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Installing Oracle Application Express (Apex 24) and Configuring Web Listener - Oracle REST Data Services (ORDS 24.2.3) at Oracle Database 19c Enterprise Edition on Windows 10:

Oracle APEX Installation Requirements

❖ Before going to install Oracle APEX 24, you need to install Oracle Database 19c or later.
https://www.oracle.com/database/technologies/oracle19c-windows-downloads.html

❖ Browser Requirements
Oracle APEX requires a JavaScript-enabled browser and supports the current and prior major release of Google Chrome, Mozilla Firefox, Apple Safari, and Microsoft Edge.

❖ Web Server Requirements
Oracle APEX requires Oracle REST Data Services (ORDS) 23.3 or later.

❖ Oracle XML DB Requirement
Oracle XML DB must be installed in the Oracle database that you want to use if you are installing a full development environment. If you are using a preconfigured database created either during an installation or by Database Configuration Assistant (DBCA), Oracle XML DB is already installed and configured.

❖ Disk Space Requirement
Oracle APEX disk space requirements are described in this section.
    APEX disk space requirements are as follows:
1. Free space for APEX software files on the file system: 510 MB if using English only download (apex_24.2_en.zip) and 890 MB if using full download (apex_24.2.zip).
2. Free space in APEX tablespace: 190 MB
3. Free space in SYSTEM tablespace: 125 MB
4. Free space in APEX tablespace for each additional language (other than English) installed: 60 MB

Oracle Application Express (APEX) is a low-code development platform that enables you to build scalable, secure enterprise apps, with world-class features, that can be deployed anywhere.
    Installation Guide:

❖ https://docs.oracle.com/en/database/oracle/apex/24.2/htmig/index.html

❖ Before going to install Oracle APEX 24, you need to check after connecting sys user:
C:\Windows\system32>sqlplus /nolog
SQL> conn / as sysdba

1. Memory Target
SQL> SHOW PARAMETER MEMORY_TARGET
If the value is 0, your database is using manual memory management.
See init.ora pfile for memory management.
Download Oracle Apex 24.2 from:
https://www.oracle.com/tools/downloads/apex-downloads/

INSTALLATION
Now go to command Prompt and Change directory to the directory holding the unzipped APEX software (C:\Apex24) for installing Oracle apex
Connect to SQL*Plus as the SYS user and run the "apexins.sql" script, specifying the relevant tablespace names and image URL.
    C:\Apex24\apex >sqlplus /nolog
    SQL> conn sys/sys@orcl as sysdba
    SQL> alter pluggable database all open;
    SQL> alter session set container=orclpdb;

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SQL> @apexins.sql sysaux sysaux temp /i/

Note:

Full development environment. Run apexins.sql passing the following four arguments in the order shown:

Where:

- ***tablespace_apex*** is the name of the tablespace for the APEX application user.
- ***tablespace_files*** is the name of the tablespace for the APEX files user.
- ***tablespace_temp*** is the name of the temporary tablespace or tablespace group.
- ***images*** is the virtual directory for APEX images. For installations using EPG, /i/ is the required value for the images argument. To support future APEX upgrades, define the virtual image directory as /i/.

When APEX installs, it creates the following database accounts:

- APEX_240200 - This account owns the APEX schema and metadata.
- FLOWS_FILES - This account owns the APEX uploaded files.
- APEX_PUBLIC_USER - This minimally privileged account is used for APEX configuration with Oracle REST Data Services or Oracle HTTP Server and mod_plsql.

If you configured RESTful Web services, then these additional accounts will be created:

- APEX_REST_PUBLIC_USER - The account used when invoking RESTful Services definitions stored in APEX.
- APEX_LISTENER - The account used to query RESTful Services definitions stored in APEX.

Once complete, Creating or Updating Your Instance Administration Account and change the admin password by running the "apxchpwd.sql" scripts as the SYS user.

SQL> @apxchpwd.sql

[User: Admin] [Email: ltit.dhaka@gmail.com] [Password: Ltit_184661]

[Password must contain at least one punctuation character. eg: =_-*$# etc.]

Configuring the APEX_PUBLIC_USER and APEX_240200 Account.

SQL> SELECT USERNAME, ACCOUNT_STATUS FROM DBA_USERS WHERE USERNMAE LIKE 'APEX%';

SQL> ALTER USER APEX_PUBLIC_USER ACCOUNT UNLOCK;

SQL> ALTER USER APEX_PUBLIC_USER IDENTIFIED BY 123;

SQL> ALTER USER APEX_240200 ACCOUNT UNLOCK;

SQL> ALTER USER APEX_240200 IDENTIFIED BY 123;

Configuring RESTful Services for Controls the ability to create and access RESTful Services mapped to SQL and PL/SQL.

SQL> @apex_rest_config.sql

The Oracle APEX architecture requires a web server to proxy requests between a web browser and the APEX engine. Oracle REST Data Services meets the requirement but its use goes beyond that of APEX. Oracle REST Data Services simplifies the deployment process because there is no Oracle home required, as connectivity is provided using an embedded JDBC driver.

Downloading and Installing Oracle REST Data Services

Download the latest release of Oracle REST Data services.

Unzip the downloaded zip file into a directory (or folder) of your choice

Copy the images directory, apex/images, from the Oracle APEX software ZIP to a location on the file system where Oracle REST Data Services is installed (to ords folder).

Note: Ensure your database is opened and lasted version of JDK 11 or later (22) is installed in your machine.

Go to the directory (cd C:\ords\bin) of ords-24.2.3 and enter the install command in the following format:

ords `--config /etc/ords/config` install

OR, java –jar ords.war install

(cd C:\ords)

(For Oracle Database 19c or later multitenant architecture, ensure that you configure the connection using the service name of the specific pluggable database (PDB) you want to access. Do not use the service name of the CDB$ROOT unless you are configuring Oracle REST Data Services to address PDBs through the URL.)

Database service name: orclpdb

Database Administrator username: sys

Password: sys
   a. Enter a number to update the value or select option A to Accept and Continue
       Choose [A]: 3
       Note: [3] Database password for ORDS runtime user (ORDS_PUBLIC_USER)

   b. Enter your choice for the runtime user password (ORDS_PUBLIC_USER)
       Choose [G]: S
       Note: [S] Specify your own password
   c. Enter the database password for ORDS_PUBLIC_USER:123
       Confirm password: 123
   d. Enter a number to update the value or select option A to Accept and Continue
       Choose [A]: 9
       Note: [9]   APEX static resources location
   e. Enter the APEX static resources location like: C:/ords/images

(If image folder is invalid or does not exist.
Enter a number to update the value or select option A to Accept and Continue
Choose [A]: 9
Note: [9]   APEX static resources location: C:/ords/images)

   f. Then hit Enter

POST-INSTALLATION
Testing:
APEX should now be available from a URL like "http://machine:port/apex".
http://localhost:8080/ords
http://localhost:8080/ords/apex_admin
http://host:port/ords
http://localhost:8080/ords/r/apex/workspace-sign-in

Note: Next time-

First up all, Confirm your database is open.

Go to the directory (ords/bin) and enter the serve command in the following format:

java –jar ords.war standalone

If You Want to Reinstall or Uninstall (Remove) Oracle REST Data Services

If you want to reinstall Oracle REST Data Services, you must first uninstall the existing Oracle REST Data Services; and before you uninstall, ensure that Oracle REST Data Services is stopped.

Uninstalling Oracle REST Data Services removes the ORDS_METADATA schema, the ORDS_PUBLIC_USER user, and Oracle REST Data Services-related database objects (including public synonyms) if they exist in the database. To uninstall (remove, or deinstall) Oracle REST Data Services, go to the directory or folder containing the ords.war file and enter the uninstall command as follows:
java -jar ords.war uninstall

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