Oracle Database Enterprise Edition | Tue Jan 11 2022

Oracle Database Server Docker Image Documentation

Oracle Database Server 12c R2 is an industry leading relational database server. The Oracle Database Server Docker Image contains the Oracle Database Server 12.2.0.1 Enterprise Edition running on Oracle Linux 7. This image contains a default database in a multitenant configuration with one pdb.

For more information on Oracle Database Server 12c R2 refer to http://docs.oracle.com/en/database/

Using this image

Accepting the terms of service

From the store.docker.com website accept `Terms of Service` for Oracle Database Enterprise Edition.

Login to Docker Store

Login to Docker Store with your credentials

```
$ docker login
```

Starting an Oracle Database Server instance

Starting an Oracle database server instance is as simple as executing

```
$ docker run -d -it --name <Oracle-DB> store/oracle/database-enterprise:12.2.0.1
```

where `<Oracle-DB>` is the name of the container and `12.2.0.1` is the Docker image tag.

The database server is ready to use when the `STATUS` field shows `(healthy)` in the output of `docker`

`ps .`

Connecting to the Database Server Container

The default password to connect to the database with `sys` user is `Oradoc_db1` .

Connecting from within the container

The database server can be connected to by executing SQL*Plus,

```
$ docker exec -it <Oracle-DB> bash -c "source /home/oracle/.bashrc; sqlplus /nolog"
```

Connecting from outside the container

The database server exposes port 1521 for Oracle client connections over SQL*Net protocol and port 5500 for Oracle XML DB. SQL*Plus or any JDBC client can be used to connect to the database server from outside the container.

To connect from outside the container start the container with `-P` or `-p` option as,

```
$ docker run -d -it --name <Oracle-DB> -P store/oracle/database-enterprise:12.2.0.1
```

option `-P` indicates the ports are allocated by Docker. The mapped port can be discovered by executing

```
$ docker port <Oracle-DB>  1521/tcp -> 0.0.0.0:<mapped host port>
```

Using this `<mapped host port>` and `<ip-address of host>` create `tnsnames.ora` in the directory pointed to by environment variable `TNS_ADMIN` .

```
ORCLCDB=(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=<ip-address of host>)(PORT=<mapped host port>))
    (CONNECT_DATA=(SERVER=DEDICATED)(SERVICE_NAME=ORCLCDB.localdomain)))
ORCLPDB1=(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=<ip-address> of host)(PORT=<mapped host port>))
    (CONNECT_DATA=(SERVER=DEDICATED)(SERVICE_NAME=ORCLPDB1.localdomain)))
```

To connect from outside the container using SQL*Plus,

```
$ sqlplus sys/Oradoc_db1@ORCLCDB as sysdba
```

Custom Configurations

DB_PDB

This parameter modifies the name of the PDB. The default value is set to `ORCLPDB1`.

DB_MEMORY

This parameter sets the memory requirement for the Oracle server. This value determines the amount of memory to be allocated for SGA and PGA. The default value is set to 2GB.

DB_DOMAIN

This parameter sets the domain to be used for database server. The default value is `localdomain`.

To start an Oracle database server with custom configuration parameters

```
$ docker run -d -it --name <Oracle-DB> -P --env-file ora.conf store/oracle/database-enterprise:12.2.0.1
```

Ensure custom values for `DB_SID`, `DB_PDB` and `DB_DOMAIN` are updated in the tnsnames.ora.

Caveats

This Docker image has the following restrictions.

1. Supports a single instance database.
2. Dataguard is not supported.
3. Database options and patching are not supported.

Changing default password for SYS user

The Oracle database server is started with a default password `Oradoc_db1`. The password used during the container creation is not secure and should be changed. To change the password connect to the database with SQL*Plus and execute

```
alter user sys identified by <new-password>;
```

The database alert log can be viewed with

```
$ docker logs <Oracle-DB>
```

where

Reusing existing database

This Oracle database server image uses Docker data volumes to store data files, redo logs, audit logs, alert logs and trace files. The data volume is mounted inside the container at `/ORCL`. To start a database with a data volume using `docker run` command,

```
$ docker run -d -it --name <Oracle-DB> -v OracleDBData:/ORCL store/oracle/database-enterprise:12.2.0.1
```

`OracleDBData` is the data volume that is created by Docker and mounted inside the container at `/ORCL`. The persisted data files can be reused with another container by reusing the `OracleDBData` data volume.

Using host system directory for data volume

To use a directory on the host system for the data volume,

```
$ docker run -d -it --name <Oracle-DB> -v /data/OracleDBData:/ORCL store/oracle/database-enterprise:12.2.0.1
```

where `/data/OracleDBData` is a directory in the host system.

Oracle Database Server 12.2.0.1 Enterprise Edition Slim Variant

The Slim Variant (`12.2.0.1-slim` tag) of EE has reduced disk space (4GB) requirements and a quicker container startup. This image does not support the following features - Analytics, Oracle R, Oracle Label Security, Oracle Text, Oracle Application Express and Oracle DataVault. To use the slim variant

```
$ docker run -d -it --name <Oracle-DB> store/oracle/database-enterprise:12.2.0.1-slim
```

support

documentation

Copy and paste to pull this image

```
docker pull store/oracle/database-enterprise:12.2.0.1
```