

Lab 4.4: Configuring and Accessing Oracle Enterprise Manager (EM) Express

Objective:

To configure and access Oracle Enterprise Manager (EM) Express for managing the CDBDEV database. EM Express provides a web-based interface for database administration and performance monitoring.

Steps:

1. Verify EM Express Configuration

1. Set Oracle environment variables manually:

```
export ORACLE_BASE=/u01/app/oracle
export ORACLE_HOME=/u01/app/oracle/product/19.3.0/dbhome_1
export ORACLE_SID=CDBDEV
export PATH=$ORACLE_HOME/bin:$PATH
```

2. Connect to SQL*Plus:

```
sqlplus / as sysdba
```

3. Check if EM Express is configured:

```
SELECT DBMS_XDB_CONFIG.GETHTTPSPORT() AS HTTPS_PORT FROM DUAL;
SELECT DBMS_XDB_CONFIG.GETHTTPPORT() AS HTTP_PORT FROM DUAL;
```

If the ports are not set, you will need to configure them.

2. Configure EM Express Ports

1. Set the HTTPS and HTTP ports:

```
EXEC DBMS_XDB_CONFIG.SETHTTPSPORT(5500);
EXEC DBMS_XDB_CONFIG.SETHTTPPORT(8080);
```

2. Verify the ports are set:

```
SELECT DBMS_XDB_CONFIG.GETHTTPSPORT() AS HTTPS_PORT FROM DUAL;
SELECT DBMS_XDB_CONFIG.GETHTTPPORT() AS HTTP_PORT FROM DUAL;
```

3. Enable EM Express Access

1. Enable XDB Protocol Server:

```
ALTER SYSTEM SET DISPATCHERS='(PROTOCOL=TCP) (SERVICE=CDBDEVXDB)';
```

2. Verify the configuration:

```
SELECT VALUE FROM V$PARAMETER WHERE NAME = 'dispatchers';
```

4. Open Required Ports in Firewall

Ensure that the ports 5500 (HTTPS) and 8080 (HTTP) are open in the firewall settings to allow access to EM Express.

1. Open ports in the firewall (as root):

```
firewall-cmd --permanent --add-port=5500/tcp
firewall-cmd --permanent --add-port=8080/tcp
firewall-cmd --reload
```

5. Access EM Express

1. **Open a web browser** and enter the following URL to access EM Express:

```
https://<hostname>:5500/em
```

or

```
http://<hostname>:8080/em
```

2. **Login with SYSDBA credentials:**

- **Username:** SYS
- **Password:** fenago
- **Role:** SYSDBA

6. Explore EM Express Features

1. **Dashboard:**

- View the database performance summary, session activity, and storage information.

2. **Performance Hub:**

- Access real-time and historical performance data.
- Monitor SQL performance, Active Session History (ASH), and other performance metrics.

3. **Storage Management:**

- Manage tablespaces, datafiles, and other storage components.

4. **Security Management:**

- Create and manage users and roles.
- Configure auditing and manage security policies.

5. **Database Configuration:**

- View and modify initialization parameters.
- Manage database instances and services.

6. **SQL and PL/SQL:**

- Execute SQL queries and PL/SQL scripts.
- Monitor and manage PL/SQL objects.

Summary

By following these steps, you will configure and access Oracle Enterprise Manager (EM) Express for managing the CDBDEV database. EM Express provides a comprehensive web-based interface for database administration, performance monitoring, and troubleshooting. This lab ensures you can effectively use EM Express to manage and monitor your Oracle database environment.