**Oracle Database 19c Software Installation**

**Overview**

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| **Trigger:** | Install Oracle DB 19c Software using response file on new Linux environments | | |
| **Special Permissions:** | SYS Admin | **Responsible Team:** | DB Team |
| **Config. Item:** | Database | **KB Reference:** | KB# |

**Instructions**

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| **Step #** | **Information** |
| 1. | * Download the Oracle 19c Database software on the server from oracle site. |
| 2. | * Prerequisites on the server: * Minimum 2GB of RAM is required, if RAM size is in between 2GB and 16GB then swap memory should be equal to size of RAM, if RAM size is more than 16GB then swap memory should be minimum 16GB. * Install below required software packages using yum install:   E.g: yum install <package\_name>  bc  binutils  elfutils-libelf  elfutils-libelf-devel  fontconfig  gcc  gcc-c++  glibc  glibc-devel  ksh  libnsl2  libX11  libXau  libXaw  libXi  libXrender  libXtst  libaiolibaio-devel  libattr-devel  libgcc  libgfortran  libibverbs  libnsl  librdmacm  libstdc++  libstdc++-devel  libxcb  make  net-tools  pam  pam-devel  policycoreutils  policycoreutils-python-utils  smartmontools  sysstat |
|  | * Set Kernel Parameters * Oracle recommends the following minimum parameter settings. Add the below lines in "/etc/sysctl.d/98-oracle.conf" file, if file doesn’t exist create it and add the below parameters.   fs.file-max = 6815744  kernel.sem = 250 32000 100 128  kernel.shmmni = 4096  kernel.shmall = 1073741824  kernel.shmmax = 4398046511104  kernel.panic\_on\_oops = 1  net.core.rmem\_default = 262144  net.core.rmem\_max = 4194304  net.core.wmem\_default = 262144  net.core.wmem\_max = 1048576  net.ipv4.conf.all.rp\_filter = 2  net.ipv4.conf.default.rp\_filter = 2  fs.aio-max-nr = 1048576  net.ipv4.ip\_local\_port\_range = 9000 65500 |
|  | * Edit Security configuration file * Add the following lines to "/etc/security/limits.d/oracle-database-server-19c-preinstall.conf" file, if file doesn’t exist create and then add.   oracle soft nofile 1024  oracle hard nofile 65536  oracle soft nproc 16384  oracle hard nproc 16384  oracle soft stack 10240  oracle hard stack 32768  oracle hard memlock 134217728  oracle soft memlock 134217728 |
|  | * To check resource limits, use the below commands. If the output is not as expected, then exit and re-login from the terminal for the change to take effect.   # ulimit -Sn  1024  # ulimit -Hn  65536  # ulimit -Su  16384  # ulimit -Hu  16384  # ulimit -Ss  10240  # ulimit -Hs  32768 |
|  | * If oracle user doesn’t exist, Create the ‘oracle’ user. * After creating the user add below new groups to it.   # groupadd oinstall  # groupadd dba  # groupadd oper   * If oracle user already exists, add the new groups to it, then assign the groups to oracle.   # usermod -g oinstall -G dba,oper oracle |
|  | * Create all the required physical directories and change the ownership to oracle like below   # mkdir -p /orahome/oracle/product/19.3/db\_1  # chown -R oracle:oinstall /orahome /orahome/OraInventory\_19c /oradata /arch /backup /control/ctlfile1 /control/ctlfile2 /control/ctlfile3 /logs/redolog1 /logs/redolog2 /logs/redolog3 |
|  | * Stop and Disable Linux firewall like below   # systemctl stop firewalld  # systemctl disable firewalld  Removed symlink /etc/systemd/system/multi-user.target.wants/firewalld.service.  Removed symlink /etc/systemd/system/dbus-org.fedoraproject.FirewallD1.service. |
|  | * Configure the bash profile at ‘/home/oracle/.bash\_profile’ like below.   # .bash\_profile  # Get the aliases and functions  if [ -f ~/.bashrc ]; then  . ~/.bashrc  fi  # User specific environment and startup programs  PATH=$PATH:$HOME/.local/bin:$HOME/bin  export PATH  export PATH=$PATH:/sbin  # Oracle Settings  TMP=/dev/shm; export TMP  TMPDIR=$TMP; export TMPDIR  ORACLE\_HOSTNAME=hostname; export ORACLE\_HOSTNAME  ORACLE\_UNQNAME=DB\_Name; export ORACLE\_UNQNAME  ORACLE\_BASE=/orahome/oracle/product; export ORACLE\_BASE  ORACLE\_HOME=$ORACLE\_BASE/19.3/db\_1; export ORACLE\_HOME  ORACLE\_SID=traxjjp; export ORACLE\_SID  PATH=/usr/sbin:$PATH; export PATH  PATH=$ORACLE\_HOME/bin:$PATH; export PATH  LD\_LIBRARY\_PATH=$ORACLE\_HOME/lib:/lib:/usr/lib; export LD\_LIBRARY\_PATH  CLASSPATH=$ORACLE\_HOME/jlib:$ORACLE\_HOME/rdbms/jlib; export CLASSPATH  export PATH   * Execute the below cmd to set the values in ‘.bash\_profile’   $ . .bash\_profile |
|  | * Unzip the downloaded Oracle DB 19c software at ORACLE\_HOME location * Configure the response file which is at “$ORACLE\_HOME/install/response” location as per the Clients’ Environment like below attached response file. |
|  | * Run the runInstaller using response file like below from ORACLE\_HOME location to install the Oracle 19c Software.   $ ./runInstaller -silent -responseFile /orahome/oracle/product/19.3/db\_1/install/response/db\_install\_response.rsp |
|  | * Post installation, execute the scripts as root user that are displayed on the output console of runInstaller.   # sh /orahome/oracle/product/19.3/db\_1/root.sh   * Verify the logs after successful installation for any errors. |

**Document Control**

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| Revision History | | | | |
| Version | **Date** | **Author** | **Title & Company** | **Description** |
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