

Oracle Database 19c EE

Download the following software:

- [Oracle Linux 7 \(x86_64\)](#)
- [Oracle Database \(x86_64\) 19c Enterprise Edition](#)
- [Oracle APEX](#)

OS setup

Install Oracle Linux 7. Select Server with a GUI. or Minimal.

As the root user, configure the OS and create the directory structure.

```
yum install -y oracle-database-preinstall-19c wget
mkdir -p /u01/app/oracle/product/19.0.0/dbhome_1
mkdir -p /u02/oradata
chown -R oracle:oinstall /u01 /u02
chmod -R 775 /u01 /u02
```

Database installation.

As the oracle user:

Make a scripts folder

```
mkdir /home/oracle/scripts
```

Create an environment script. This will hold all of the settings.

```
cat > /home/oracle/scripts/setEnv.sh <<EOF
# Oracle Settings
export TMP=/tmp
export TMPDIR=\$TMP
export ORACLE_HOSTNAME=ora19c.core.example.com
export ORACLE_UNQNAME=cdb1
export ORACLE_BASE=/u01/app/oracle
export ORACLE_HOME=\$ORACLE_BASE/product/19.0.0/dbhome_1
```

```
export ORA_INVENTORY=/u01/app/oralInventory
export ORACLE_SID=cdb1
export PDB_NAME=pdb1
export DATA_DIR=/u02/oradata
export PATH=/usr/sbin:/usr/local/bin:\$PATH
export PATH=\$ORACLE_HOME/bin:\$PATH
export LD_LIBRARY_PATH=\$ORACLE_HOME/lib:/lib:/usr/lib
export CLASSPATH=\$ORACLE_HOME/jlib:\$ORACLE_HOME/rdbms/jlib
EOF
```

Add the contents of setEnv.sh to Oracle's .bash_profile.

```
echo ". /home/oracle/scripts/setEnv.sh" >> /home/oracle/.bash_profile
```

Create a start script.

```
cat > /home/oracle/scripts/start_all.sh <<EOF
#!/bin/bash
. /home/oracle/scripts/setEnv.sh

export ORAENV_ASK=NO
. oraenv
export ORAENV_ASK=YES

dbstart \$ORACLE_HOME
EOF
```

Create a stop script.

```
cat > /home/oracle/scripts/stop_all.sh <<EOF
#!/bin/bash
. /home/oracle/scripts/setEnv.sh

export ORAENV_ASK=NO
. oraenv
export ORAENV_ASK=YES

dbshut \$ORACLE_HOME
EOF
```

Set the owner and folder and execute on the scripts.

```
chown -R oracle:oinstall /home/oracle/scripts
chmod u+x /home/oracle/scripts/*.sh
```

Load the environment.

```
source /home/oracle/.bash_profile
```

Unzip the installer.

```
cd $ORACLE_HOME
unzip -oq /tmp/LINUX.X64_193000_db_home.zip
```

Run the installer.

```
./runInstaller -ignorePrereq -waitforcompletion -silent \
  -responseFile ${ORACLE_HOME}/install/response/db_install.rsp \
  oracle.install.option=INSTALL_DB_SWONLY \
  ORACLE_HOSTNAME=${ORACLE_HOSTNAME} \
  UNIX_GROUP_NAME=oinstall \
  INVENTORY_LOCATION=${ORA_INVENTORY} \
  SELECTED_LANGUAGES=en,en_US \
  ORACLE_HOME=${ORACLE_HOME} \
  ORACLE_BASE=${ORACLE_BASE} \
  oracle.install.db.InstallEdition=EE \
  oracle.install.db.OSDBA_GROUP=dba \
  oracle.install.db.OSBACKUPDBA_GROUP=dba \
  oracle.install.db.OSDGDBA_GROUP=dba \
  oracle.install.db.OSKMDBA_GROUP=dba \
  oracle.install.db.OSRACDBA_GROUP=dba \
  SECURITY_UPDATES_VIA_MYORACLESUPPORT=false \
  DECLINE_SECURITY_UPDATES=true
```

As a **root** user, execute the following:

```
/u01/app/oraInventory/orainstRoot.sh
/u01/app/oracle/product/19.0.0/dbhome_1/root.sh
```

As the **oracle** user:

Start the listener

```
lsnrctl start
```

Create the first database.

```
dbca -silent -createDatabase \
  -templateName General_Purpose.dbc \
  -gdbname ${ORACLE_SID} -sid ${ORACLE_SID} -responseFile NO_VALUE \
  -characterSet AL32UTF8 \
  -sysPassword Som3bTt3rpwd \
  -systemPassword Som3bTt3rpwd \
  -createAsContainerDatabase true \
  -numberOfPDBs 1 \
  -pdbName ${PDB_NAME} \
  -pdbAdminPassword Som3bTt3rpwd \
  -databaseType MULTIPURPOSE \
  -automaticMemoryManagement false \
  -totalMemory 2000 \
  -storageType FS \
  -datafileDestination "${DATA_DIR}" \
  -redoLogFileSize 50 \
  -emConfiguration NONE \
  -ignorePreReqs
```

Edit the "/etc/oratab" file setting the restart flag for each instance to 'Y'.

Example:

```
cdb1:/u01/app/oracle/product/19.0.0/db_1:Y
```

Enable Oracle Managed Files and make the PDB start when the instance starts

```
sqlplus / as sysdba <<EOF
alter system set db_create_file_dest='/u02/oradata';
alter pluggable database pdb1 save state;
exit;
EOF
```

APEX

As the **oracle** user:

Make the apex directory and unzip the apex files.

```
mkdir -p /home/oracle/apex
unzip /tmp/apex_20.*.zip -d /home/oracle
chown -R oracle:oinstall /home/oracle/apex
cd /home/oracle/apex
```

Create an ACL script. This will be needed later.

```
cat > apex_acl.sql << EOF
BEGIN
  BEGIN
    dbms_network_acl_admin.drop_acl(acl => 'all-network-PUBLIC.xml');
  EXCEPTION
    WHEN OTHERS THEN
      NULL;
  END;
  dbms_network_acl_admin.create_acl(acl      => 'all-network-PUBLIC.xml',
                                   description => 'Allow all network traffic',
                                   principal  => 'PUBLIC',
                                   is_grant   => TRUE,
                                   privilege  => 'connect');
  dbms_network_acl_admin.add_privilege(acl      => 'all-network-PUBLIC.xml',
                                       principal => 'PUBLIC',
                                       is_grant  => TRUE,
                                       privilege => 'resolve');
  dbms_network_acl_admin.assign_acl(acl => 'all-network-PUBLIC.xml',
                                   host => '*');

END;
/
sho err
COMMIT;
/
EOF
```

Connect to the database

```
sqlplus /nolog
```

Change roles

```
CONN pdb1 AS SYSDBA
```

```
alter session set container=PDB1;
```

Run the script to install a full development environment

```
@apexins.sql SYS AUX SYS AUX TEMP /i/
```

Create an instance administrator user and set their password

```
@apxchpwd.sql
```

Configure REST Data Services

```
@apex_rest_config.sql
```

Run the ACL setup script created earlier.

```
@apex_acl.sql
```

Unlock APEX users

```
ALTER USER APEX_PUBLIC_USER ACCOUNT UNLOCK;  
ALTER USER APEX_PUBLIC_USER IDENTIFIED BY "Som3bTt3rpwd";  
ALTER USER APEX_REST_PUBLIC_USER IDENTIFIED BY "Som3bTt3rpwd" ACCOUNT UNLOCK;  
ALTER USER APEX_LISTENER IDENTIFIED BY "Som3bTt3rpwd" ACCOUNT UNLOCK;
```

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