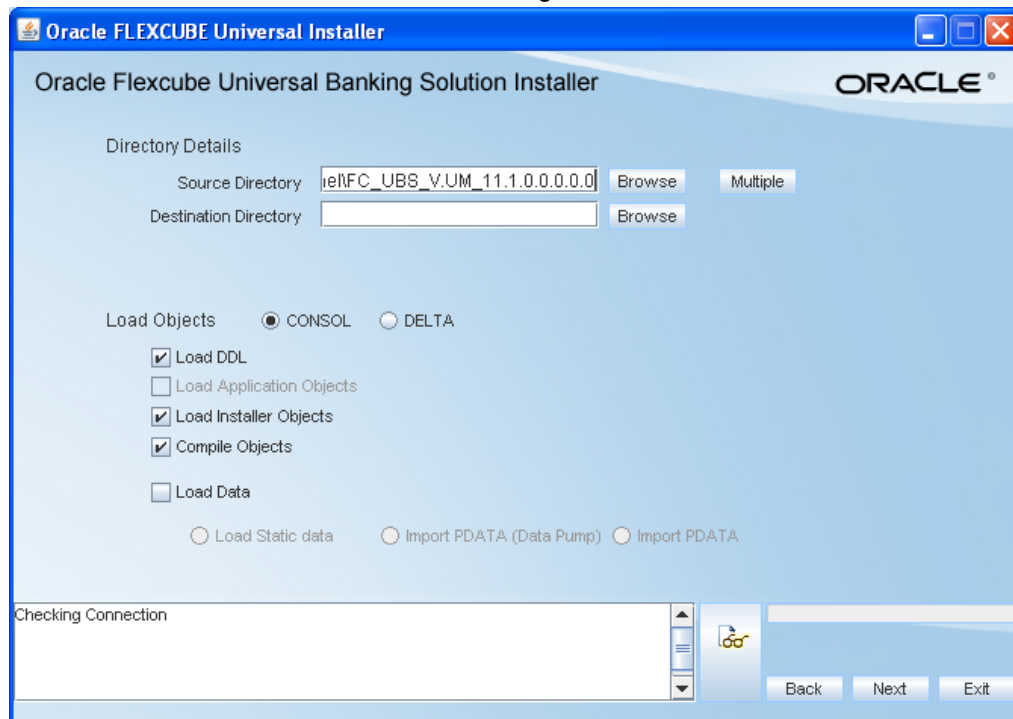
CONSOL/DELTA

Choose one of the following:

- CONSOL – Choose this for fresh installation of the sources.
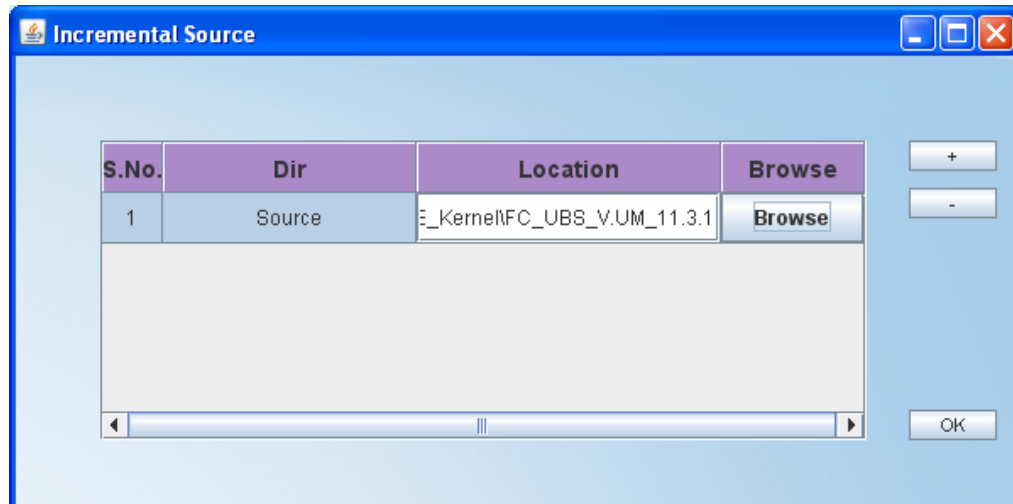- DELTA – Choose this for incremental releases

4.3.2 Using Multiple Source Directories

You can specify multiple source directories using 'Multiple' button. This is not required for creating EAR for Oracle FCUBS 11.3.

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7. Launch Oracle FLEXCUBE Universal Banking Solution Installer.
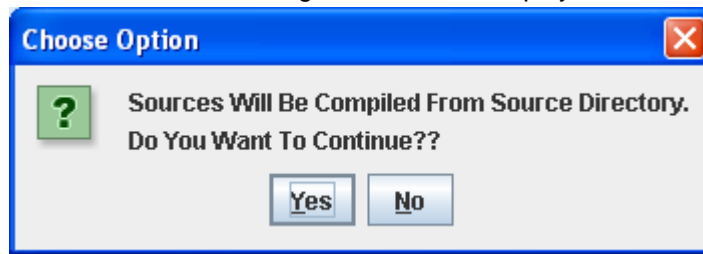

8. Specify the locations of the source and the destination directories.

9. Click 'Multiple' button. The 'Incremental Source' screen is displayed.

10. You can add multiple source directories using '+' button. You may also delete a row from the list using '-' button.

11. Use 'Browse' button to browse the source directory.

12. Click 'OK' button. The Installer will copy the sources from the multiple locations into the destination directory. You can have consolidated sources in the destination directory.

Note: In case you have already consolidated the sources manually, then specify that folder as the sources directory and leave the destination directory blank.

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13. Click 'Next'. The following screen will be displayed.

14. Click 'Yes'. If you have checked 'Load Static Data', the Installer loads the INCs also. After loading the objects, click 'Next'. The following screen is displayed:
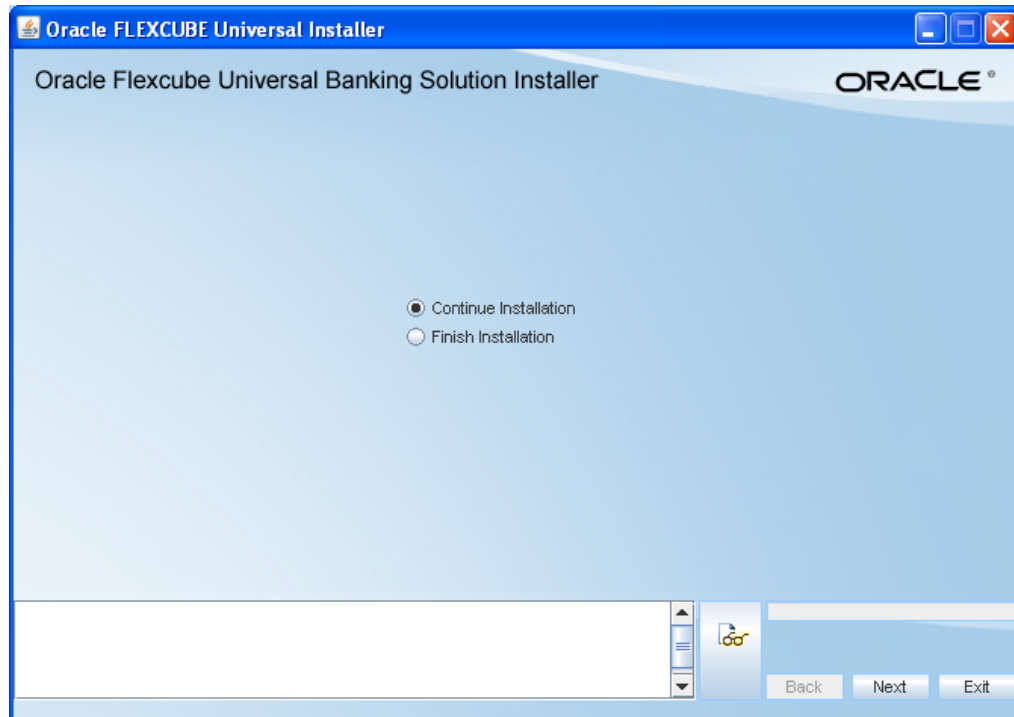
15. You can choose to continue or finish. This step completes the database objects compilation processes.

4.3.3 Loading Data

Once the objects are loaded, you need to insert data into the tables. This task can be completed in three ways.

- Loading Static Data from Shipment media
- Importing Data Dump with Data Pump
- Import PDATA

For details on loading data, refer to the section "2.4   Loading Data in this user manual.

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Setting up Database
[May] [2011]
Version 11.3.0

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