

ELCM Application Setup  
Oracle FLEXCUBE Universal Banking  
Release 12.0.1.12.0  
[April] [2013]



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# 1. Setting up Standalone ELCM

## 1.1 Introduction

This document explains the steps to build ELCM as standalone application. It includes the ELCM standalone database and Application installation.

## 1.2 Prerequisites

Following are the prerequisites for setting up Oracle FGL Application in centralized mode:

**Queue and Connection Factories:** If you wish to include the scheduler plug-in, ensure that you have the respective queue and connection factories in the Application Server.

*For further details on this, refer to the chapter 'Resource\_Creation\_WL.doc and Resource\_Creation\_WAS.doc'.*

**BIP Report Server:** To include the report plug-in in Application, you need to setup the BIP Reports Server for facilitating the report generation.

*For further details on this, refer to the chapter '09-BIP\_Webservices\_Reports\_Setup.doc'.*

## 1.3 Preparing Source Folder

You need to setup various folders to be used as the source input for Installer to build the EAR files based on different plug-ins selected.

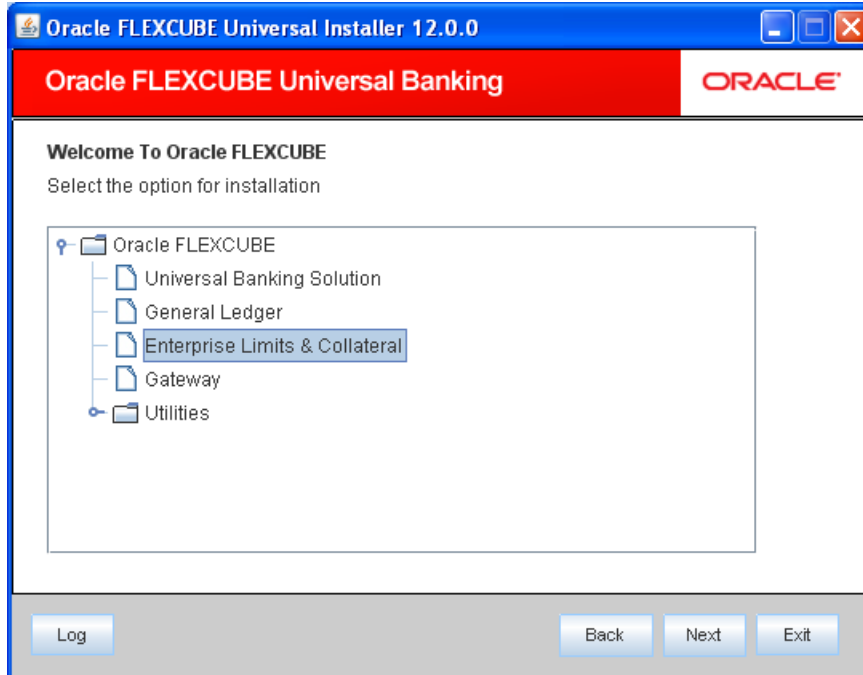
In order to create EAR file for ELCM Application, you need to copy the following folders to the Source Directory:

Folder	Destination Folder	Action
INFRA	Source_Dir/INFRA	Copy the INFRA folder from the Shipment Media into the Source Directory
MAIN	Source_Dir/MAIN	Copy the MAIN folder from the Shipment Media to the Source Directory.
APPLICATION	Source_Dir/APPLICATION	Copy the APPLICATION folder from the Shipment Media to the Source Directory.

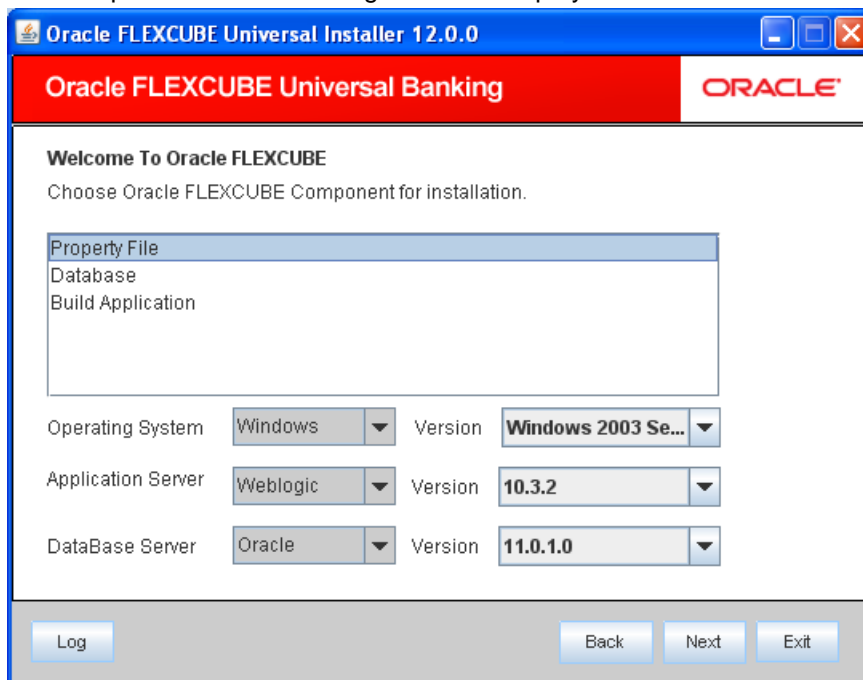
## 1.4 Building Application for Setup

This section guides you through the steps to build EAR file. To build the application for setup using the installer, follow the steps given below.

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



2. You need to select the application to be installed. Choose 'Enterprise Limits & Collaterals' and click 'Next' to proceed. The following screen is displayed.



3. Choose the option 'Property File'.
4. Specify the following details:

## Operating System and Version

Specify the operating system in which you are creating the property file. Choose the appropriate one from the drop-down list. You also need to specify the version of the selected operating system.

## Application Server and Version

Specify the application server in which you are creating the property file. Choose the appropriate one from the drop-down list. You also need to specify the version of the selected application server.

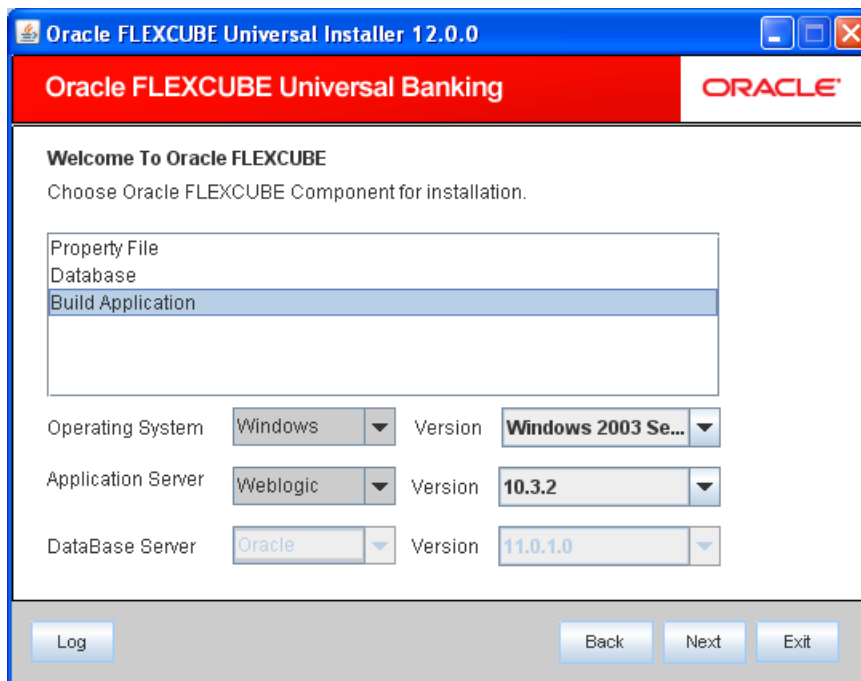
## Database Server and Version

Specify the database server in which you are creating the property file. Choose the appropriate one from the drop-down list. You also need to specify the version of the selected database server.

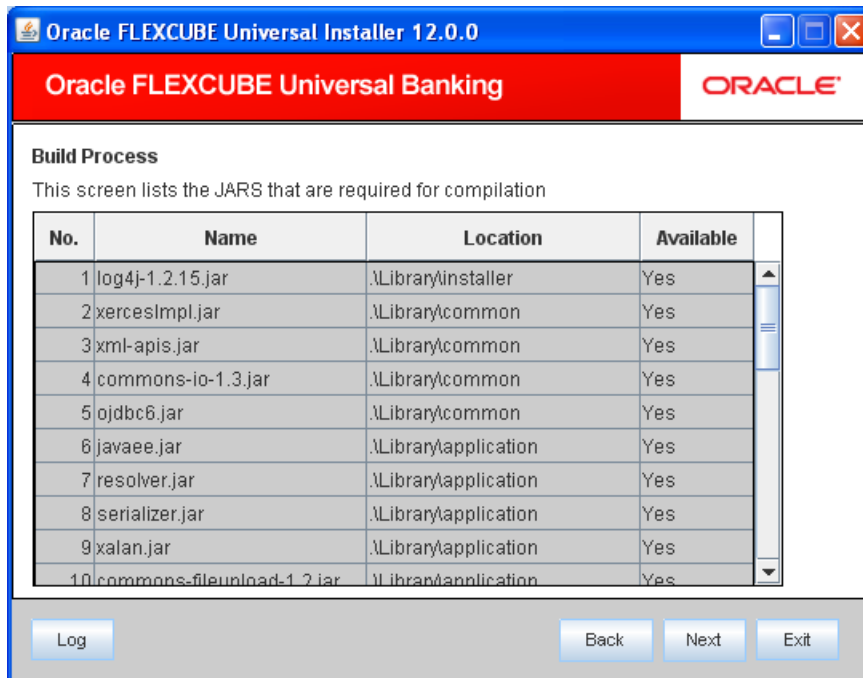
5. Once you have specified the details, click 'Next' to continue.

*Refer to the chapter '04-PropertyFile\_Setup.doc' for details on the method of setting up and modifying property files.*

6. The following screen is displayed.

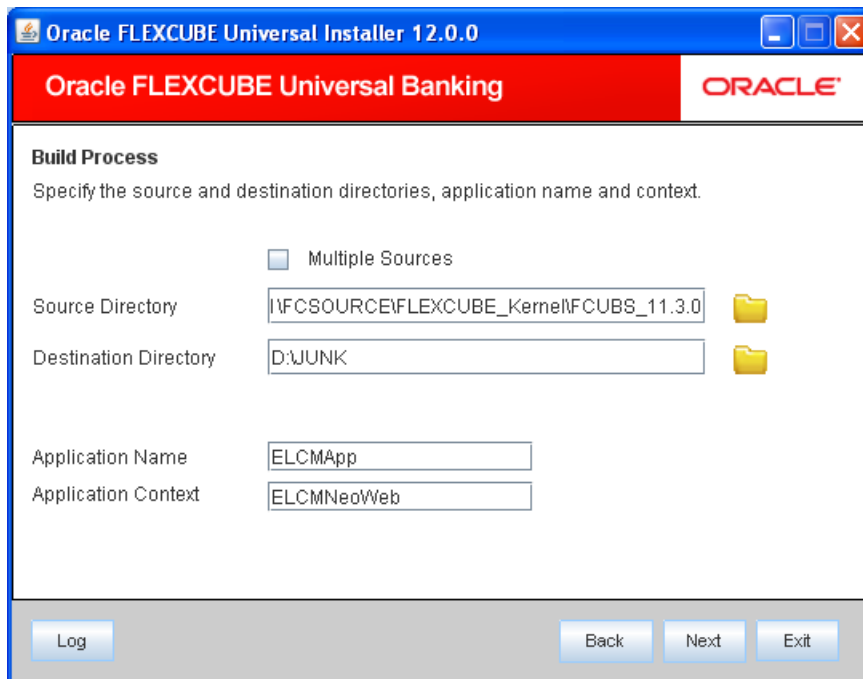


7. Choose the option 'Build Application' and click 'Next' to continue. You will be prompted to specify the application details in the following screen.



8. Observe the list of JAR files required for compilation. Verify the JAR file requirements and click 'Next'.

**Note:** You need to verify the JAR in EXEC mode of installation also.



9. Specify the following details.

### Source Directory

Specify the location of the application source directory. The source directory will have the following folders:

- INFRA (Copied from Shipment Media)
- MAIN (Copied from Shipment Media) (optional)
- ELCM

Use the 'Browse' button to browse and select the source directory.

Check the box 'Multiple Sources' to use multiple source directories.

### **Destination Directory**

Specify the location where the application should be setup. The installer will copy the source files from the App Source Path to the App Destination Path.

Use the 'Browse' button to browse and select the destination directory.

### **Application Name**

Specify a name for the Application to be deployed.

You cannot use special characters such as '.' (dot), ',' (comma), '\$' etc. However, you may use '\_' (underscore).

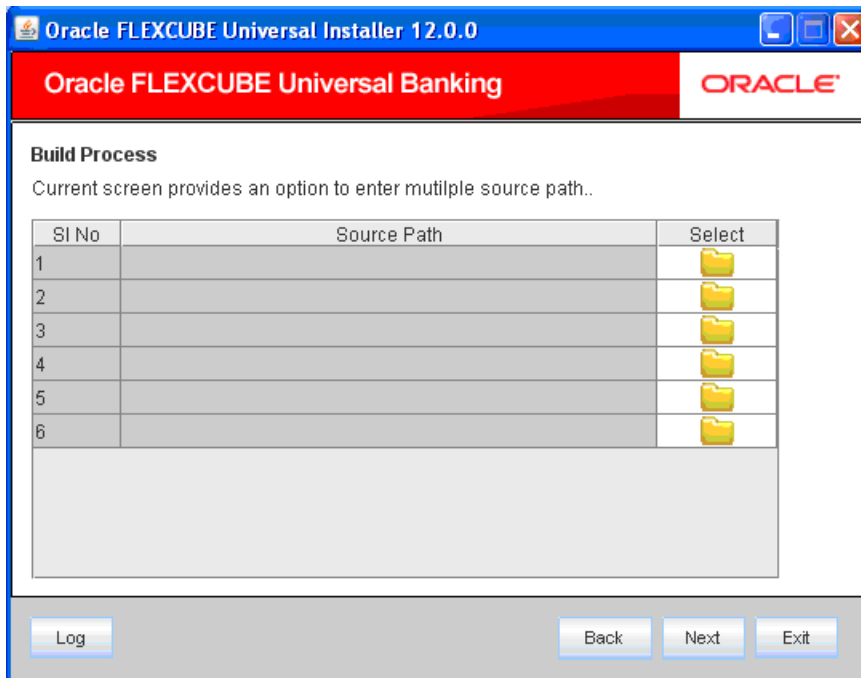
E.g.: FCUBSELCM

### **Application Context**

Based on the Application type selected, the Installer displays the application context. However, you may modify the default value.

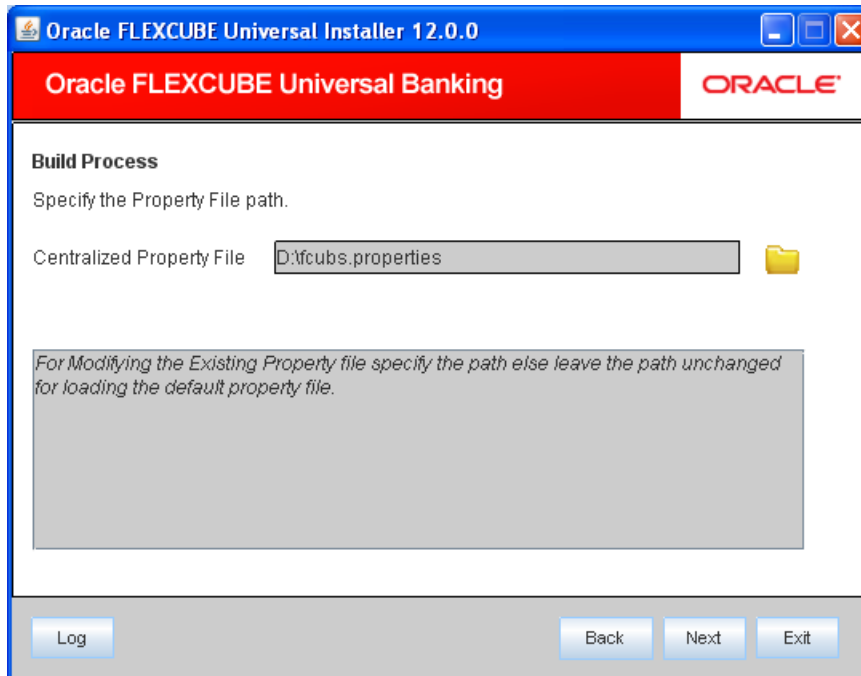
### **Multiple Sources**

In case of Cluster/Patch releases, you can get the files from multiple source directories. If you check this box, the installer will not allow you to specify the source directory in this screen. On clicking 'Next', the following screen is displayed.



You can select all the source directories in this screen. The Installer will copy the sources from the multiple locations into the destination directory. You can have consolidated sources in the destination directory.

10. Once you have specified the details, click 'Next' to continue.



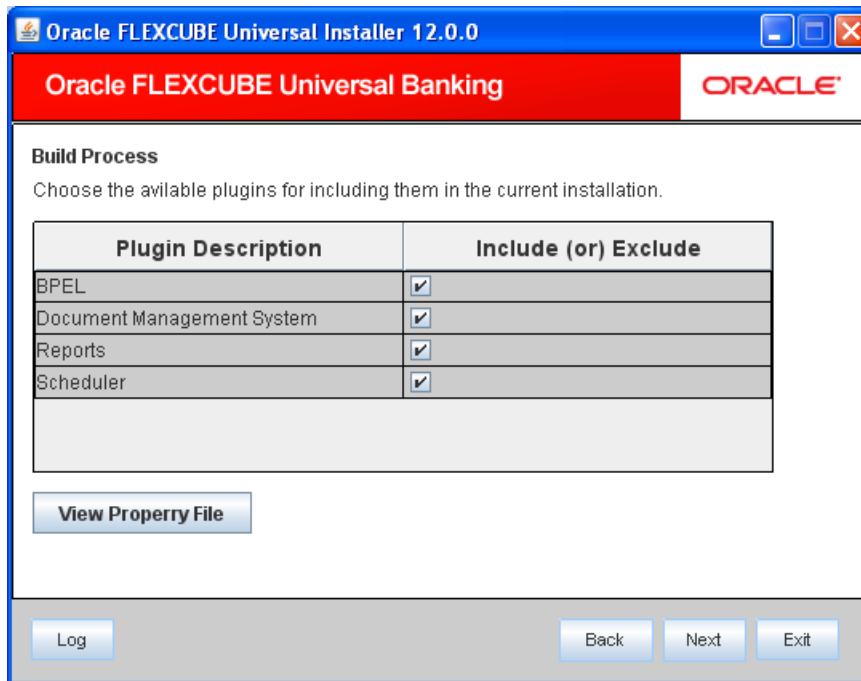
11. Specify the following details:

### Centralized Property File

To modify an existing property file, you can manually specify the location of the property file.



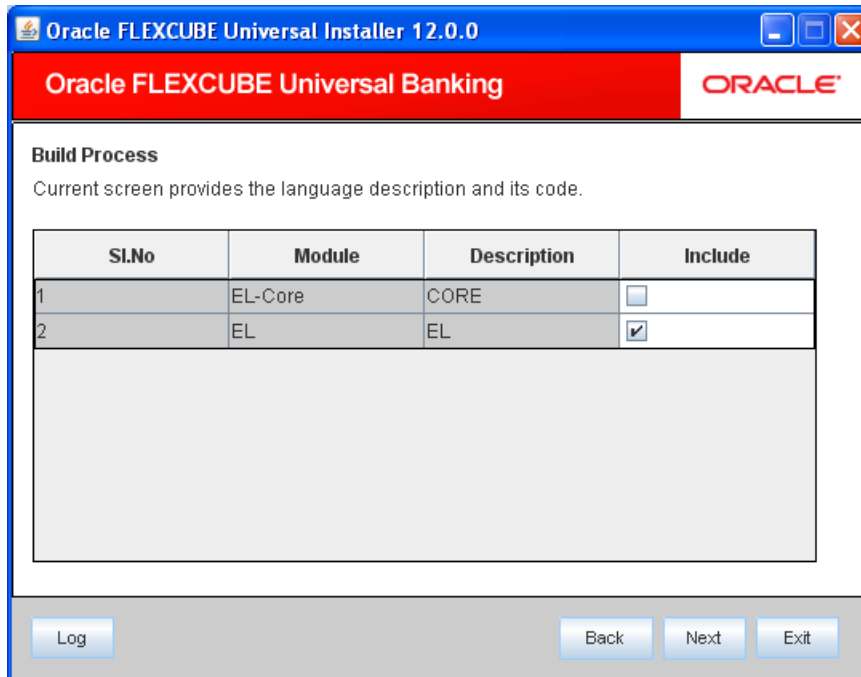
12. Click 'Next'. The system displays the following screen.



13. When you load an existing property file, the installer will not allow you to edit the plug-ins. To edit the plug-ins, you need to create a new property file, set the plug-in details there and then load the new property file,

**Note:** Ensure that the source folder pertaining to the plug-in exists in the source directory itself.

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



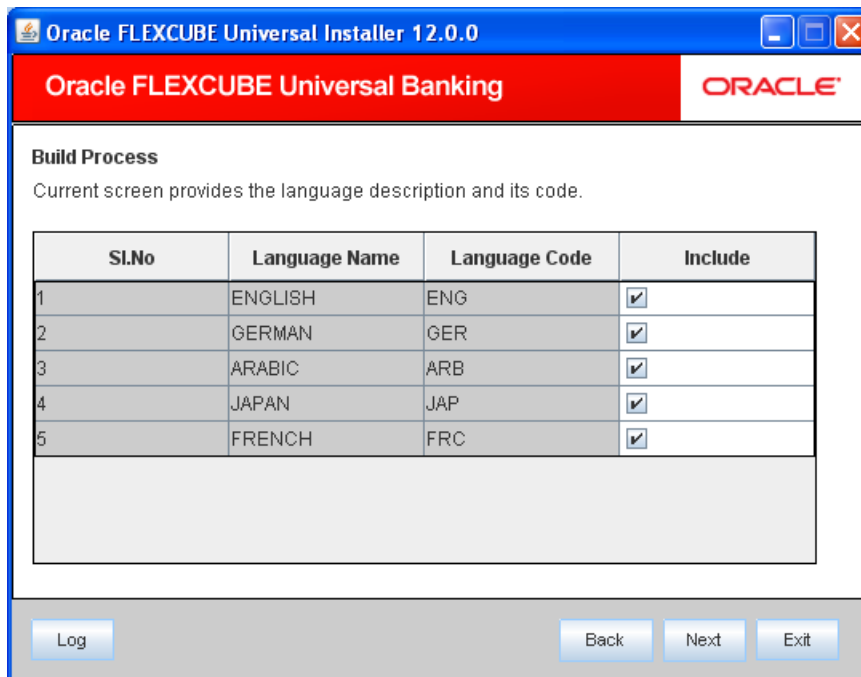
15. Select the modules to be included.

On including the modules, the Installer copies the following files from source folder to the destination folder if the module is available in the MAIN folder of the Source Directory.

- All the JS files from MAIN/<Module>/JS to the folder INFRA/FCJNeoWeb/WebContent/Script/JS in the destination directory
- All the XML files from MAIN/<Module>/ UIXML/ENG/ to the folder INFRA/FCJNeoWeb/WebContent/UIXML/ENG in the destination directory

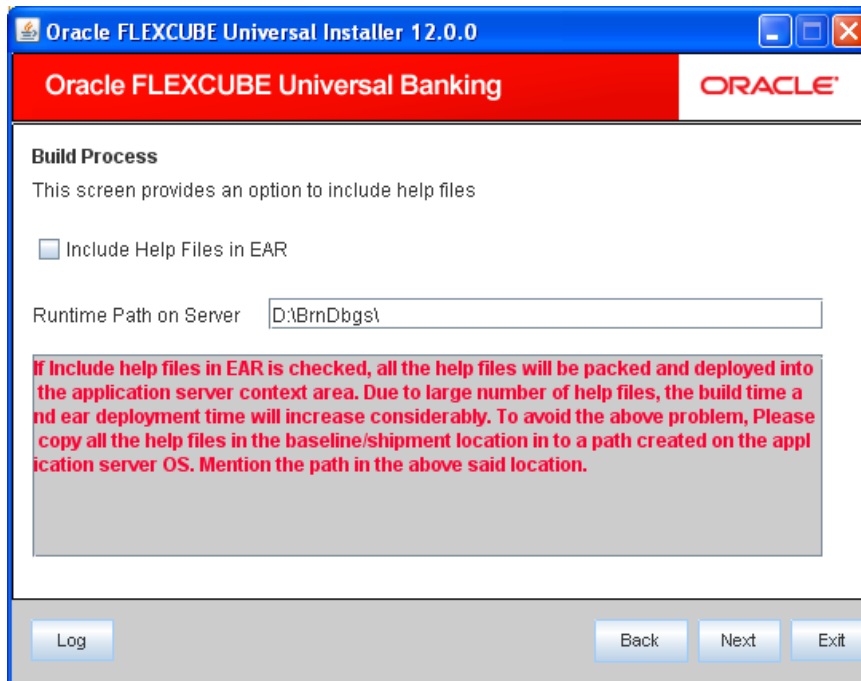
If the Main folder is not copied to the Source Directory, then, after deployment of EAR file, you need to manually copy these files into the deployed location.

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



17. Select the languages that you wish to include in the installation.

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



19. Specify the following details:

#### **Include Help Files in EAR**

Check the box 'Help Files' to include the online help files in the installation.

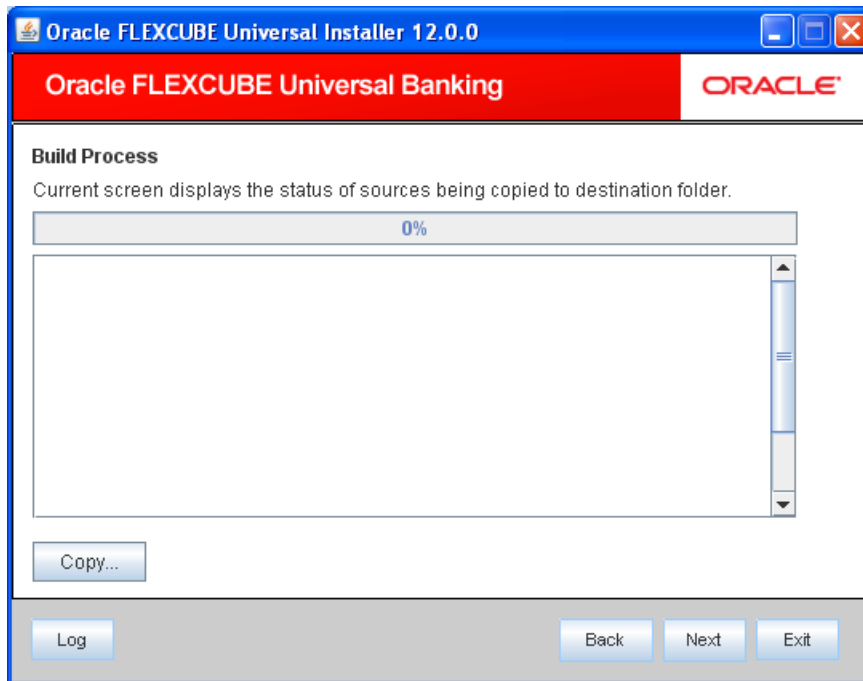
If you do not check this box, the Installer will not include the help files in the EAR file. However, you can manually copy the help files to a specific folder in the application server. For details, read the information below.

#### **Runtime Path on Server**

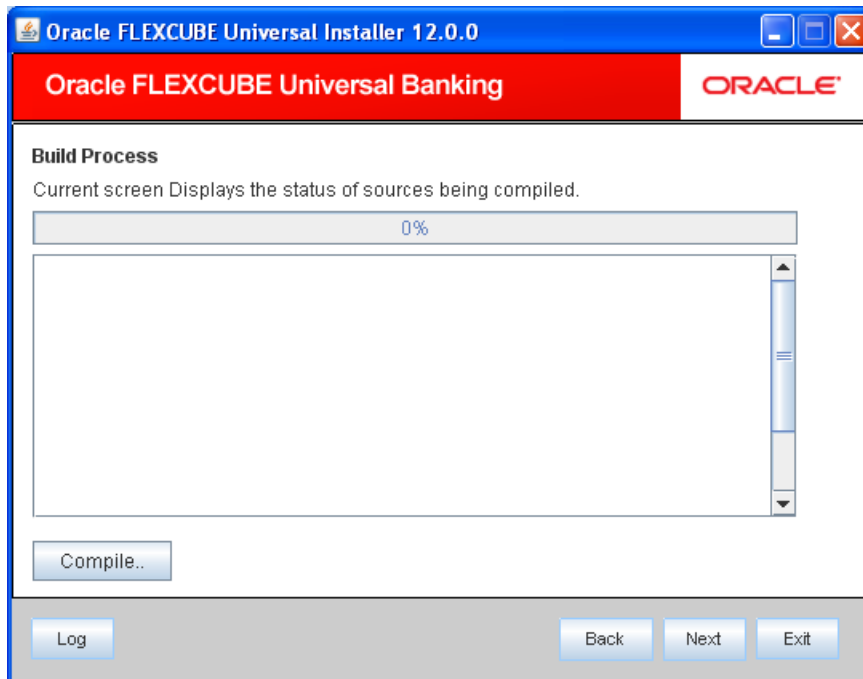
In case you have manually moved the help files into a folder in the application server, specify the path of that folder.

**Note:** You can manually copy the help files from the shipment media to a specific folder in the application server. This will reduce the time required for building EAR file. Copy the help files into a specific folder in the application server and unzip the files. Later, specify the folder location in the field 'Runtime Path on Server'.

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



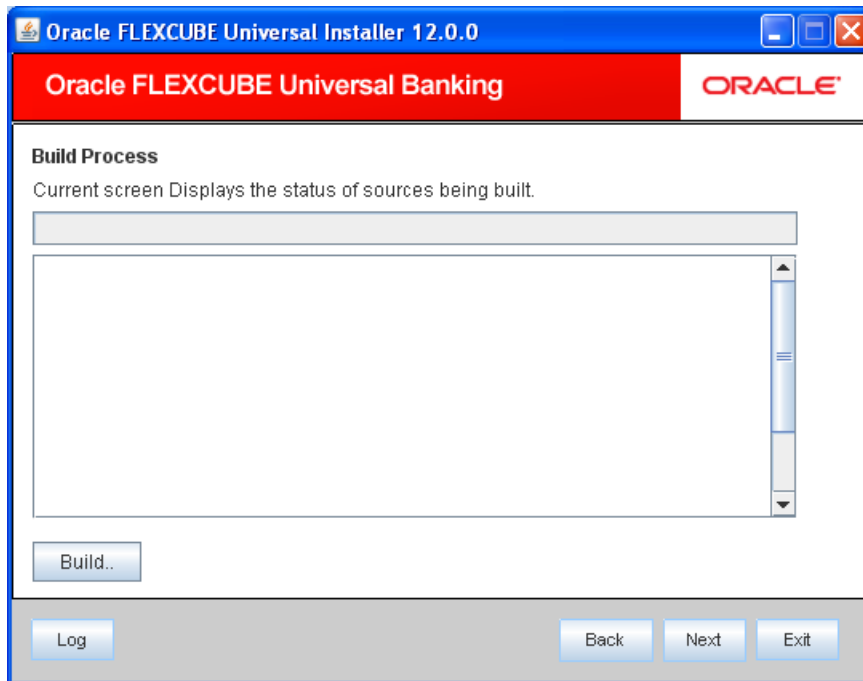
21. Click 'Copy' button to copy the source files to the destination folder. The installer copies the files.
22. Click 'Next'. The following screen is displayed.



23. Click 'Compile' button to start compilation. The installer compiles the files.

**Note:** This screen will not be available in EXEC mode of installation.

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



25. Click 'Build' button to start the build process. The installer builds the EAR file.

This completes the EAR file generation process.

EAR file will be available in selected EAR file location. If you have opted for BPEL, then FCBPELCIS.jar file will also be available in the EAR file location.

---

## 2. Pre-Deployment Tasks

### 2.1 Introduction

You need to carry out certain task manually before Oracle FGL deployment. This chapter details out the pre-deployment tasks based on the on the selected plug-ins.

### 2.2 ELCM Application

Before deploying the EAR file created with ELCM as a standalone, you need to complete the following tasks.

#### 2.2.1 Startup Script Modification

By default, the TopLink used in MBean uses Oracle xml parser internally. However, WebLogic Server has to use JAXPPlatform.

To change the system property, follow the steps given below:

- Go to the WebLogic domain home folder. // change for Oracle standards
- Based on the operating system used, open 'startWebLogic.cmd' or 'startWebLogic.sh' from the folder 'bin'.
- Search for 'WLS\_REDIRECT\_LOG'. After '%JAVA\_OPTIONS%' add the following code under 'if' and 'else' conditions.

**`"-Dtoplink.xml.platform=oracle.toplink.platform.xml.jaxp.JAXPPlatform"`**

Now, the details will look like this:

```
if "%WLS_REDIRECT_LOG%"==" " (

    echo Starting WLS with line:

    echo %JAVA_HOME%\bin\java %JAVA_VM% %MEM_ARGS% -
Dweblogic.Name=%SERVER_NAME% -
Djava.security.policy=%WL_HOME%\server\lib\weblogic.policy %JAVA_OPTIONS%
%PROXY_SETTINGS% %SERVER_CLASS%

    %JAVA_HOME%\bin\java %JAVA_VM% %MEM_ARGS% -Dweblogic.Name=%SERVER_NAME%
-Djava.security.policy=%WL_HOME%\server\lib\weblogic.policy %JAVA_OPTIONS%
-Dtoplink.xml.platform=oracle.toplink.platform.xml.jaxp.JAXPPlatform
%PROXY_SETTINGS% %SERVER_CLASS%

) else (

    echo Redirecting output from WLS window to %WLS_REDIRECT_LOG%

    %JAVA_HOME%\bin\java %JAVA_VM% %MEM_ARGS% -Dweblogic.Name=%SERVER_NAME%
-Djava.security.policy=%WL_HOME%\server\lib\weblogic.policy %JAVA_OPTIONS%
-Dtoplink.xml.platform=oracle.toplink.platform.xml.jaxp.JAXPPlatform
%PROXY_SETTINGS% %SERVER_CLASS% >"%WLS_REDIRECT_LOG%" 2>&1
```

)

Restart the WebLogic server.

## 2.2.2 **CSTB\_PARAM Setting**

### **Creating debug path for ELCM Gateway**

Check the property file for the path given in HOST\_LOG\_FILE\_PATH. Create a folder by name 'Gateway' inside that folder for logging ELCM Gateway debug.

E.g.: If the Host Debug path is 'D:\BrnDbgs', then you need to create the folder 'Gateway' inside 'D:\BrnDbgs'. (D:\BrnDbgs\Gateway).

You need to verify the entries in CSTB\_PARAM table as per examples given below:

PARAM_NAME	PARAM_VAUE
ELCM_SOURCE	EXTSYS
ELCM_USER_ID	SYSTEM
ELCM_INSTALLED	Y
ELCM_INTERFACE	TABLE
ELCM_URL	http://10.184.74.97:8101/ELGatewayClient/IntE.g.rationController
ELCM_HTTP_TYPE	JAVA_HTTP
ELCM_HTTP_URL	http://10.184.74.97:8101/ELGatewayClient/IntE.g.rationController
ELCM_TIMEOUT	10000000
ELCM_HTTPS_URL	https://10.184.74.97:8101/ELGatewayClient/IntE.g.rationController

### **ELCM\_SOURCE**

When the parameter name is 'ELCM\_SOURCE', then the parameter value has to be an external system maintained as part of the External System Functions Maintenance (GWDEXFUN). The external system must have the message exchange pattern as FSFS.

E.g.: EXTSYS

### **ELCM\_USER\_ID**

When the parameter name is 'ELCM\_USER\_ID', then the parameter value should be 'SYSTEM' as default for all transactions that are internal and triggered by the system and passed from Oracle FCUBS to ELCM.

**Note:** 'ELCM\_USER\_ID' is parameterized and can have any valid user ID which has all roles and is auto authorized.

## **ELCM\_INSTALLED**

This should be 'Y' if ELCM is installed in Oracle FCUBS.

## **ELCM\_INTERFACE**

This should be 'TABALE' in embedded mode of ELCM.

## **ELCM\_URL and ELMS\_HTTP\_URL**

These are the URLs to the location where ELCM Gateway Client has been installed.

E.g.: If the ELCM Gateway Client URL is 'http://10.184.74.97:8101/ELGatewayClient', then the parameter values will be the following URL:

<http://10.184.74.97:8101/ELGatewayClient/IntE.g.rationController>.

## **ELCM\_HTTP\_TYPE**

If the PARAM\_NAME is 'ELMS\_HTTP\_TYPE', then the parameter value can be 'JAVA\_HTTP' or 'UTIL\_HTTP'.

WHEN ELCM\_HTTP\_TYPE is JAVA\_HTTP, following scripts need to be run with DBA rights:

```
EXEC DBMS_JAVA.grant_permission (SCHEMA NAME, 'java.io.FilePermission', '*', 'read' , execute);
```

```
/
```

```
EXEC DBMS_JAVA.grant_permission(SCHEMA NAME, 'SYS:java.lang.RuntimePermission',  
'writeFileDescriptor', '*');
```

```
/
```

```
EXEC DBMS_JAVA.grant_permission(SCHEMA NAME, 'SYS:java.lang.RuntimePermission',  
'readFileDescriptor', '*');
```

```
/
```

```
GRANT JAVAUSERPRIV TO SCHEMA NAME,;
```

```
/
```

```
EXEC dbms_java.grant_permission (SCHEMA NAME, 'SYS:java.net.SocketPermission', 'IP  
ADDRESS:PORT NUMBER', 'connect','resolve' );
```

```
/
```

Example: if SCHEMA NAME is APACK110, IP ADDRESS is 10.184.74.97 and PORT NUMBER is 8101 where application is deployed then following scripts need to be run with DBA permission.

```
EXEC DBMS_JAVA.grant_permission('APACK110', 'java.io.FilePermission', '*', 'read , execute');
```

```
/
```

```
EXEC DBMS_JAVA.grant_permission('APACK110', 'SYS:java.lang.RuntimePermission',  
'writeFileDescriptor', '*');
```



/

```
EXEC DBMS_JAVA.grant_permission('APACK110', 'SYS:java.lang.RuntimePermission',  
'readFileDescriptor', '*');
```

/

```
GRANT JAVAUSERPRIV TO APACK110;
```

/

```
EXEC dbms_java.grant_permission('APACK110', 'SYS:java.net.SocketPermission', '10.184.74.97:8101',  
'connect,resolve');
```

/

WHEN ELCM\_HTTP\_TYPE is UTIL\_HTTP and HTTP\_TYPE is UTL\_HTTP, ACL rights are required for the host (IP address and PORT) where the Application is deployed.

WHEN ELCM\_HTTP\_TYPE is JAVA\_HTTPS, you need to make entry of the HTTPS URL of ELCM gateway client in the PARAM\_VALUE having 'PARAM\_NAME ELCM\_HTTPS\_URL'.

E.g.: If the ELCM Gateway Client's SSL URL is 'https://10.184.74.97:8101/ELGatewayClient', then the parameter value will be the following URL:

<https://10.184.74.97:8101/ELGatewayClient/IntE.g.rationController>.

WHEN ELCM\_HTTP\_TYPE is JAVA\_HTTPS, follow the steps below:

1. Create a directory in the Database Server where the keystore is stored.
2. Create the Oracle Directory in the above directory by name 'ELCM\_SSL\_KEYSTORE' with DBA role.

WHEN ELCM\_HTTP\_TYPE is JAVA\_HTTPS, you need to run the following scripts with DBA rights:

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

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

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

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

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

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

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

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

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

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

## 2.3 **Integrating Oracle FGL with Scheduler**

Before deploying the Application EAR file created with Scheduler as a Plug-in, you need to complete the following tasks.

### 2.3.1 **Running Backend Scripts**

Before deploying the EAR file, you need to compile in the schema some tables pertaining to Scheduler. In this case, you need to use Quartz version 1.6.6. Follow the steps given below:

1. Download Quartz 1.6.6

*For instructions on downloading the zip file, refer to the chapter 'Setting up Oracle FLEXCUBE Installer.'*

2. Once you have downloaded the file 'Quartz 1.6.6.zip', extract the zip file to a directory.
3. Go to 'Quartz-1.6.6\docs\dbTables' folder and run 'tables\_oracle.sql' (this is specific to Oracle Database) in the schema.

## 2.4 **BIP Reports Integrating**

For details on configuring BIP Reports and patches (BI PUBLISHER ENTERPRISE 10.1.3.4.1) installation, refer to the chapter '09-BIP\_Webservices\_Reports\_Setup.doc'.

### 2.4.1 **Deploying Application through Application Server's Admin Console**

#### **Deployment from WebLogic Administration Console**

You can find the details pertaining to the deployment of Application using WebLogic Administration Console in the chapter 'FCUBS\_Application\_WL.doc'.

## 2.5 **Integrating ELCM and MBean**

In order to Integrating ELCM and MBean, you need to follow the below steps before deploying the ELCM EAR file created with MBean as a Plug-in.

### 2.5.1 **Startup Script Modification**

By default, the TopLink used in MBean uses Oracle xml parser internally. However, WebLogic Server has to use JAXPlatform.

To change the system property, follow the steps given below:

1. Go to the WebLogic domain home folder.
2. Based on the operating system used, open 'startWebLogic.cmd' or 'startWebLogic.sh' from the folder 'bin'.

3. Search for 'WLS\_REDIRECT\_LOG'. After '%JAVA\_OPTIONS%' add the following code under 'if' and 'else' conditions.

**"-Dtoplink.xml.platform=oracle.toplink.platform.xml.jaxp.JAXPPlatform"**

Now, the details will look like this:

```
if "%WLS_REDIRECT_LOG%"==" " (

    echo Starting WLS with line:

    echo %JAVA_HOME%\bin\java %JAVA_VM% %MEM_ARGS% -
    Dweblogic.Name=%SERVER_NAME% -
    Djava.security.policy=%WL_HOME%\server\lib\weblogic.policy %JAVA_OPTIONS%
    %PROXY_SETTINGS% %SERVER_CLASS%

    %JAVA_HOME%\bin\java %JAVA_VM% %MEM_ARGS% -Dweblogic.Name=%SERVER_NAME%
    -Djava.security.policy=%WL_HOME%\server\lib\weblogic.policy %JAVA_OPTIONS%
    -Dtoplink.xml.platform=oracle.toplink.platform.xml.jaxp.JAXPPlatform
    %PROXY_SETTINGS% %SERVER_CLASS%

) else (

    echo Redirecting output from WLS window to %WLS_REDIRECT_LOG%

    %JAVA_HOME%\bin\java %JAVA_VM% %MEM_ARGS% -Dweblogic.Name=%SERVER_NAME%
    -Djava.security.policy=%WL_HOME%\server\lib\weblogic.policy %JAVA_OPTIONS%
    -Dtoplink.xml.platform=oracle.toplink.platform.xml.jaxp.JAXPPlatform
    %PROXY_SETTINGS% %SERVER_CLASS% >"%WLS_REDIRECT_LOG%" 2>&1

)
```

4. Restart the WebLogic server.

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## 3. Loading POJO JAR Files into Database

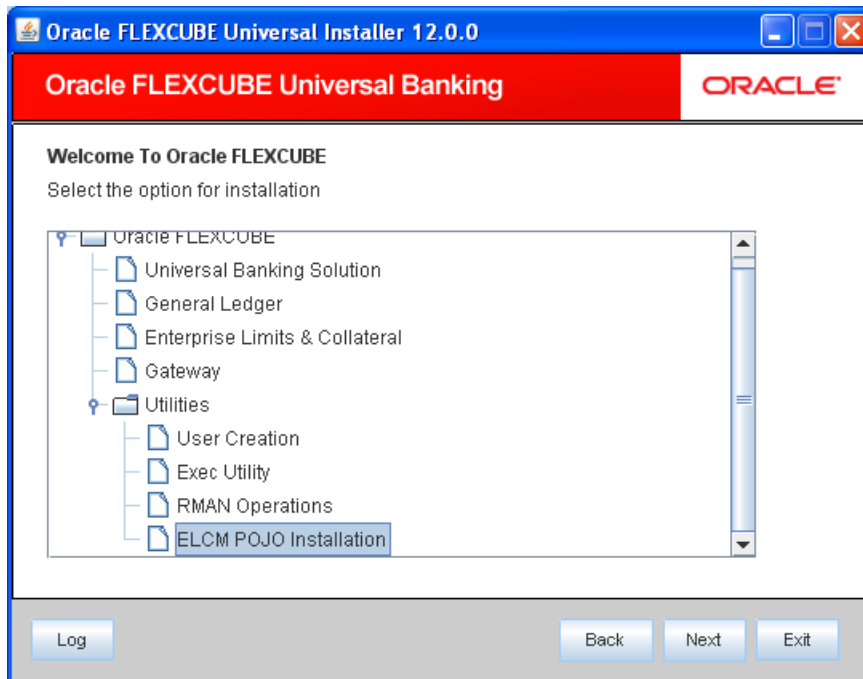
### 3.1 Introduction

This chapter describes the process of loading POJO JAR files into the database.

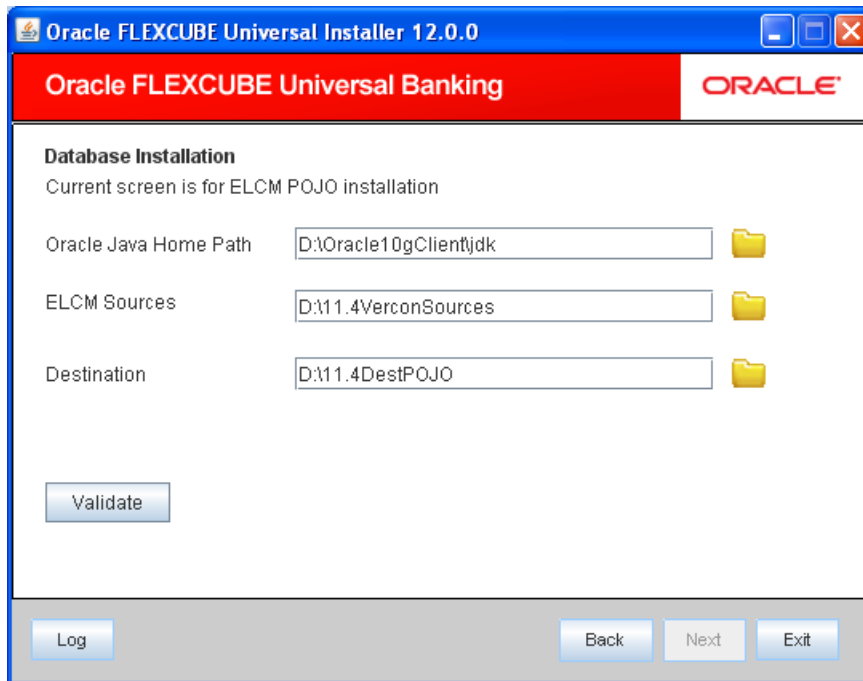
### 3.2 Loading POJO JAR Files

In order to load the POJO JAR files, follow the steps given below.

5. Invoke Oracle FLEXCUBE Universal Banking Solutions installer.



6. Expand 'Oracle FLEXCUBE' and then 'Utilities' and select 'ELCM POJO Installation'.
7. Click 'Next'. The following screen is displayed.



8. The installer displays POJO installation options. Specify the following details.

- Oracle JAVA Home Path
- ELCM Source
- Destination

9. Once you have specified the above details, click 'Validate' button.

10. Before POJO compilation, you need to run the following scripts:

```
dropjava -thin -user FC114PTST/FC114PTST@10.184.74.141:1521:FCSUPPORT ElcmUTILITY.jar
```

```
dropjava -thin -user FC114PTST/FC114PTST@10.184.74.141:1521:FCSUPPORT ElcmDao.jar
```

```
dropjava -thin -user FC114PTST/FC114PTST@10.184.74.141:1521:FCSUPPORT ElcmDTO.jar
```

```
dropjava -thin -user FC114PTST/FC114PTST@10.184.74.141:1521:FCSUPPORT ElcmPROCESS.jar
```

11. You also need to execute the following Java Grants:

```
EXEC DBMS_JAVA.grant_permission('FC114MR2', 'java.io.FilePermission', '<DB_DEBUG_PATH>', 'read , execute');
```

```
EXEC DBMS_JAVA.grant_permission('FC114MR2', 'java.io.FilePermission', '*', 'read , execute');
```

```
EXEC DBMS_JAVA.grant_permission('FC114MR2', 'SYS:java.lang.RuntimePermission', 'writeFileDescriptor', '*');
```

```
EXEC DBMS_JAVA.grant_permission('FC114MR2', 'java.io.FilePermission', '*', 'read , execute');
```

```
EXEC DBMS_JAVA.grant_permission('FC114MR2', 'SYS:java.lang.RuntimePermission', 'readFileDescriptor', '*');
```

```
EXEC DBMS_JAVA.grant_permission('FC114MR2', 'SYS:java.lang.reflect.ReflectPermission',  
'suppressAccessChecks', " ");
```

```
GRANT JAVAUSERPRIV TO FC114MR2;
```

```
GRANT JAVADEBUGPRIV TO FC114MR2;
```

```
GRANT JAVAIDPRIV TO FC114MR2;
```

```
GRANT JAVASYSPRIV TO FC114MR2;
```

```
GRANT JAVA_ADMIN TO FC114MR2;
```

```
GRANT JAVA_DEPLOY TO FC114MR2;
```

```
EXEC dbms_java.grant_permission('FC114MR2', 'SYS:java.net.SocketPermission',  
'192.168.218.32:7001', 'connect,resolve' );
```

```
Execute dbms_java.grant_permission('FC114MR2', 'java.io.FilePermission', '<AppLogs>',  
'read,write,execute,delete');
```

```
Execute dbms_java.grant_permission('FC114MR2', 'SYS:java.util.logging.LoggingPermission', 'control', "  
");
```

```
Execute dbms_java.grant_permission('FC114MR2', 'SYS:java.util.PropertyPermission', '*', 'read,write' );
```

```
Execute dbms_java.grant_permission('FC114MR2', 'SYS:java.io.FilePermission', '<<ALL FILES>>',  
'execute');
```

```
GRANT JAVAUSERPRIV TO FC114MR2;
```

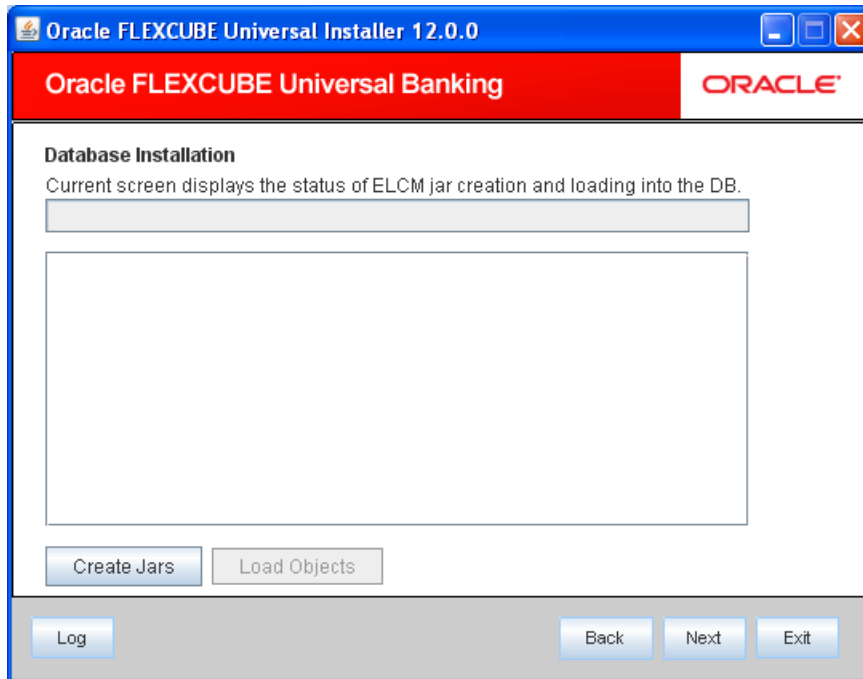
12. Once you have completed the above steps, click 'Next'. The following screen is displayed.

Name	Value
Username	installer
Password	••••••••
Connect String	testdb
IP Address	10.184.87.199
Port	1521

13. Specify the following details:

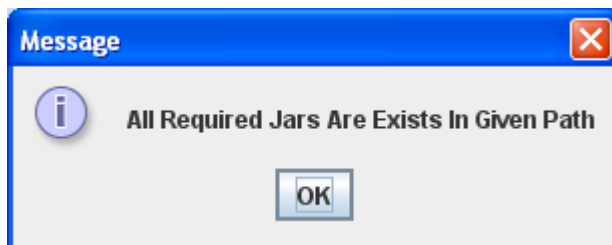
- User Name
- Password
- Connect String
- IP Address
- Port

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



15. Click 'Create Jars' button. The installer starts creating the required JAR files.

16. If all the required JAR files are available, the installer displays the following message.



17. After the compilation of the POJO JAR files, you need to do the cyclic recompilations as given below. This action validates the JAVA units.

```
"CREATE OR REPLACE PROCEDURE pr_instlr_cyclic_compile_elcm(p_err_code OUT VARCHAR2
, p_err_param OUT VARCHAR2) IS
```

```
CURSOR crinvalid IS
```

```

SELECT object_type
       ,object_name
FROM   user_objects
WHERE  status = 'INVALID' and object_type like 'JAVA%' ;
/* ORDER BY decode(object_type
                   , 'SYNONYM'
                   , 1
                   , 'TYPE'
                   , 2
                   , 'VIEW'
                   , 3
                   , 'PACKAGE'
                   , 4
                   , 'FUNCTION'
                   , 5
                   , 'PROCEDURE'
                   , 6
                   , 'PACKAGE BODY'
                   , 7
                   , 'TRIGGER'
                   , 8
                   , 9);*/

```

```

TYPE tyinvobjs IS TABLE OF crinvalid%ROWTYPE INDEX BY BINARY_INTEGER;

```

```

linvalidobjs tyinvobjs;

```

```

lprevinvalids NUMBER := 0;

```

```

lcurrinvalids NUMBER := 0;

```



```
l_status    VARCHAR2(100);
```

```
i NUMBER;
```

```
lsql VARCHAR2(256);
```

```
BEGIN
```

```
    SELECT COUNT(*)
```

```
    INTO  lcurrinvalids
```

```
    FROM  user_objects
```

```
    WHERE status = 'INVALID';
```

```
    WHILE (lprevinvalids <> lcurrinvalids)
```

```
    LOOP
```

```
        IF lcurrinvalids <> lprevinvalids
```

```
        THEN
```

```
            FOR rec IN crinvalid
```

```
            LOOP
```

```
                dbms_output.put_line('rec.object_name'||rec.object_name);
```

```
                IF rec.object_type = 'PACKAGE BODY'
```

```
                THEN
```

```
                    lsql := 'ALTER PACKAGE ' || rec.object_name || ' COMPILE BODY';
```

```
                ELSIF rec.object_type = 'TYPE BODY'
```

```
                THEN
```

```
                    lsql := 'ALTER TYPE ' || rec.object_name || ' COMPILE BODY';
```

```
                ELSE
```

```
                    lsql := 'ALTER ' || rec.object_type || ' ' || rec.object_name || ' COMPILE';
```

```

        END IF;

        SELECT status
        INTO   l_status
        FROM   user_objects
        WHERE  object_name = rec.object_name
        AND    object_type = rec.object_type;

        IF l_status = 'INVALID'
        THEN
            BEGIN

                EXECUTE IMMEDIATE lsq;

            EXCEPTIONkama

                WHEN OTHERS THEN

                    NULL;

            END;

        END IF;

    END LOOP;

    lprevinvalids := lcurrinvalids;

    SELECT COUNT(*)
    INTO   lcurrinvalids
    FROM   user_objects
    WHERE  status = 'INVALID';

    END IF;

END LOOP;

```

```

RETURN;

EXCEPTION

WHEN OTHERS THEN

    p_err_code := 'IN-CMP-001';

    p_err_param := substr(SQLERRM, 1, 255);

    dbms_output.put_line('When Others Error : ' || SQLERRM);

END; “

```

18. You need to give DB grants with a DBA ticket. The script is given below.

```

“EXEC DBMS_JAVA.grant_permission (SCHEMA NAME, 'java.io.FilePermission', '*', 'read' , execute');

/

EXEC DBMS_JAVA.grant_permission(SCHEMA NAME, 'SYS:java.lang.RuntimePermission',
'writeFileDescriptor', '*');

/

EXEC DBMS_JAVA.grant_permission(SCHEMA NAME, 'SYS:java.lang.RuntimePermission',
'readFileDescriptor', '*');

/

GRANT JAVAUSERPRIV TO SCHEMA NAME;;

/

EXEC dbms_java.grant_permission (SCHEMA NAME, 'SYS:java.net.SocketPermission', 'IP
ADDRESS:PORT NUMBER', 'connect','resolve' );

/

Execute dbms_java.grant_permission(' SCHEMA NAME ', 'java.io.FilePermission',
'/home/fcubs/FC114PTST/debug/*', 'read,write,execute,delete');

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

/

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

/

```

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

```
Execute dbms_java.grant_permission( '<schema_name>', 'SYS:java.lang.reflect.ReflectPermission',  
'suppressAccessChecks', " ");
```



ELCM Application Setup  
[April] [2013]  
Version 12.0.1.12.0

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