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|  | Install [Oracle Database 19c](http://www.oracle.com/). Before Installing, Change some settings for requirements of installing Oracle database on here. |
| [1] | [Install Desktop Environment, refer to here](https://www.server-world.info/en/note?os=CentOS_7&p=x).   |  | | --- | | **Desktop Environment : Install GNOME**  2014/07/09 |  |  |  | | --- | --- | |  | Desktop Environment is not neccessary for Server usage, though. But Sometimes installation or using an application requires Desktop Environment, then build Desktop Environment as follwos. | | [1] | Install GNOME Desktop Environment on here. |  |  | | --- | | **[root@dlp ~]#**  [**yum**](https://www.server-world.info/en/command/html/yum.html)**-y groups install "GNOME Desktop"** |  |  |  | | --- | --- | | [2] | Input a command like below after finishing installation of new packages. |  |  | | --- | | **[root@dlp ~]#**  [**startx**](https://www.server-world.info/en/command/html/startx.html) |  |  |  | | --- | --- | | [3] | GNOME Desktop Environment starts. For first booting, initial setup runs like follows. Select System language first. |  |  | | --- | | https://www.server-world.info/en/CentOS_7/x/img/1.png |  |  |  | | --- | --- | | [4] | Select your keyboard type. |  |  | | --- | | https://www.server-world.info/en/CentOS_7/x/img/2.png |  |  |  | | --- | --- | | [5] | Add online accounts if you'd like to. |  |  | | --- | | https://www.server-world.info/en/CentOS_7/x/img/3.png |  |  |  | | --- | --- | | [6] | Configuration finished and click "Start using CentOS Linux". |  |  | | --- | | https://www.server-world.info/en/CentOS_7/x/img/4.png |  |  |  | | --- | --- | | [7] | GNOME Desktop Environments starts like follows. |  |  | | --- | | https://www.server-world.info/en/CentOS_7/x/img/5.png | |
| [2] | Install required packages. |

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| **[root@dlp ~]#**  [**yum**](https://www.server-world.info/en/command/html/yum.html)**-y install binutils compat-libcap1 gcc gcc-c++ glibc glibc.i686 glibc-devel glibc.i686 ksh libaio libaio.i686 libaio-devel libaio-devel.i686 libgcc libgcc.i686 libstdc++ libstdc++l7.i686 libstdc++-devel libstdc++-devel.i686 compat-libstdc++-33 compat-libstdc++-33.i686 libXi libXi.i686 libXtst libXtst.i686 make sysstat** |

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| [3] | Edit Kernel parameters. |

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| **[root@dlp ~]#**  **MEMTOTAL=$(free -b | sed -n '2p' | awk '{print $2}')**  **[root@dlp ~]#**  **SHMMAX=$(expr $MEMTOTAL / 2)**  **[root@dlp ~]#**  **SHMMNI=4096**  **[root@dlp ~]#**  **PAGESIZE=$(getconf PAGE\_SIZE)**  **[root@dlp ~]#**  [**cat**](https://www.server-world.info/en/command/html/cat.html)**> /etc/sysctl.d/50-oracle.conf << EOF fs.aio-max-nr = 1048576 fs.file-max = 6815744 kernel.shmmax = $SHMMAX kernel.shmall = $(expr \( $SHMMAX / $PAGESIZE \) \\* \( $SHMMNI / 16 \)) kernel.shmmni = $SHMMNI kernel.sem = 250 32000 100 128 net.ipv4.ip\_local\_port\_range = 9000 65500 net.core.rmem\_default = 262144 net.core.rmem\_max = 4194304 net.core.wmem\_default = 262144 net.core.wmem\_max = 1048576 EOF**  **[root@dlp ~]#**  [**sysctl**](https://www.server-world.info/en/command/html/sysctl.html)**--system**    **.....**  **.....**  **\* Applying /etc/sysctl.d/50-oracle.conf ...**  **fs.aio-max-nr = 1048576**  **fs.file-max = 6815744**  **kernel.shmmax = 9469661184**  **kernel.shmall = 591853824**  **kernel.shmmni = 4096**  **kernel.sem = 250 32000 100 128**  **net.ipv4.ip\_local\_port\_range = 9000 65500**  **net.core.rmem\_default = 262144**  **net.core.rmem\_max = 4194304**  **net.core.wmem\_default = 262144**  **net.core.wmem\_max = 1048576**  **\* Applying /usr/lib/sysctl.d/60-libvirtd.conf ...**  **fs.aio-max-nr = 1048576**  **\* Applying /etc/sysctl.d/99-sysctl.conf ...**  **\* Applying /etc/sysctl.conf ...** |

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| [4] | Create user and groups for Oracle Database service. |

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| **[root@dlp ~]#**  **i=54321; for group in oinstall dba oper backupdba dgdba kmdba asmdba asmoper asmadmin racdba; do groupadd -g $i $group; i=$(expr $i + 1) done**  **[root@dlp ~]#**  [**useradd**](https://www.server-world.info/en/command/html/useradd.html)**-u 54321 -g oinstall -G dba,oper,backupdba,dgdba,kmdba,asmdba,racdba -d /usr/oracle oracle**  **[root@dlp ~]#**  [**passwd**](https://www.server-world.info/en/command/html/passwd.html)**oracle**  **Changing password for user oracle. New password: Retype new password: passwd: all authentication tokens updated successfully. [root@dlp ~]#**  [**mkdir**](https://www.server-world.info/en/command/html/mkdir.html)**-p /u01/app/oracle**  **[root@dlp ~]#**  [**chown**](https://www.server-world.info/en/command/html/chown.html)**-R oracle:oinstall /u01/app**  **[root@dlp ~]#**  [**chmod**](https://www.server-world.info/en/command/html/chmod.html)**-R 755 /u01**  **[root@dlp ~]#**  [**vi**](https://www.server-world.info/en/command/html/vi.html)**/etc/pam.d/login**  **# line 15: add**    **session required pam\_selinux.so open**  **session required pam\_namespace.so**  **session required pam\_limits.so**  **session optional pam\_keyinit.so force revoke**  **session include system-auth**  **-session optional pam\_ck\_connector.so**  **[root@dlp ~]#**  [**vi**](https://www.server-world.info/en/command/html/vi.html)**/etc/security/limits.d/50-oracle.conf**  **# create new**  **oracle soft nofile 1024**  **oracle hard nofile 65536**  **oracle soft nproc 2047**  **oracle hard nproc 16384**  **oracle soft stack 10240**  **oracle hard stack 32768** |

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| [5] | Login with the user [oracle] and set environment variables. |

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| **dlp login:**  **oracle**  **Password:**  **[oracle@dlp ~]$**  [**vi**](https://www.server-world.info/en/command/html/vi.html)**~/.bash\_profile**  **# add to the end**  **umask 022 export ORACLE\_BASE=/u01/app/oracle**  **# create a directory for using installation**  **[oracle@dlp ~]$**  [**mkdir**](https://www.server-world.info/en/command/html/mkdir.html)**database** |

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| Install Oracle Database 19c. |
| [1] | [Login and work with [oracle] user which you create in pre-requirements settings](https://www.server-world.info/en/note?os=CentOS_7&p=oracle19c&f=1). |

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| https://www.server-world.info/en/CentOS_7/oracle19c/img/1.png |

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| [2] | Download Oracle Databse 18c for Linux and upload on your server.  ⇒ https://www.oracle.com/database/technologies/oracle-database-software-downloads.html |
| [3] | After uploading Oracle files, move to a tmp directory and run an Installer like follows. |

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| **[oracle@dlp ~]$**  [**cd**](https://www.server-world.info/en/command/html/cd.html)**database**  **[oracle@dlp database]$**  [**unzip**](https://www.server-world.info/en/command/html/unzip.html)**LINUX.X64\_193000\_db\_home.zip**  **[oracle@dlp database]$**  **./runInstaller** |

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| [4] | Select Installation Option. On this example, Select [Install database software only]. |

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| https://www.server-world.info/en/CentOS_7/oracle19c/img/2.png |

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| [5] | Select Database type you install. On this example, Select [Single Instance Database \*\*\*]. |

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| https://www.server-world.info/en/CentOS_7/oracle19c/img/3.png |

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| [6] | Select edition you'd like to install. |

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| https://www.server-world.info/en/CentOS_7/oracle19c/img/4.png |

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| [7] | Specify the base directory and application files for Oracle. On this example, keep default and proceed to next. |

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| https://www.server-world.info/en/CentOS_7/oracle19c/img/5.png |

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| [8] | Specify the directory for installation metadata files. On this example, keep default and proceed to next. |

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| https://www.server-world.info/en/CentOS_7/oracle19c/img/6.png |

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| [9] | Specify the privileged group. On this example, keep default and proceed to next. |

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| https://www.server-world.info/en/CentOS_7/oracle19c/img/7.png |

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| [10] | This is the root script configuration section. Select automatic or manually. If you select automatic, input root password or username and password who has root privilege with sudo. If you do not select automatic, run root script manually later on this installation task. |

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| https://www.server-world.info/en/CentOS_7/oracle19c/img/8.png |

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| [11] | Pre-requirements are checked. If some settings are not configured for recomendations, notification is displayed like follows. Confirm them again. |

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| https://www.server-world.info/en/CentOS_7/oracle19c/img/9.png |

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| [12] | The summary is shown for configuration. Click [Install] if it's OK all. |

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| https://www.server-world.info/en/CentOS_7/oracle19c/img/10.png |

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| [13] | Installation starts. After this task, if you selected manual execution for root script on the [10] section, it is required. Then, run it like follows manually. |

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| https://www.server-world.info/en/CentOS_7/oracle19c/img/11.png |

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| **[root@dlp ~]#**  **/u01/app/oraInventory/orainstRoot.sh**    **Changing permissions of /u01/app/oraInventory.**  **Adding read,write permissions for group.**  **Removing read,write,execute permissions for world.**  **Changing groupname of /u01/app/oraInventory to oinstall.**  **The execution of the script is complete.**  **[root@dlp ~]#**  **/usr/oracle/database/root.sh**    **Performing root user operation.**  **The following environment variables are set as:**  **ORACLE\_OWNER= oracle**  **ORACLE\_HOME= /usr/oracle/database**  **Enter the full pathname of the local bin directory: [/usr/local/bin]: # Enter**  **Copying dbhome to /usr/local/bin ...**  **Copying oraenv to /usr/local/bin ...**  **Copying coraenv to /usr/local/bin ...**  **Creating /etc/oratab file...**  **Entries will be added to the /etc/oratab file as needed by**  **Database Configuration Assistant when a database is created**  **Finished running generic part of root script.**  **Now product-specific root actions will be performed.**  **Do you want to setup Oracle Trace File Analyzer (TFA) now ? yes|[no] :**  **yes**  **Installing Oracle Trace File Analyzer (TFA).**  **Log File: /usr/oracle/database/install/root\_dlp.srv.world\_2020-01-21\_19-13-21-711439865.log**  **Finished installing Oracle Trace File Analyzer (TFA)** |

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| [14] | Installation finished. Click [Close] button. |

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| https://www.server-world.info/en/CentOS_7/oracle19c/img/12.png |

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| [15] | Set Environment variables for Oracle user. |

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| **[oracle@dlp ~]$**  [**vi**](https://www.server-world.info/en/command/html/vi.html)**~/.bash\_profile**  **# add to the end**  **export ORACLE\_HOME=/usr/oracle/database export PATH=$PATH:$ORACLE\_HOME/bin**  **[oracle@dlp ~]$**  **source ~/.bash\_profile** |