Oracle Database 19c step by step installation guide on Oracle Linux 7.6

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http://mohamedazar.com
Software Download


Oracle Database 19c (19.3)

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Oracle Database 19c (19.3) for Linux x86-64 (RPM)

oracle-database-ee-19c-1.0-1.x86_64.rpm (2,694,664,264 bytes)

(sha256sum - c519397aae7af9f097cbde6597783f17964e5c53ea3fd90da042d6b5c379e52)

Oracle Database 19c (19.3) for Linux x86-64

LINUX x64_193000 db_home.zip (3,859,705,302 bytes)

(sha256sum - baa328c57133da313ed3b6d7b6c5ac42cd9970e28bf2e6233f3235233aa8c8)

More detail about installation guide, Please refer


/etc/hosts

[root@dbhost ~]# cat /etc/hosts

127.0.0.1   localhost localhost.localdomain localhost4 localhost4.localdomain4
::1         localhost localhost.localdomain localhost6 localhost6.localdomain6

192.168.1.7 dbhost.localdomain dbhost

Automatic Setup

[root@dbhost ~]# yum install -y oracle-database-preinstall-19c

Loaded plugins: langpacks, ulninfo

Resolving Dependencies

-- Running transaction check

--- Package oracle-database-preinstall-19c.x86_64 0:1.0-1.el7 will be installed
--> Processing Dependency: compat-libcap1 for package: oracle-database-preinstall-19c-1.0-1.el7.x86_64

--> Processing Dependency: ksh for package: oracle-database-preinstall-19c-1.0-1.el7.x86_64

--> Processing Dependency: libaio-devel for package: oracle-database-preinstall-19c-1.0-1.el7.x86_64

--> Processing Dependency: glibc-devel for package: oracle-database-preinstall-19c-1.0-1.el7.x86_64

--> Processing Dependency: compat-libstdc++-33 for package: oracle-database-preinstall-19c-1.0-1.el7.x86_64

--> Processing Dependency: libstdc++-devel for package: oracle-database-preinstall-19c-1.0-1.el7.x86_64

--> Running transaction check

--->

--> Package compat-libcap1.x86_64 0:1.10-7.el7 will be installed

--> Package compat-libstdc++-33.x86_64 0:3.2.3-72.el7 will be installed

--> Package glibc-devel.x86_64 0:2.17-260.0.17.el7_6.6 will be installed

--> Processing Dependency: glibc = 2.17-260.0.17.el7_6.6 for package: glibc-devel-2.17-260.0.17.el7_6.6.x86_64

--> Processing Dependency: glibc = 2.17-260.0.17.el7_6.6 for package: glibc-devel-2.17-260.0.17.el7_6.6.x86_64

--> Processing Dependency: ksh = 2.17-260.0.17.el7_6.6 for package: glibc-devel-2.17-260.0.17.el7_6.6.x86_64

--> Package glibc.x86_64 0:2.17-196.el7 will be updated

--> Processing Dependency: glibc = 2.17-196.el7 for package: glibc-common-2.17-196.el7.x86_64

--> Package glibc.x86_64 0:2.17-260.0.17.el7_6.6 will be an update

--> Package glibc=headers.x86_64 0:2.17-260.0.17.el7_6.6 will be installed

--> Processing Dependency: kernel-headers >= 2.2.1 for package: glibc-headers-2.17-260.0.17.el7_6.6.x86_64

--> Processing Dependency: kernel-headers for package: glibc-headers-2.17-260.0.17.el7_6.6.x86_64

--> Package libstdc++.x86_64 0:4.8.5-16.el7 will be updated
--- Package libstdc++.x86_64 0:4.8.5-36.0.1.el7_6.2 will be an update
--- Running transaction check
--- Package glibc-common.x86_64 0:2.17-196.el7 will be updated
--- Package glibc-common.x86_64 0:2.17-260.0.17.el7_6.6 will be an update
--- Package kernel-headers.x86_64 0:3.10.0-957.21.3.el7 will be installed
--- Finished Dependency Resolution

Dependencies Resolved

<table>
<thead>
<tr>
<th>Package</th>
<th>Arch</th>
<th>Version</th>
<th>Repository</th>
</tr>
</thead>
<tbody>
<tr>
<td>oracle-database-preinstall-19c</td>
<td>x86_64</td>
<td>1.0-1.el7</td>
<td>ol7_latest</td>
</tr>
<tr>
<td>compat-libcap1</td>
<td>x86_64</td>
<td>1.10-7.el7</td>
<td>ol7_latest</td>
</tr>
<tr>
<td>compat-libstdc++-33</td>
<td>x86_64</td>
<td>3.2.3-72.el7</td>
<td>ol7_latest</td>
</tr>
<tr>
<td>glibc-devel</td>
<td>x86_64</td>
<td>2.17-260.0.17.el7_6.6</td>
<td>ol7_latest</td>
</tr>
<tr>
<td>glibc-headers</td>
<td>x86_64</td>
<td>2.17-260.0.17.el7_6.6</td>
<td>ol7_latest</td>
</tr>
<tr>
<td>kernel-headers</td>
<td>x86_64</td>
<td>3.10.0-957.21.3.el7</td>
<td>ol7_latest</td>
</tr>
<tr>
<td>ksh</td>
<td>x86_64</td>
<td>20120801-139.0.1.el7</td>
<td>ol7_latest</td>
</tr>
<tr>
<td>libaio-devel</td>
<td>x86_64</td>
<td>0.3.109-13.el7</td>
<td>ol7_latest</td>
</tr>
</tbody>
</table>
libstdc++-devel x86_64 4.8.5-36.0.1.el7_6.2 ol7_latest
1.5 M

Updating for dependencies:
glibc x86_64 2.17-260.0.17.el7_6.6 ol7_latest
3.7 M
glibc-common x86_64 2.17-260.0.17.el7_6.6 ol7_latest
12 M
libstdc++ x86_64 4.8.5-36.0.1.el7_6.2 ol7_latest
304 k

Transaction Summary
=====================================================================================  
=====================================================================================
Install  1 Package  (+8 Dependent packages)
Upgrade             ( 3 Dependent packages)

Total size: 28 M
Total download size: 12 M

Downloading packages:

warning: /var/cache/yum/x86_64/7Server/ol7_latest/packages/compat-libcap1-1.10-7.el7.x86_64.rpm:
Header V3 RSA/SHA256 Signature, key ID ec551f03: NOKEY B: ETA

Public key for compat-libcap1-1.10-7.el7.x86_64.rpm is not installed

(1/9): compat-libcap1-1.10-7.el7.x86_64.rpm                 | 17 kB  00:00:00
(2/9): compat-libstdc++-33-3.2.3-72.el7.x86_64.rpm         | 190 kB  00:00:00
(3/9): glibc-headers-2.17-260.0.17.el7_6.6.x86_64.rpm      | 685 kB  00:00:01
(4/9): glibc-devel-2.17-260.0.17.el7_6.6.x86_64.rpm        | 1.1 MB  00:00:01
(5/9): ksh-20120801-139.0.1.el7.x86_64.rpm                | 883 kB  00:00:01
(6/9): libaio-devel-0.3.109-13.el7.x86_64.rpm | 12 kB 00:00:00

(7/9): libstdc++-devel-4.8.5-36.0.1.el7_6.2.x86_64.rpm | 1.5 MB 00:00:02

(8/9): oracle-database-preinstall-19c-1.0-1.el7.x86_64.rpm | 18 kB 00:00:02

(9/9): kernel-headers-3.10.0-957.21.3.el7.x86_64.rpm | 8.0 MB 00:00:09

-----------------------------------------------------------------------------------------------------------------------------

Total 1.1 MB/s | 12 MB
00:00:11

Retrieving key from file:///etc/pki/rpm-gpg/RPM-GPG-KEY-oracle

Importing GPG key 0xEC551F03:
Userid : "Oracle OSS group (Open Source Software group) <build@oss.oracle.com>"
Fingerprint: 4214 4123 fecf c55b 9086 313d 72f9 7b74 ec55 1f03
Package : 7:oraclelinux-release-7.4-1.0.4.el7.x86_64 (@anaconda/7.4)
From : /etc/pki/rpm-gpg/RPM-GPG-KEY-oracle

Running transaction check

Running transaction test

Transaction test succeeded

Running transaction

  Updating  : glibc-2.17-260.0.17.el7_6.6.x86_64 1/15

  Updating  : glibc-common-2.17-260.0.17.el7_6.6.x86_64 2/15

  Updating  : libstdc++-4.8.5-36.0.1.el7_6.2.x86_64 3/15

  Installing : libstdc++-devel-4.8.5-36.0.1.el7_6.2.x86_64 4/15

  Installing : ksh-20120801-139.0.1.el7.x86_64 5/15
Installing: compat-libstdc++-33-3.2.3-72.el7.x86_64  
6/15
Installing: compat-libcap1-1.10-7.el7.x86_64  
7/15
Installing: kernel-headers-3.10.0-957.21.3.el7.x86_64  
8/15
Installing: glibc-headers-2.17-260.0.17.el7_6.6.x86_64  
9/15
Installing: glibc-devel-2.17-260.0.17.el7_6.6.x86_64  
10/15
Installing: libaio-devel-0.3.109-13.el7.x86_64  
11/15
Installing: oracle-database-preinstall-19c-1.0-1.el7.x86_64  
12/15
Cleanup: libstdc++-4.8.5-16.el7.x86_64  
13/15
Cleanup: glibc-2.17-196.el7.x86_64  
14/15
Cleanup: glibc-common-2.17-196.el7.x86_64  
15/15
Verifying: ksh-20120801-139.0.1.el7.x86_64  
1/15
Verifying: libstdc++-devel-4.8.5-36.0.1.el7_6.2.x86_64  
2/15
Verifying: glibc-headers-2.17-260.0.17.el7_6.6.x86_64  
3/15
Verifying: compat-libstdc++-33-3.2.3-72.el7.x86_64  
4/15
Verifying: compat-libcap1-1.10-7.el7.x86_64  
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Verifying: kernel-headers-3.10.0-957.21.3.el7.x86_64
12/15
Verifying: libstdc++-4.8.5-16.el7.x86_64
13/15
Verifying: glibc-common-2.17-196.el7.x86_64
14/15
Verifying: glibc-2.17-196.el7.x86_64
15/15

Installed:
oracle-database-preinstall-19c.x86_64 0:1.0-1.el7

Dependency Installed:
compat-libcap1.x86_64 0:1.10-7.el7
glibc-devel.x86_64 0:2.17-260.0.17.el7_6.6
glibc-headers.x86_64 0:2.17-260.0.17.el7_6.6
ksh.x86_64 0:20120801-139.0.1.el7
libaio-devel.x86_64 0:0.3.109-13.el7
libstdc++-devel.x86_64 0:4.8.5-36.0.1.el7_6.2

Dependency Updated:
glibc.x86_64 0:2.17-260.0.17.el7_6.6
glibc-common.x86_64 0:2.17-260.0.17.el7_6.6
libstdc++.x86_64 0:4.8.5-36.0.1.el7_6.2

Complete!
[root@dbhost ~]#
Verify: Oracle user and group created

[root@dbhost ~]# grep oracle /etc/passwd
oracle:x:54321:54321::/home/oracle:/bin/bash

[root@dbhost ~]# grep oracle /etc/group
oinstall:x:54321:oracle
dba:x:54322:oracle
oper:x:54323:oracle
backupdba:x:54324:oracle
dgdba:x:54325:oracle
kmdba:x:54326:oracle
racdba:x:54330:oracle

Selinux:

[root@dbhost ~]# cat /etc/selinux/config

# This file controls the state of SELinux on the system.
# SELINUX= can take one of these three values:
#      enforcing - SELinux security policy is enforced.
#      permissive - SELinux prints warnings instead of enforcing.
#      disabled - No SELinux policy is loaded.
SELINUX=enforcing

# SELINUXTYPE= can take one of three two values:
#      targeted - Targeted processes are protected,
#      minimum - Modification of targeted policy. Only selected processes are protected.
#      mls - Multi Level Security protection.
SELINUXTYPE=targeted

Change selinux=permissive
# This file controls the state of SELinux on the system.
# SELINUX= can take one of these three values:
#  enforcing - SELinux security policy is enforced.
#  permissive - SELinux prints warnings instead of enforcing.
#  disabled - No SELinux policy is loaded.
SELINUX=permissive
# SELINUXTYPE= can take one of three two values:
#  targeted - Targeted processes are protected,
#  minimum - Modification of targeted policy. Only selected processes are protected.
#  mls - Multi Level Security protection.
SELINUXTYPE=targeted

[root@dbhost ~]# setenforce Permissive

Firewall Stop:
[root@dbhost ~]# systemctl stop firewalld
[root@dbhost ~]# systemctl disable firewalld
Removed symlink /etc/systemd/system/multi-user.target.wants/firewalld.service.
Removed symlink /etc/systemd/system/dbus-org.fedoraproject.FirewallD1.service.

Change oracle OS user and password:

[root@dbhost ~]# passwd oracle
Changing password for user oracle.
New password:  
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: all authentication tokens updated successfully.

Directory Creation:
[root@dbhost ~]# mkdir -p /u01/app/oracle/product/19c/dbhome_1
[root@dbhost ~]# chown -Rf oracle:oinstall /u01
[root@dbhost ~]# chmod -Rf 775 /u01

Bash profile for Oracle OS user:

[oracle@dbhost ~]$ cat .bash_profile
# .bash_profile

# Get the aliases and functions
if [ -f ~/.bashrc ]; then
  . ~/.bashrc
fi

# User specific environment and startup programs

PATH=$PATH:$HOME/.local/bin:$HOME/bin
export PATH

TMP=/tmp; export TMP
TE
export EDITOR=vi
ORACLE_SID=uatdb; export ORACLE_SID
ORACLE_BASE=/u01/app/oracle/; export ORACLE_BASE
ORACLE_HOME=/install; export ORACLE_HOME
PATH=/usr/sbin:$PATH; export PATH
PATH=$ORACLE_HOME/bin:$PATH; export PATH
LD_LIBRARY_PATH=$ORACLE_HOME/lib:/usr/lib; export LD_LIBRARY_PATH
CLASSPATH=$ORACLE_HOME/JRE:$ORACLE_HOME/jlib:$ORACLE_HOME/rdbms/jlib; export CLASSPATH
if [ $USER = "oracle" ]; then
    if [ $SHELL = "/bin/ksh" ]; then
        ulimit -p 16384
    ulimit -n 65536
    else
        ulimit -u 16384 -n 65536
    fi
fi

**Extract Software:**

[root@dbhost ~]# chown -Rf oracle:oinstall /install
[oracle@dbhost install]# unzip LINUX.X64_193000_db_home.zip

Please be note : you need to extract where you want to keep software binary files
Example : you need to extract the oracle database 19c software files at Oracle home path location.
$ORACLE_HOME = /u01/app/oracle/product/19c/dbhome_1

**Database software installation :**

[oracle@dbhost install]# export DISPLAY=:0
[oracle@dbhost install]# ./runInstaller
Select any of the following install options.

- Create and configure a single instance database.
  This option creates a starter database.

- Set Up Software Only

Note 1: For RAC Install, do ‘Set Up Software Only’ and then execute DBCA (Database Configuration Assistant) from the oracle home.

Note 2: To upgrade an Oracle Database, do ‘Set Up Software Only’ and then execute DBUA (Database Upgrade Assistant) from the oracle home.
### Select System Class

<table>
<thead>
<tr>
<th>Configuration Option</th>
<th>System Class</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Desktop class</strong></td>
</tr>
<tr>
<td></td>
<td>Choose this option if you are installing on a laptop or desktop class system. This option includes a starter database and allows minimal configuration.</td>
</tr>
<tr>
<td></td>
<td><strong>Server class</strong></td>
</tr>
<tr>
<td></td>
<td>Choose this option if you are installing on a server class system, which Oracle defines as a system used in a production data center. This option allows for more advanced configuration options.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Typical Installation</th>
<th>Root script execution</th>
<th>Prerequisite Checks</th>
<th>Summary</th>
<th>Install Product</th>
<th>Finish</th>
</tr>
</thead>
</table>

**Oracle Database 19c Installer - Step 2 of 8**
Typical Install Configuration

Perform full database installation with basic configuration.

Oracle base: /u01/app/oracle/
Software location: Install
Database file location: /u01/app/oracle/product/19c/dhome_1
Database edition: Enterprise Edition
Character set: Unicode (AL32UTF8)
OSDBA group: dba
Global database name: userdb
Password: ******** Confirm password:

Create as Container database

Pluggable database name: orclpdb
You are starting your first installation on this host. Specify a directory for installation metadata files (for example, install log files). This directory is called the "inventory directory". The installer automatically sets up subdirectories for each product to contain inventory data. The subdirectory for each product typically requires 150 Kilobytes of disk space.

Inventory Directory: /u01/app/orainventory

Specify an operating system group whose members have write permission to the inventory directory (orainventory):

orainventory Group Name: install
During the software configuration, certain operations have to be performed as "root" user. You can choose to have the installer perform these operations automatically by specifying inputs for one of the options below. The input specified will also be used by the installer to perform additional prerequisite checks.

- Automatically run configuration scripts
  - Use "root" user credential
    - Password: ********
  - Use sudo
    - Program path: /usr/bin/sudo
    - Username: oracle
    - Password: 

[Options: Help, Previous, Next, Install, Cancel]
Click yes
The configuration of Oracle Database was successful.

Note:

Oracle Enterprise Manager Database Express URL: https://localhost:5500/em
[oracle@dbhost ~]$ sqlplus / as sysdba

SQL*Plus: Release 19.0.0.0.0 - Production on Fri Jul 5 22:29:26 2019
Version 19.3.0.0.0

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Connected to:
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.3.0.0.0
<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>UATDB</td>
</tr>
</tbody>
</table>

The SQL query selects the name from the v$database view.