# Oracle Banking Trade Finance Approot Object Conversion Utility





Oracle Banking Trade Finance Approot Object Conversion Utility, Release 14.7.4.0.0

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### **Application Root Object Conversion**

- Introduction
  - This document explains the process involved in object conversion in Approot.
- Pre-requisites
  - This topic provides systematic instructions for pre-requisites.
- Application Root PDB Model Configuration
   To build the application for setup using the installer, follow the steps given below.

### 1.1 Introduction

This document explains the process involved in object conversion in Approot.

### 1.2 Pre-requisites

This topic provides systematic instructions for pre-requisites.

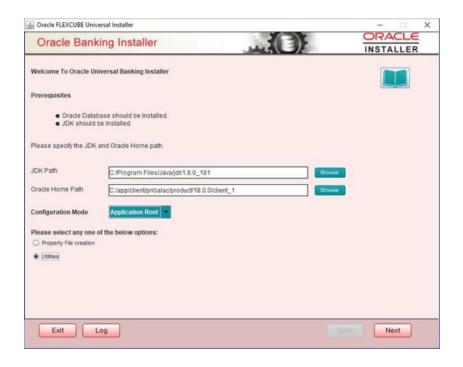
The below steps has to be completed in a sequential order before using this utility.

- 1. CDB is created with 18c database and 'Application Template PDB' is created under this CDB and the OBTFobjects are loaded.
- 2. Application root creation followed by application seed creation.
- Application installation version 1.0 has to be done in approof with user being made explicit. Application Installation.sql

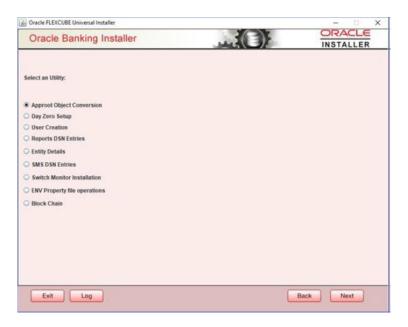
### 1.3 Application Root - PDB Model Configuration

To build the application for setup using the installer, follow the steps given below.

 Double-click 'FCUBSInstaller.bat' batch file to launch Oracle Banking Trade Finance Installer. The following screen is displayed. Select Utilities option, configuration mode as "Application Root" and click 'Next' button.



2. Select 'Approot object Conversion" in Utility Screen and click Next as shown below:



In the Approot object conversion screen, enter application name and Approot Schema details.

Options of conversion include:

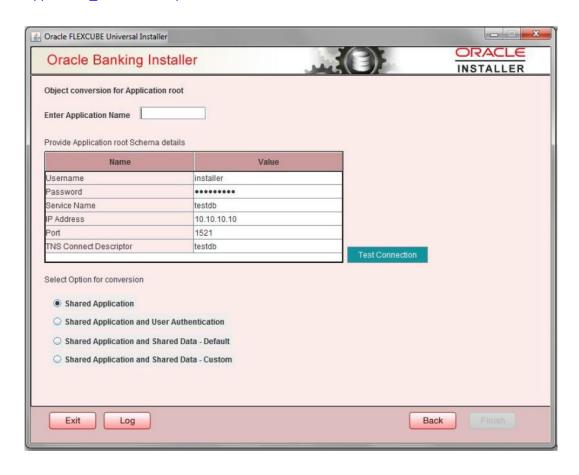
- Shared Application
- Shared Application and User Authentication
- Shared Application and Shared Data Default
- Shared Application and Shared Data Custom



#### **Shared Application**

- When 'Shared Application' is selected, there will not be any common data and only application is shared.
- 2. After selecting the radio button, user will have to input the Application name and the Application root schema details where the conversion has to be applied and click on 'Test Connection'.
- 3. When Application name is not inputted, error will be displayed to input the same. User has to make sure that application name is the one mentioned in pre-requisites with installation done for version 1.0.
- 4. Once the Connection is successful, 'Finish' button will be enabled and the object conversion will be completed at this step.
- Execution will take few minutes and post completion, a dialog box displays 'Compilation Success' message in the front end.

Application Installation.sql



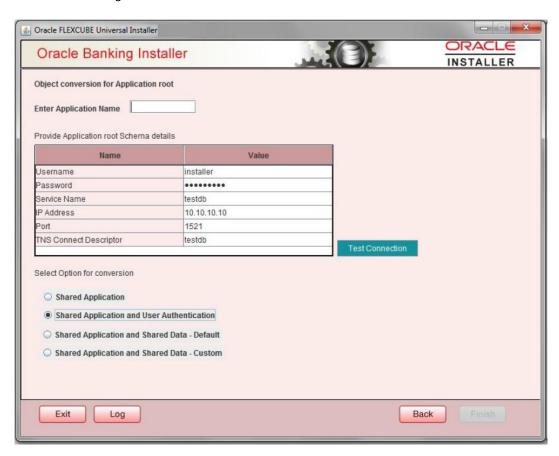
Application\_PDB\_Creation.sql

#### **Shared Application and User Authentication**

1. When 'Shared Application and User authentication' is selected, only user authentication related data will be shared along with a shared application,



- After selecting the radio button, user will have to input the Application name and Application root schema details where the conversion has to be applied and click on 'Test Connection'.
- When Application name is not inputted, error will be displayed to input the same. User has to make sure that application name is the one mentioned in pre-requisites with installation done for version 1.0.
- 4. Once the Connection is successful, 'Finish' button will be enabled and the object conversion will be completed at this step.
- 5. Execution will take few minutes and post completion, a dialog box displays 'Compilation Success' message in the front end.



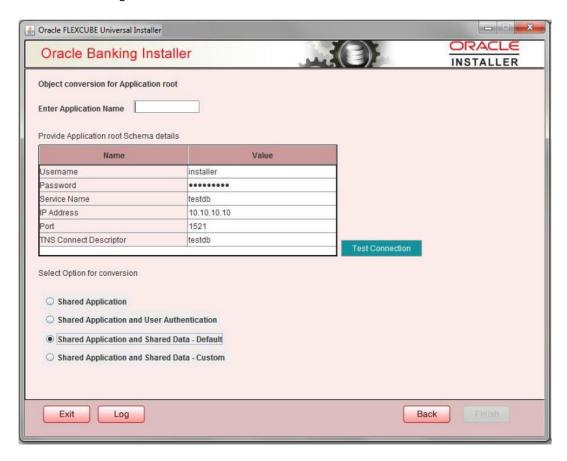
Application\_Template\_PDB\_Creation.sql

#### **Shared Application & Shared Data - Default**

- 1. When Shared Application & Shared Data Default is selected, all the function groups listed will be installed in the application root.
- After selecting the Radio button, user will have to input the Application name and Application root schema details where the conversion has to applied and click on 'Test Connection'.
- 3. When Application name is not inputted, error will be displayed to input the same. User has to make sure that application name is the one mentioned in pre-requisites with installation done for version 1.0.



- 4. Once the Connection is successful, 'Finish' button will be enabled and the object conversion will be completed at this step.
- Execution will take few minutes and post completion, a dialog box displays 'Compilation Success' message in the front end.

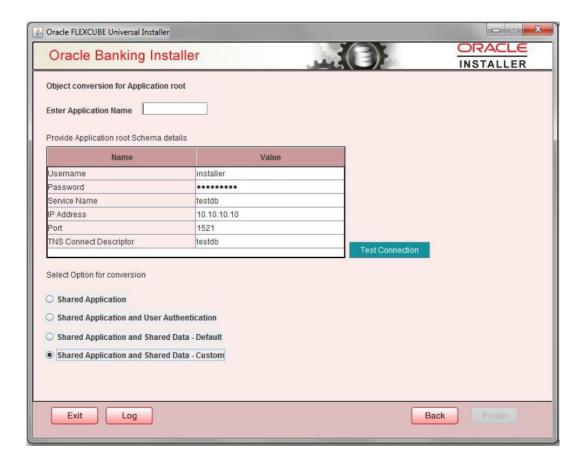


#### **Shared Application & Shared Data - Custom**

- 1. When Shared Application & Shared Data Custom is selected, all the function groups listed will be installed in the application root.
- After selecting the Radio button, user will have to input the Application name and Application root schema details where the conversion has to applied and click on 'Test Connection'.
- 3. When Application name is not inputted, error will be displayed to input the same. User has to make sure that application name is the one mentioned in pre-requisites with installation done for version 1.0.
- Once the Connection is successful, 'Next' button will be enabled to take through the steps of movement of function ids to pdbs.
- 5. After selecting the Radio button, user will have to input the Application name and Application root schema details where the conversion has to applied and click on 'Test Connection'.
- 6. Once the Connection is successful, 'Finish' button will be enabled to continue with the next steps of object conversion.



#### Approot\_AppSeed\_sync.sql



#### Approot\_PDB\_Sync.sql

- 7. In the Next Screen, user can opt-out the entities which are not required to be the candidates of approot and those function ids will be moved to PDB.
- 8. There will be two multiblocks available.
  - **a.** First multiblock will list the details of function groups which are the Approot candidates.
  - **b.** Second multiblock will list the function ids corresponding to each of the function group in the first block.
- Second multiblock will have the check box 'Move to PDB' against each function ID.



- 10. User can select more than one function group and the respective function ids will also be appended to the second multiblock against the function group on click of 'View Details' button.
- **11.** Once the selection is completed, '**Next**' button has to clicked to move to the next screen where the complete list of function ids.
- **12.** The dependent function ids of the selected functions opted to move to PDB will be listed in the below section.

fn\_error\_handler.sql





- **13.** Object conversion can be completed by clicking on the **Finish** button.
- **14.** Execution will take few minutes and post completion, a dialog box displays '**Compilation Success**' message in the front end.



### **Application Installation**

#### **Purpose**

It is used for application installation.

```
SET VERIFY ON
SET HEAD ON
SET FEEDBACK 1
SET ARRAY 1
SET LINESIZE 10000
SET PAGESIZE 50000
SET LONG 10000
SET ECHO ON
SET TRIMSPOOL ON
SET COLSEP ';'
SET SERVEROUT OFF
clear screen
SPOOL ON
SET SQLBLANKLINES ON
SET SERVEROUTPUT ON
SET ERRORLOGGING ON
SET ECHO ON
prompt Welcome to Application PDB Configuration
SPOOL "&SPOOL PATH"
/* Inputs are recieved */
/* Connect CDB as sys user */
accept P CDB USER Prompt 'Enter CDB Schema Username: '
accept P CDB PWD Prompt 'Enter CDB Schema Password: '
accept P CDB HOST Prompt 'Enter CDB Schema Host: '
accept P CDB PORT Prompt 'Enter CDB Schema Port: '
accept P APPROOT NAME Prompt 'Enter Application Root Name: '
accept P APPLICATION NAME Prompt 'Enter application name to be installed: '
accept P COMMON USER Prompt 'Enter Common User Name: '
/* Connecting to Application Root As SYSDBA*/
conn &P CDB USER/&P CDB PWD@(DESCRIPTION=(ADDRESS LIST=(ADDRESS=(PROTOCOL=TCP)
(HOST=&P CDB HOST) (PORT=&P CDB PORT))) (CONNECT DATA=(SERVER=DEDICATED)
(SERVICE NAME=&P APPROOT NAME))) as sysdba;
alter pluggable database application &P APPLICATION NAME begin install '1.0';
    exec dbms pdb.set user explicit('&P COMMON USER');
alter pluggable database application &P APPLICATION NAME end install;
SET ERRORLOGGING OFF
SPOOL OFF
```



### Application\_PDB\_Creation

#### **Purpose**

It is used in the application PDB creation.

#### **Syntax**

/\* Pre-requisites: Step 2 on application root and application seed has to be completed.\*/

SET VERIFY ON SET HEAD ON SET FEEDBACK 1 SET ARRAY 1 SET LINESIZE 10000 SET PAGESIZE 50000 SET LONG 10000 SET ECHO ON SET TRIMSPOOL ON SET COLSEP ',' SET SERVEROUT OFF clear screen SPOOL ON SET SQLBLANKLINES ON SET SERVEROUTPUT ON SET ERRORLOGGING ON SET ECHO ON prompt Welcome to Application PDB Configuration SPOOL "&SPOOL PATH" /\* Inputs are recieved \*/ /\* Connect Approot as sys user \*/ accept P\_CDB\_USER Prompt 'Enter CDB Username: ' accept P\_CDB\_PWD Prompt 'Enter CDB Password: ' accept P\_CDB\_HOST Prompt 'Enter CDB Host: ' accept P\_CDB\_PORT Prompt 'Enter CDB Port: ' accept P\_CDB\_NAME Prompt 'Enter CDB Schema Name: 'accept P DB MOUNTED PATH Prompt 'Enter Approot mounted path for approot application seed creation: [Eg: /scratch/db1800dat]' accept P APPROOT NAME Prompt 'Enter Application Root Name: 'accept P\_APPPDB\_NAME Prompt 'Please provide name for Application PDB Name -- Application Root associated PDB: '/\* Connecting to Application Root As SYSDBA\*/ conn &P\_CDB\_USER/ &P CDB PWD@(DESCRIPTION=(ADDRESS LIST=(ADDRESS=(PROTOCOL=TCP) (HOST=&P\_CDB\_HOST)(PORT=&P\_CDB\_PORT))) (CONNECT DATA=(SERVER=DEDICATED)(SERVICE NAME=&P APPROOT NAME))) as sysdba; /\* Creating Application Associated PDB\*/ CREATE pluggable database &P APPPDB NAME FROM &P APPROOT NAME\$SEED file\_name\_convert=('&P\_DB\_MOUNTED\_PATH/&P\_CDB\_NAME/ SEED&P APPROOT NAME/,'&P DB MOUNTED PATH/&P APPROOT NAME/ &P APPPDB NAME/'); ALTER pluggable database &P APPPDB NAME OPEN; SET ERRORLOGGING OFF SPOOL OFF



### Application\_Template\_PDB\_Creation

#### **Purpose**

This script is used for application template PDB creation.

```
(SET VERIFY ON
SET HEAD ON
SET FEEDBACK 1
SET ARRAY 1
SET LINESIZE 10000
SET PAGESIZE 50000
SET LONG 10000
SET ECHO ON
SET TRIMSPOOL ON
SET COLSEP ';'
SET SERVEROUT OFF
clear screen
SPOOL ON
SET SQLBLANKLINES ON
SET SERVEROUTPUT ON
SET ERRORLOGGING ON
SET ECHO ON
prompt Welcome to Application Template PDB Configuration
SPOOL "&SPOOL PATH"
/* CDB sys user name and password to be given */
accept P CDB USER Prompt 'Enter CDB Schema Username: [Eg: sys]'
accept P CDB PWD Prompt 'Enter CDB Schema Password: [Eg: PASSWORD]'
accept P CDB HOST Prompt 'Enter CDB Schema Host: [Eq: fcubs.in.oracle.com]'
accept P CDB PORT Prompt 'Enter CDB Schema Port: [Eg: 1521]'
accept P CDB NAME Prompt 'Enter CDB Service Name: [Eg: FCUBSCDB]'
accept P DB MOUNTED PATH Prompt 'Enter CDB mounted path: [Eg: /scratch/
db1800dat1'
accept P APP TEMPLATE PDB Prompt 'Enter Name for Application Template PDB to
be created: [Eq: pdbfcubs]'
accept P COMMON USER Prompt 'Enter Common Username to be created: [Eg: fcubs]'
accept P COMMON USER PWD Prompt 'Enter Pwd for Common User : [Eg: fcubs]'
accept P COMMON TSPACE Prompt 'Enter TableSpace Name : [Eg: fcubs]'
/* Connecting to CDB as sysdba */
CONN &P CDB USER/&P CDB PWD@&P CDB NAME AS sysdba;
create pluggable database &P APP TEMPLATE PDB ADMIN USER sourceadmin
IDENTIFIED BY sourceadmin file name convert=('pdbseed','&P APP TEMPLATE PDB');
alter pluggable database &P APP TEMPLATE PDB open;
alter pluggable database &P APP TEMPLATE PDB save state;
/*connecting to template pdb as sysdba */
conn &P CDB USER/&P CDB PWD@ (DESCRIPTION=(ADDRESS LIST=(ADDRESS=(PROTOCOL=TCP)
(HOST=&P CDB HOST) (PORT=&P CDB PORT))) (CONNECT DATA=(SERVER=DEDICATED)
```



```
(SERVICE NAME=&P APP TEMPLATE PDB))) as sysdba;
create tablespace &P COMMON USER datafile '&P DB MOUNTED PATH/&P CDB NAME/
&P APP TEMPLATE PDB/&P COMMON TSPACE..dbf' size 100M autoextend on next 10M
maxsize 30000M;
CREATE USER &P COMMON USER IDENTIFIED BY &P COMMON USER PWD default
tablespace &P COMMON USER quota unlimited on &P COMMON USER;
grant execute on dbms sql to &P COMMON USER;
grant execute on dbms lock to &P COMMON USER;
grant execute on dbms job to &P COMMON USER;
grant execute on dbms alert to &P COMMON USER;
grant execute on dbms refresh to &P COMMON USER;
grant execute on dbms pipe to &P COMMON USER;
grant execute on dbms_shared_pool to &P_COMMON USER;
grant execute on dbms application info to &P COMMON USER;
grant execute on utl file to &P COMMON USER;
grant select on v $process to &P COMMON USER;
grant select on v $session to &P COMMON USER;
grant select on v_$instance to &P_COMMON_USER;
grant select on v $timer to &P COMMON USER;
grant select on v $database to &P COMMON USER;
grant select on v $parameter to &P COMMON USER;
grant select on v_$nls_parameters to &P_COMMON_USER;
grant select on dba jobs running to &P COMMON USER;
grant create session to &P_COMMON_USER;
grant create synonym to &P COMMON USER;
grant create view to &P COMMON USER;
grant create sequence to &P COMMON USER;
grant create table to &P COMMON USER;
grant create procedure to &P COMMON USER;
grant create trigger to &P COMMON USER;
grant create type to &P COMMON USER;
grant create library to &P COMMON USER;
grant create database link to &P COMMON USER;
grant create any synonym to &P COMMON USER;
grant select on dba_jobs to &P_COMMON_USER;
grant create database link to &P COMMON USER;
grant create materialized view to &P COMMON USER;
grant execute on dbms ag to &P COMMON USER;
grant execute on dbms agadm to &P COMMON USER;
grant execute on dbms_job to &P_COMMON_USER;
grant execute on dbms lock to &P COMMON USER;
grant execute on dbms pipe to &P COMMON USER;
grant execute on dbms refresh to &P COMMON USER;
grant execute on dbms rls to &P COMMON USER;
create public synonym dbms shared pool for sys.dbms shared pool;
grant execute on dbms shared pool to &P COMMON USER;
grant execute on dbms_sql to &P_COMMON_USER;
grant execute on utl file to &P COMMON USER;
grant select on SYS.TRANSPORT SET VIOLATIONS to &P COMMON USER;
grant create evaluation context to &P COMMON USER;
grant create rule to &P COMMON USER;
grant create job to &P COMMON USER;
grant create rule set to &P COMMON USER;
grant exp full database to &P COMMON USER;
```

```
grant alter tablespace to &P COMMON USER;
grant manage tablespace to &P COMMON USER;
grant execute on DBMS FILE TRANSFER to &P COMMON USER;
grant execute on SYS.DBMS TTS to &P COMMON USER;
grant execute on SYS.DBMS DATAPUMP to &P COMMON USER;
grant JAVAUSERPRIV to &P COMMON USER;
grant execute on dbms scheduler to &P COMMON USER;
create public synonym UTL RECOMP for sys.UTL RECOMP;
grant execute on UTL RECOMP to &P COMMON USER;
grant execute on DBMS MONITOR to &P COMMON USER;
grant select on dba directories to &P COMMON USER;
grant execute on DBMS CRYPTO to &P COMMON USER;
grant select on gv_$session to &P_COMMON_USER;
grant create any directory to &P COMMON USER;
grant select on SYS.DBA_SCHEDULER_RUNNING_JOBS to &P_COMMON_USER;
grant execute on sys.dbms redact to &P COMMON USER;
grant SELECT on sys.redaction_policies to &P COMMON USER;
grant SELECT on sys.redaction columns to &P COMMON USER;
grant SELECT on sys.redaction values for type full to &P COMMON USER;
grant create session, connect, resource to &P COMMON USER;
grant SELECT ON dba_applications to &P_COMMON USER;
grant SELECT ON dba app versions to &P COMMON USER;
grant dba to &P COMMON USER;
SET ECHO OFF
clear screen
spool off
```



### Approot\_AppSeed\_Sync.sql

#### **Purpose**

Application Root - PDB Model Configuration

```
SET VERIFY ON
SET HEAD ON
SET FEEDBACK 1
SET ARRAY 1
SET LINESIZE 10000
SET PAGESIZE 50000
SET LONG 10000
SET ECHO ON
SET TRIMSPOOL ON
SET COLSEP ';'
SET SERVEROUT OFF
clear screen
SPOOL ON
SET SQLBLANKLINES ON
SET SERVEROUTPUT ON
SET ERRORLOGGING ON
SET ECHO ON
prompt Welcome to Application PDB Configuration
SPOOL "&SPOOL PATH"
/* Inputs are received */
accept P_APPROOT_USER Prompt 'Enter Approot Schema Username: '
accept P APPROOT PWD Prompt 'Enter Approot Schema Password: '
accept P APPROOT HOST Prompt 'Enter Approot Schema Host: '
accept P APPROOT PORT Prompt 'Enter Approot Schema Port: '
accept P APPROOT NAME Prompt 'Enter Application Root Name: '
accept P APPLICATION NAME Prompt
                                  'Enter application name to be upgraded for
object conversion: '
/*Connecting to Application seed*/
conn &P APPROOT USER/
&P_APPROOT_PWD@ (DESCRIPTION= (ADDRESS_LIST= (ADDRESS= (PROTOCOL=TCP)
(HOST=&P APPROOT HOST) (PORT=&P APPROOT PORT))) (CONNECT DATA=(SERVER=DEDICATED)
(SERVICE NAME=&P APPROOT NAME$SEED)));
/*Synching object conversion to application seed */
alter pluggable database application &P APPLICATION NAME sync;
SET ERRORLOGGING OFF
SPOOL OFF
```



### Approot\_PDB\_Sync

#### **Purpose**

Check the approot PDB Sync.

```
SET VERIFY ON
SET HEAD ON
SET FEEDBACK 1
SET ARRAY 1
SET LINESIZE 10000
SET PAGESIZE 50000
SET LONG 10000
SET ECHO ON
SET TRIMSPOOL ON
SET COLSEP ';'
SET SERVEROUT OFF
clear screen
SPOOL ON
SET SQLBLANKLINES ON
SET SERVEROUTPUT ON
SET ERRORLOGGING ON
SET ECHO ON
prompt Welcome to Application PDB Sync
SPOOL "&SPOOL PATH"
/* Inputs are received */
accept P_PDB_USER Prompt 'Enter PDB Schema Username: '
accept P PDB PWD Prompt 'Enter PDB Schema Password: '
accept P PDB HOST Prompt 'Enter PDB Schema Host: '
accept P_PDB_PORT Prompt 'Enter PDB Schema Port: '
accept P PDB NAME Prompt 'Enter the PDB name to be synched: '
accept P_APPLICATION_NAME Prompt 'Enter the application name: '
/*Connecting to pdb */
conn &P PDB USER/&P PDB PWD@ (DESCRIPTION=(ADDRESS LIST=(ADDRESS=(PROTOCOL=TCP)
(HOST=&P PDB HOST) (PORT=&P PDB PORT))) (CONNECT DATA=(SERVER=DEDICATED)
(SERVICE_NAME=&P_PDB_NAME)));
/*Synching the application with pdbs */
alter pluggable database application &P APPLICATION NAME sync;
SET ERRORLOGGING OFF
SPOOL OFF
```



# fn\_error\_handler

#### **Purpose**

This script is used as error handler.

```
create table log error
       VARCHAR2 (2000)
(Err
, DT
         DATE)
CREATE OR REPLACE NONEDITIONABLE FUNCTION fn error handler(octcode
NUMBER,
errcode IN NUMBER,
statement IN VARCHAR2,
resync IN NUMBER)
RETURN NUMBER AUTHID CURRENT USER
retcode NUMBER := DBMS PDB APP CON.SYNC ERROR NOT OK;
PROCEDURE prlog (pErr VARCHAR2)
PRAGMA AUTONOMOUS_TRANSACTION;
BEGIN
INSERT INTO log error
VALUES (pErr, SYSDATE);
COMMIT;
END prLog;
BEGIN
prLog('fn: '||errcode);
IF errcode IN
(24344,6512,65297,65272,65274,4045,1,2264,1430,1434,955,4063,942,4043,65215,22
60,904,4023,6510,4097,6508,4088
,2261,44201,2437,22859,12006,1418,21700,980
,1720,1449,1036,2443,2441 --Added Newly on 08-Sep-2020
                                 --Added Newly on 24-Nov-2020
,22275,1024,12003,
1439,6550
                                --Added Newly on 24-Nov-2020 --recheck 1439
some column datatype will have to be corrected
retcode := DBMS PDB APP CON.SYNC ERROR OK ALWAYS;
END IF;
prLog('ret: '||retcode);
RETURN retcode;
END;
```



# Glossary



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