

Application Container Installation
Oracle FLEXCUBE Investor Servicing
Release 14.4.0.0.0
[July] [2020]



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1. Manage Application Utility

1.1 Introduction

Oracle FLEXCUBE Investor Servicing supports database installation using application container. Installer is enhanced to support application container based installation using the following main operations:

- Install Begin
- Install End
- Upgrade Begin
- Upgrade End
- Sync

1.2 Pre-requisites

- An admin user (for instance, FCISADMIN) should be created along with the required regular users (SMS, LOB, SP, PENSION and REPORTS) in APPROOT and all application PDB's
- FCISADMIN user should have the below two grants along with the regular schema grants:
 - DBMS_PDB
 - ALTER DATABASE
- FCISADMIN user only should be used for the operations of manage application.
- For SYNC operation, the user name should be same in both root PDB and application PDB.

1.3 Setting up Manage Application

Along with the existing database setup, the Installer will be enhanced to support the application root enabled database setup also. The below steps will be followed in this process:

The 'installer.properties' has the following 3 new parameters:

APPROOT_DEPLOYMENT

- Y means installer will support application root enabled deployment only.
- N means installer will not support application root enabled deployment. This will be the default value.

APPROOT_APPNAME

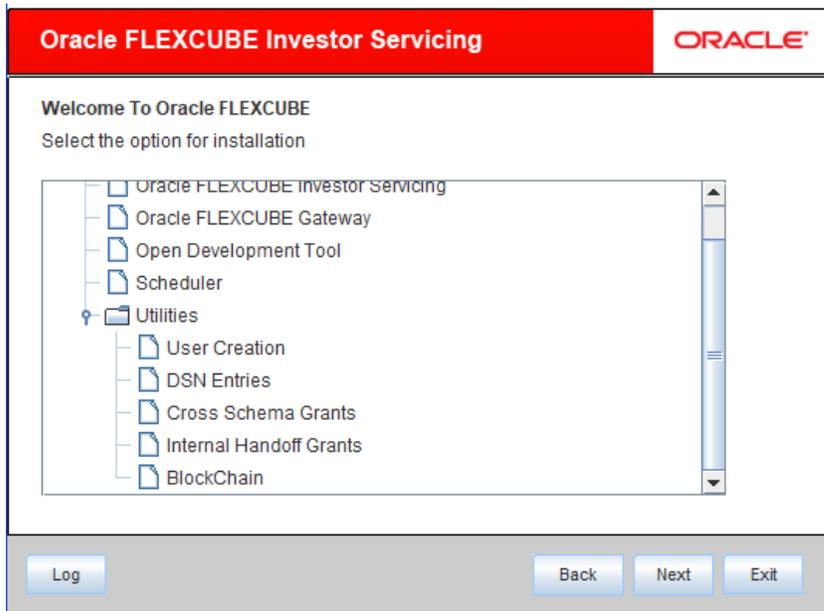
- This will be used only when APPROOT_DEPLOYMENT value is Y
- Application name for manage application will be maintained here

EXPLICIT_USERS

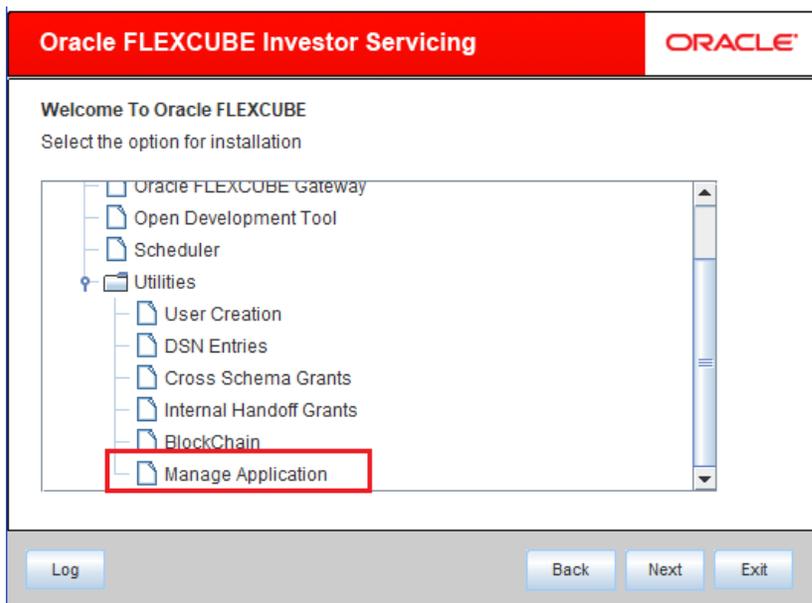
- This will be used only when APPROOT_DEPLOYMENT value is Y
- All the users except FCISADMIN should be maintained here with ~ separated

A new utility called 'Manage Application' will be introduced in the Main FCIS Installer screen. This utility will be available only if Application root deployment is enabled. If Application root deployment is not enabled then this utility will not be available.

If APPROOT_DEPLOYMENT = N then the below screen will not get any impact:



If APPROOT_DEPLOYMENT = Y then Manage Application utility will be added in the screen:



If Application root deployment enabled then system won't allow database installation directly without install begins or upgrade begins executed at the root application. This will be validated during Test Connection action of the database setup.

Select Manage Application and click Next. The below new screen will get launched:

Name	Value
Username	ADMINUSER
Password	••••••••
Service Name	APPROOT
IP Address	10.10.10.10
Port	1521
TNS Connect Descriptor	APPROOT
Application Name	FCISAPP
Application Stage	Install Begin

User Name

Mention the schema name which is having ALTER DATABASE and DBMS_PDB rights. This is a text field.

Password

Mention the user password. This will be a password field.

Service Name

Mention the service name. This is a text field.

IP Address

Mention the IP address of the database. This is a text field.

Port

Mention the port number. This is a text field.

TNS Connect Descriptor

Mention the TNS connect descriptor. This is a text field.

Application Name

Application Name field will be defaulted from APPROOT_APPNAME of the installer.properties.

This defaulted Application Name should not be changed. This will be validated during Apply process.

Once the installation is executed in the application root environment then, APPROOT_APPNAME of the installer.properties value must not be changed. This will be operationally controlled.

Application Stage

This field is a drop down field which will be used to select the operation that needs to be performed. This drop down field will have the below options:

Name	Value
Username	ADMINUSER
Password	••••••••
Service Name	APPROOT
IP Address	10.10.10.10
Port	1521
TNS Connect Descriptor	APPROOT
Application Name	FCISAPP
Application Stage	Install Begin

- **Install Begin** - This should be performed only in root application. Select this option to initiate a new installation in the root application. It can be executed only once for that application.
- **Install End** - This should be performed in root application. Select this option to end the installing process in the root application
- **Upgrade Begin** - This should be performed in root application. Select this option to initiate the application upgrade from the current application version to next version. The version will be automatically incremented.
- **Upgrade End** - This should be performed in root application. Select this option to end the initiated upgrading process in the root application
- **Sync** - Sync should be performed in application PDB. Select this option to sync the application PDB into the initiated newly installed version or upgraded version for the root application PDB.

For each application PDB, this Sync should be executed separately.

Test Connection

This field is used to test the connection.

Apply

On screen launch, the Apply button and Next button will not be enabled.

On click of the Test Connection, the entered user details will be validated along with the required PDB (root PDB or application PDB) along with necessary user rights.

On successful connection, the Apply button and Next button will get enabled.

On click of Apply button, the necessary operation which is selected against Application Stage field will get executed.

If the user has modified any value once after the Test Connection successful, the Apply button will get disabled once again. Test Connection needs to be tested once again to validate the current values and Apply button will get enabled on successful connection.

In a root application setup, Install begin should be executed as initial setup. After the execution of Install Begin, the application status will be available as INSTALLING.

Now the database setup for all the FCIS schemas can be done at application root level as usual.

Once the necessary database setup are done, then Install End should be executed. This will update the PDB application status as NORMAL.

This Install Begin and Install End should be executed only once in an installation.

Once the Install End executed at root application, then Sync operation can be executed in the required application PDBs.

Upgrade begin and Upgrade End can be used for further changes in that application.

After executing Upgrade Begin and Upgrade End, the application status will be UPGRADING and NORMAL respectively.

In the application root enabled deployment, the database setup can be done only when the application status as INSTALLING or UPGRADING.

Once the Install Ends or Upgrade Ends completed then only that application version can be synced to the required application PDB.

Once the Sync operation has been completed then, it cannot be rolled back. It will be irreversible.

Proper backup needs to be maintained. In case of any sync failure, then it should be restored based on the backup only.

The database setup through installer will be allowed only in application root when the application status as INSTALLING or UPGRADING. The database changes from application root will be propagated to application PDB only by sync operation.

Note

All the common application database objects will be compiled only in the application root PDB.

The compiled objects will be propagated from application root container to required application PDB during sync operation. The application will be created for the synchronized application PDB.

1.3.1 **Objects created in the application root PDB cannot be dropped/alterd in application PDB. UI Error Messages**

Sl. No.	Validation	Type	Message
1	For APPROOT enabled application, try to install database for new installation deployment by without doing Install Begin or Upgrade Begin	E	For APPROOT enabled deployments, DB setup is allowed only when application stage as INSTALLING or UPGRADING
2	For APPROOT enabled application, try to install database for Patch deployment by without doing Install Begin or Upgrade Begin	E	For APPROOT enabled deployments, DB setup is allowed only when application stage as INSTALLING or UPGRADING
3	For APPROOT enabled application, try to install database for Rolled-up Patch deployment by without doing Install Begin or Upgrade Begin	E	For APPROOT enabled deployments, DB setup is allowed only when application stage as INSTALLING or UPGRADING
4	Modify the Application Name and click Apply.	E	Application name should be same as APPROOT application name property
5	Apply Install Begin operation for the second time.	E	FCISAPP application is already installed
6	Apply Install End operation in which Install Begin not applied in that application root environment.	E	FCISAPP application installation is not initiated
7	Apply Upgrade Begin when the current application status is not Install End or Upgrade End in the application root environment.	E	Upgrade begin is applicable only on applications with status as NORMAL
8	Apply Upgrade End without executing Upgrade Begin.	E	FCISAPP application upgrade is not initiated
9	Apply Install Begin for the first time in the application root.	I	Install Begin process for FCISAPP application is completed
10	Apply Install End for the first time in the application root.	I	Install End process for FCISAPP application is completed

11	Apply Upgrade Begin in which application root status is NORMAL	I	Upgrade Begin process for FCISAPP application is completed
12	Apply Upgrade End in which application root status is UPGRADING	I	Upgrade End process for FCISAPP application is completed
13	Apply Sync in the application PDB whereas application root status is NORMAL	I	Sync process for FCISAPP application is completed
	Apply Install Begin in which application root status is NORMAL	I	Install Begin process for FCISAPP application is initiated. Please wait for completion...
14	Apply Upgrade Begin in which application root status is NORMAL	I	Upgrade Begin process for FCISAPP application is initiated. Please wait for completion...
15	Apply Sync in the application PDB whereas application root status is NORMAL	I	Sync process for FCISAPP application is initiated. Please wait for completion...
16	Enter application PDB files along with Application stage as Install Begin and click Test Connection	E	Application Root schema details should be entered for Install Begin
17	Enter application PDB files along with Application stage as Install End and click Test Connection	E	Application Root schema details should be entered for Install End
18	Enter application PDB files along with Application stage as Upgrade Begin and click Test Connection	E	Application Root schema details should be entered for Upgrade Begin
19	Enter application PDB files along with Application stage as Upgrade End and click Test Connection	E	Application Root schema details should be entered for Upgrade End
20	Enter root PDB files along with Application stage as Sync and click Test Connection	E	Application PDB schema details should be entered for Sync
21	Enter schema user details in which it does not have ALTER DATABASE grants and click Test Connection	E	User does not have proper DB rights for this operation
22	Enter Invalid DB user credential details and click Test Connection	E	Invalid DB Credentials
23	During DSN creation, the AppRoot JNDI field value is not entered	E	AppRoot JNDI is mandatory



Manage Application
Version 14.4.0.0.0
[July] [2020]

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