

Oracle Database 19c(rpm & zip) on SUSE Linux Enterprise Server 16 for x86-64

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Introduction

This document provides details on installing Oracle Database 19c(rpm & zip) on SUSE Linux Enterprise Server 16. It covers x86_64 version but installation steps are same for other supported platforms. (x86, ia64, System z, etc.).

Official Oracle product documentation is available at: <http://docs.oracle.com/en/>

System Requirements and Specifications

Hardware Requirements

Requirement	Minimum
RAM	32 GB
Swap space	Approx. twice the size of RAM
Disk space in /tmp	8 GB
Disk space for software files	8 GB
Disk space for database files	8 GB

Software Requirements

SUSE

- *SUSE Linux Enterprise Server 16 GM (x86_64)*
(<https://www.suse.com/products/server/download>)

Oracle

- *Oracle Database 19c(19.3) (x86_64) - (oracle-database-ee-19c-1.0-1.x86_64.rpm)*
(<https://www.oracle.com/database/technologies/oracle19c-linux-downloads.html>)
- *Oracle Database 19c(19.3) (x86_64) - (LINUX.X64_193000_db_home.zip)*
(<https://www.oracle.com/database/technologies/oracle19c-linux-downloads.html>)
- *Patch 38291812: DATABASE RELEASE UPDATE 19.29.0.0.0*
- *Patch 37499406: OJVM RELEASE UPDATE 19.27.0.0.0*
- *Patch 6880880: OPatch utility 12.2.0.1.47 for DB 19.0.0.0.0(Jul 2025)*
(<https://support.oracle.com>)

Testing Machine Information

Dell PowerEdge R750

CPU: 2 * Intel Xeon Gold 5318Y 2.1G, 24C/48T

RAM: 128GB GB

NIC: 2 * Intel Ethernet Converged Network Adapter X710-DA2 (10GbE SFP+, Dual Port)

Local HDD: 2 * SSD (1TB, NVMe)

OS: SUSE Linux Enterprise Server 16 GM (x86-64) - Kernel version: 6.12.0-160000.5-default

Prerequisites

1. Installing SUSE Linux Enterprise Server 16

1-1. Install SUSE Linux Enterprise Server 16 with “Base, Base Traditional, Minimal Base, Selinux, Cockpit” pattern. Please follow official Oracle Database Installation manual for selective SLES OS required rpms.

Figure 1-1 Software Installed as shown below

```
c3n1-sles16vm:~ # zypper pt | grep '^i'
```

i	base	20241218-160000.2.2	SLE-Product-SLES-16.0
i+	cockpit	16.0-160000.2.2	SLE-Product-SLES-16.0
i+	devel_basis	20170319-160000.2.2	SLE-Product-SLES-16.0
i+	documentation	20241218-160000.2.2	SLE-Product-SLES-16.0
i+	enhanced_base	20241218-160000.2.2	SLE-Product-SLES-16.0
i+	gnome	20250310-160000.2.2	SLE-Product-SLES-16.0
i	gnome_basic	20250310-160000.2.2	SLE-Product-SLES-16.0
i	minimal_base	20241218-160000.2.2	SLE-Product-SLES-16.0
i+	oracle_server	20250313-160000.2.2	SLE-Product-SLES-16.0
i+	selinux	20241218-160000.2.2	SLE-Product-SLES-16.0
i+	sw_management	20241218-160000.2.2	SLE-Product-SLES-16.0

```
c3n1-sles16vm:~ #
```

Figure 1-2 OS release information and kernel version

```
c3n1-sles16vm:~ # more /etc/os-release
# The NAME and PRETTY_NAME fields have been chosen to state compatibility between our products.
# The use of "SLES" and "SUSE Linux Enterprise" rather than a more generic name is due to backward compatibility with existing OS detection code in applications of third party vendors.
NAME="SLES"
PRETTY_NAME="SUSE Linux Enterprise Server 16.0"
VARIANT="Enterprise Server"
VARIANT_ID="server"
VERSION="16.0"
VERSION_ID="16.0"
ANSI_COLOR="0;32"
ID="sles"
ID_LIKE="suse opensuse"
CPE_NAME="cpe:/o:suse:sles:16:16.0"
SUSE_SUPPORT_PRODUCT="SUSE Linux Enterprise Server"
SUSE_SUPPORT_PRODUCT_VERSION="16.0"
HOME_URL="https://www.suse.com/products/server/"
DOCUMENTATION_URL="https://documentation.suse.com/sles/16.0/"
LOGO="distributor-logo"
c3n1-sles16vm:~ # uname -a
Linux c3n1-sles16vm 6.12.0-160000.5-default #1 SMP PREEMPT_DYNAMIC Wed Sep 10 15:26:25 UTC 2025 (3545bbd) x86_64 x86_64 x86_64 GNU/Linux
c3n1-sles16vm:~ #
```

1-2. Special Startup Requirements.

1). To set the SHMMAX kernel parameter.

Change the value of SHMMAX to 16531791872 by including the following line in '/usr/lib/sysctl.d/99-sysctl.conf'

```
kernel.shmmax = 16531791872
```

Change the value of SHMALL to 4294967296 by including the following line in '/usr/lib/sysctl.d/99-sysctl.conf'

```
kernel.shmall = 4294967296
```

Activate the new SHMMAX setting by running the command:

```
/sbin/sysctl --system
```

2). Remove '/etc/profile.d/oracle.sh' as root.

```
#mv /etc/profile.d/oracle.sh /etc/profile.d/oracle.sh.bak
```

2. Download Oracle Software

Login to the SLES 16 64-bit OS as a non-admin user.

Download Oracle Database 19c(19.3 rpm version) for Linux x86-64 (oracle-database-ee-19c-1.0-1.x86_64.rpm) from:

<https://www.oracle.com/database/technologies/oracle19c-linux-downloads.html>.

Download oracle-database-preinstall-19c EL9 Version(oracle-database-preinstall-19c-1.0-1.el9.x86_64.rpm) from Oracle Linux home:

https://yum.oracle.com/repo/OracleLinux/OL9/appstream/x86_64/.

Download Oracle Database 19c(19.3 zip version) for Linux x86-64 (LINUX.X64_193000_db_home.zip) from:

<https://www.oracle.com/database/technologies/oracle19c-linux-downloads.html>.

Download following patches from Oracle Support (MOS): <https://support.oracle.com>.

DATABASE RELEASE UPDATE 19.29.0.0.0 (Patch 38291812)

OJVM RELEASE UPDATE 19.27.0.0.0 (Patch 37499406)

OPatch utility 12.2.0.1.47 for DB 19.0.0.0.0(Jul 2025) (Patch 6880880)

Oracle Database 19c Installation

Case 1 - Installing Oracle Database 19c(rpm version) for x86-64 with patch 19.29.0.0.0

Pre-install the oracle-database-preinstall-19c EL9 version, and subsequently install the Oracle Database 19c rpm package. Ensure that all necessary dependencies and configurations are in place before installing the Oracle Database 19c RPM package.

1. Please make sure that the following packages are installed with SLES16.

```
-----  
bc  
binutils  
glibc  
glibc-devel  
insserv-compat  
libaio-devel  
libaio1  
libX11-6  
libXau6  
libXext-devel  
libXext6  
libXi-devel  
libXi6  
libXrender-devel  
libXrender1  
libXtst6  
libcap-ng-utils  
libcap-ng0  
libcap-progs  
libcap1  
libcap2  
libelf1  
libgcc_s1  
libjpeg8  
libpcap1  
libpcre1  
libpcre16-0  
libpng16-16  
libstdc++6  
libtiff6  
libgfortran5  
mksh  
make  
pixz  
rdma-core  
rdma-core-devel  
smartmontools  
sysstat  
xorg-x11-libs  
xz  
xdpyinfo  
+ libnsl-stub1 (Newly added in Beta3)  
-----
```

2. Installing “oracle-database-preinstall-19c-1.0-1.el9.x86_64.rpm”, then install the Oracle Database 19c rpm package.

```
# sudo rpm -ivh --nodeps oracle-database-preinstall-19c-1.0-1.el9.x86_64.rpm
```

```

oracle@c3n1-sles16vm:...e/ORACLE_SW/DB/19c
/home/ORACLE_SW/DB/19c

c3n1-sles16vm:/home/ORACLE_SW/DB/19c # rpm -ivh oracle-database-preinstall-19c-1.0-1.el9.x86_64.rpm
warning: oracle-database-preinstall-19c-1.0-1.el9.x86_64.rpm: Header V3 RSA/SHA256 Signature, key ID 8d8b756f: NOKEY
Y
error: Failed dependencies:
    /etc/redhat-release is needed by oracle-database-preinstall-19c-1.0-1.el9.x86_64
    initscripts is needed by oracle-database-preinstall-19c-1.0-1.el9.x86_64
    libgcc is needed by oracle-database-preinstall-19c-1.0-1.el9.x86_64
    libnsl is needed by oracle-database-preinstall-19c-1.0-1.el9.x86_64
    libstdc++ is needed by oracle-database-preinstall-19c-1.0-1.el9.x86_64
    util-linux-ng is needed by oracle-database-preinstall-19c-1.0-1.el9.x86_64
    xorg-x11-utils is needed by oracle-database-preinstall-19c-1.0-1.el9.x86_64
c3n1-sles16vm:/home/ORACLE_SW/DB/19c # rpm -ivh --nodeps oracle-database-preinstall-19c-1.0-1.el9.x86_64.rpm
warning: oracle-database-preinstall-19c-1.0-1.el9.x86_64.rpm: Header V3 RSA/SHA256 Signature, key ID 8d8b756f: NOKEY
Y
Verifying...                               ##### [100%]
Preparing...                               ##### [100%]
Updating / installing...
 1:oracle-database-preinstall-19c-1.##### [100%]
c3n1-sles16vm:/home/ORACLE_SW/DB/19c #

```

```
# sudo rpm -ivh oracle-database-ee-19c-1.0-1.x86_64.rpm
```

```

oracle@c3n1-sles16vm:...e/ORACLE_SW/DB/19c
/home/ORACLE_SW/DB/19c

c3n1-sles16vm:/home/ORACLE_SW/DB/19c # rpm -ivh oracle-database-ee-19c-1.0-1.x86_64.rpm
warning: oracle-database-ee-19c-1.0-1.x86_64.rpm: Header V3 RSA/SHA256 Signature, key ID ec551f03: NOKEY
Verifying...                               ##### [100%]
Preparing...                               ##### [100%]
Updating / installing...
 1:oracle-database-ee-19c-1.0-1##### [100%]
[INFO] Executing post installation scripts...
[INFO] Oracle home installed successfully and ready to be configured.
To configure a sample Oracle Database you can execute the following service configuration script as root: /etc/init
.d/oracledb_ORCLCDB-19c configure
c3n1-sles16vm:/home/ORACLE_SW/DB/19c #

```

3. Apply the following patches using the OPatch utility (version 12.2.0.1.47):

38291812(DATABASE RELEASE UPDATE 19.29.0.0.0)
37499406(OJVM RELEASE UPDATE 19.27.0.0.0)

```
# mv /opt/oracle/product/19c/dbhome_1/OPatch /opt/oracle/product/19c/dbhome_1/OPatch.bak
# unzip p6880880_190000_Linux-x86-64.zip-d /opt/oracle/product/19c/dbhome_1/
```

```
# $STAGE/38291812> /opt/oracle/product/19c/dbhome_1/OPatch/patch apply
```

```

oracle@c3n1-sles16vm:...RU_192900/38291812
/home/ORACLE_SW/DB/19c/DB_patch_RU_192900/38291812
oracle@c3n1-sles16vm:...RU_192900/38291812 x oracle@c3n1-sles16vm:...for_DB19c_Jul-2025 oracle@c3n1-sles16vm:...9c/dbhome_1/OPatch
oracle@c3n1-sles16vm:/home/ORACLE_SW/DB/19c/DB_patch_RU_192900/38291812> /opt/oracle/product/19c/dbhome_1/OPatch/patch apply
Oracle Interim Patch Installer version 12.2.0.1.47
Copyright (c) 2025, Oracle Corporation. All rights reserved.

Oracle Home      : /opt/oracle/product/19c/dbhome_1
Central Inventory : /opt/oracle/oraInventory
   from           : /opt/oracle/product/19c/dbhome_1/oraInst.loc
OPatch version    : 12.2.0.1.47
OUI version       : 12.2.0.7.0
Log file location : /opt/oracle/product/19c/dbhome_1/cfgtoollogs/patch/patch2025-10-22_17-37-22PM_1.log

Verifying environment and performing prerequisite checks...
OPatch continues with these patches: 38291812

Do you want to proceed? [y/n]
y
User Responded with: Y
All checks passed.

Please shutdown Oracle instances running out of this ORACLE_HOME on the local system.
(Oracle Home = '/opt/oracle/product/19c/dbhome_1')

Is the local system ready for patching? [y/n]
y
User Responded with: Y
Backing up files...
Applying interim patch '38291812' to OH '/opt/oracle/product/19c/dbhome_1'
ApplySession: Optional component(s) [ oracle.network.gsm, 19.0.0.0.0 ], [ oracle.assistants.asm, 19.0.0.0.0 ], [ oracle.crypto.rsrf, 19.0.0.0.0 ], [ oracle.pg4appc, 19.0.0.0.0 ], [ oracle.precomp.companion, 19.0.0.0.0 ], [ oracle.rdbms.ic, 19.0.0.0.0 ], [ oracle.rdbms.tg4db2, 19.0.0.0.0 ], [ oracle.sdo.companion, 19.0.0.0.0 ], [ oracle.tfa, 19.0.0.0.0 ], [ oracle.rdbms.tg4msql, 19.0.0.0.0 ], [ oracle.rdbms.tg4tera, 19.0.0.0.0 ], [ oracle.oid.client, 19.0.0.0.0 ], [ oracle.network.cman, 19.0.0.0.0 ], [ oracle.rdbms.tg4sybs, 19.0.0.0.0 ], [ or

```

```

oracle@c3n1-sles16vm:...RU_192900/38291812
/home/ORACLE_SW/DB/19c/DB_patch_RU_192900/38291812
oracle@c3n1-sles16vm:...RU_192900/38291812 x oracle@c3n1-sles16vm:...for_DB19c_Jul-2025 oracle@c3n1-sles16vm:...9c/dbhome_1/OPatch
Patching component oracle.nlsrtl.rsrf.core, 19.0.0.0.0...
Patching component oracle.nlsrtl.rsrf.ic, 19.0.0.0.0...
Patching component oracle.sqlj.sqljruntime, 19.0.0.0.0...
Patching component oracle.javavm.server, 19.0.0.0.0...
Patching component oracle.nlsrtl.rsrf.lbuilder, 19.0.0.0.0...
Patching component oracle.mgw.common, 19.0.0.0.0...
Patching component oracle.network.listener, 19.0.0.0.0...
Patching component oracle.rdbms.dv, 19.0.0.0.0...
Patching component oracle.sdo.locator, 19.0.0.0.0...
Patching component oracle.rdbms.hs.common, 19.0.0.0.0...
Patching component oracle.precomp.common, 19.0.0.0.0...
Patching component oracle.precomp.lang, 19.0.0.0.0...
Patching component oracle.jdk, 1.8.0.201.0...
Patch 38291812 successfully applied.
Sub-set patch [29517242] has become inactive due to the application of a super-set patch [38291812].
Please refer to Doc ID 2161861.1 for any possible further required actions.
Log file location: /opt/oracle/product/19c/dbhome_1/cfgtoollogs/patch/patch2025-10-22_17-37-22PM_1.log

OPatch succeeded.
oracle@c3n1-sles16vm:/home/ORACLE_SW/DB/19c/DB_patch_RU_192900/38291812>

```

```
# $STAGE/37499406> /opt/oracle/product/19c/dbhome_1/OPatch/opatch apply
```

```
oracle@c3n1-sles16vm:...RU_192700/37499406
/home/ORACLE_SW/DB/19c/OJVM_patch_RU_192700/37499406

oracle@c3n1-sles16vm:...RU_192700/37499406 x oracle@c3n1-sles16vm:...for_DB19c_Jul-2025 oracle@c3n1-sles16vm:...9c/dbhome_1/OPatch

oracle@c3n1-sles16vm:/home/ORACLE_SW/DB/19c/OJVM_patch_RU_192700/37499406> /opt/oracle/product/19c/dbhome_1/OPatch/opatch apply
Oracle Interim Patch Installer version 12.2.0.1.47
Copyright (c) 2025, Oracle Corporation. All rights reserved.

Oracle Home      : /opt/oracle/product/19c/dbhome_1
Central Inventory : /opt/oracle/oraInventory
   from           : /opt/oracle/product/19c/dbhome_1/oraInst.loc
OPatch version    : 12.2.0.1.47
OUI version       : 12.2.0.7.0
Log file location : /opt/oracle/product/19c/dbhome_1/cfgtoollogs/patch/patch2025-10-22_17-47-27PM_1.log

Verifying environment and performing prerequisite checks...
OPatch continues with these patches: 37499406

Do you want to proceed? [y|n]
y
User Responded with: Y
All checks passed.

Please shutdown Oracle instances running out of this ORACLE_HOME on the local system.
(Oracle Home = '/opt/oracle/product/19c/dbhome_1')

Is the local system ready for patching? [y|n]
y
User Responded with: Y
Backing up files...
Applying interim patch '37499406' to OH '/opt/oracle/product/19c/dbhome_1'

Patching component oracle.javavm.server, 19.0.0.0.0...

Patching component oracle.javavm.server.core, 19.0.0.0.0...
```

```
oracle@c3n1-sles16vm:...RU_192700/37499406
/home/ORACLE_SW/DB/19c/OJVM_patch_RU_192700/37499406

oracle@c3n1-sles16vm:...RU_192700/37499406 x oracle@c3n1-sles16vm:...for_DB19c_Jul-2025 oracle@c3n1-sles16vm:...9c/dbhome_1/OPatch

Verifying environment and performing prerequisite checks...
OPatch continues with these patches: 37499406

Do you want to proceed? [y|n]
y
User Responded with: Y
All checks passed.

Please shutdown Oracle instances running out of this ORACLE_HOME on the local system.
(Oracle Home = '/opt/oracle/product/19c/dbhome_1')

Is the local system ready for patching? [y|n]
y
User Responded with: Y
Backing up files...
Applying interim patch '37499406' to OH '/opt/oracle/product/19c/dbhome_1'

Patching component oracle.javavm.server, 19.0.0.0.0...

Patching component oracle.javavm.server.core, 19.0.0.0.0...

Patching component oracle.rdbms.dbscripts, 19.0.0.0.0...

Patching component oracle.rdbms, 19.0.0.0.0...

Patching component oracle.javavm.client, 19.0.0.0.0...
Patch 37499406 successfully applied.
Log file location: /opt/oracle/product/19c/dbhome_1/cfgtoollogs/patch/patch2025-10-22_17-47-27PM_1.log

OPatch succeeded.
oracle@c3n1-sles16vm:/home/ORACLE_SW/DB/19c/OJVM_patch_RU_192700/37499406>
```

4. Check and ensure the successful installation of the above patches.

```
oracle@c3n1-sles16vm:...9c/dbhome_1/OPatch
~/product/19c/dbhome_1/OPatch
oracle@c3n1-sles16vm:...RU_192700/37499406 | oracle@c3n1-sles16vm:...for_DB19c_Jul-2025 | oracle@c3n1-sles16vm:...9c/dbhome_1/OPatch x
oracle@c3n1-sles16vm:~/product/19c/dbhome_1/OPatch> ./opatch lspatches
37499406;OJVM RELEASE UPDATE: 19.27.0.0.250415 (37499406)
38291812;Database Release Update : 19.29.0.0.251021 (38291812)
29585399;OCW RELEASE UPDATE 19.3.0.0.0 (29585399)
OPatch succeeded.
oracle@c3n1-sles16vm:~/product/19c/dbhome_1/OPatch> |
```

5. Using DBCA to create a database.

1). Select Database Operation.

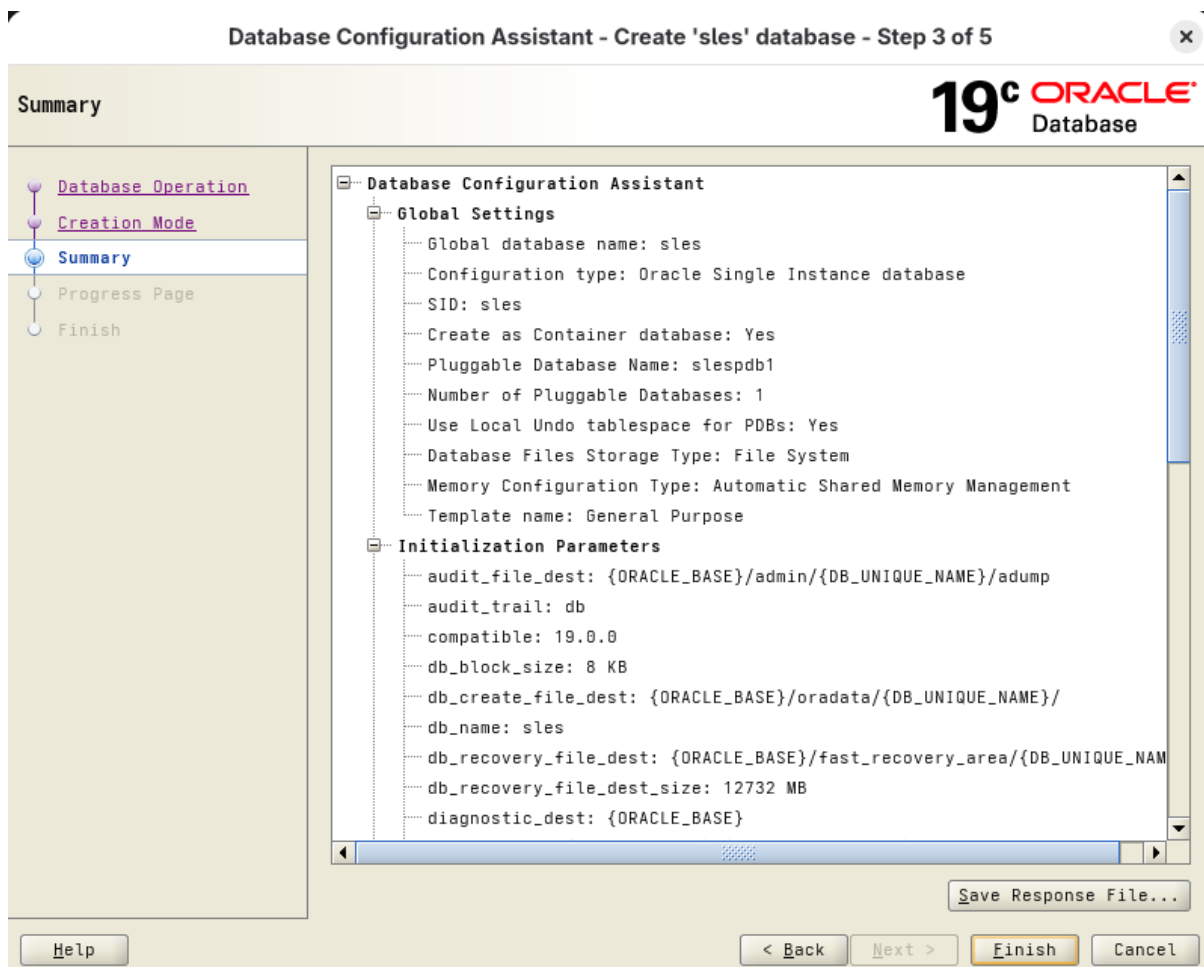


Select Create a database, then click **Next** to continue.

2). Select Database Creation Mode.

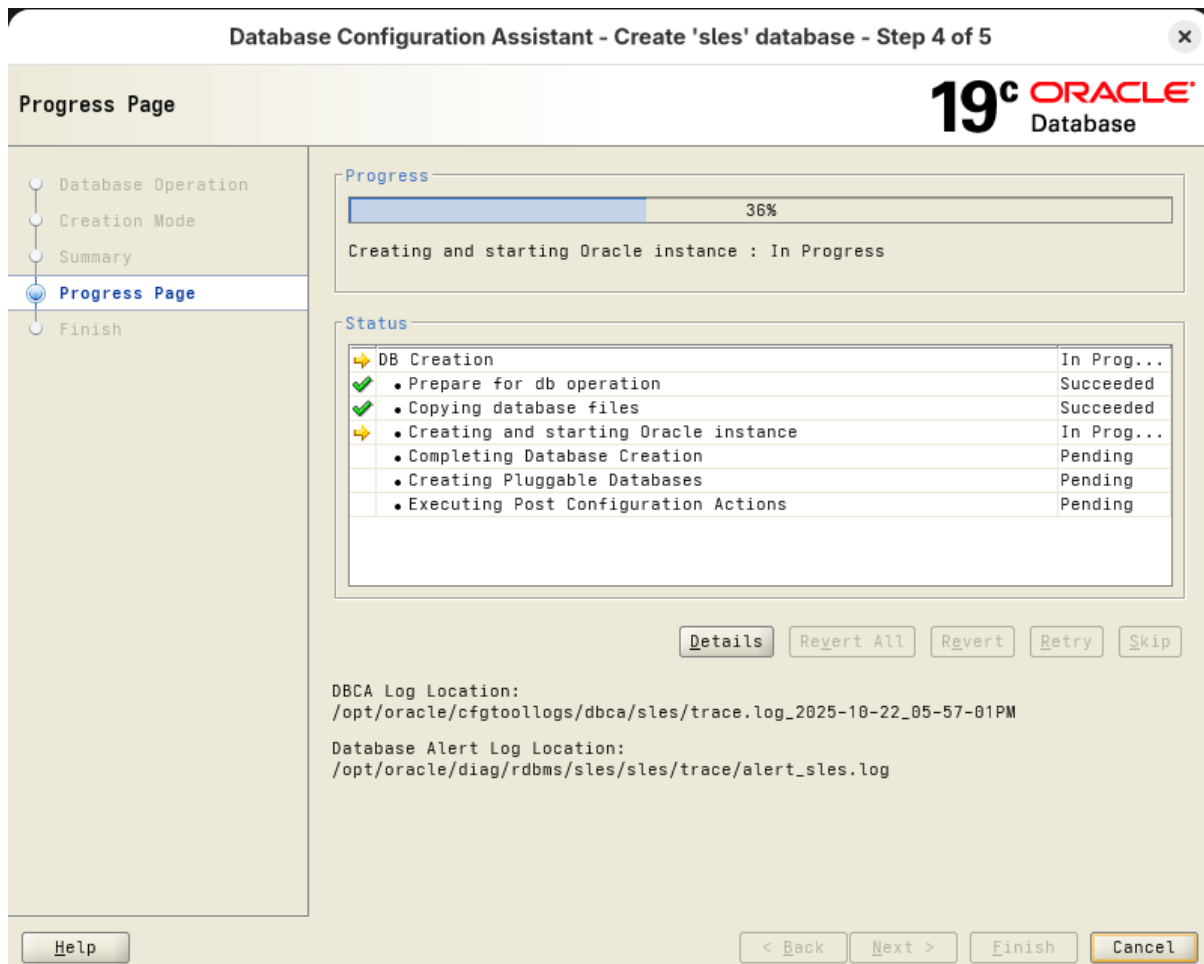
Select option "**Typical configuration**" and fill in administrator password. Then, click **Next** to continue.

3). Summary.



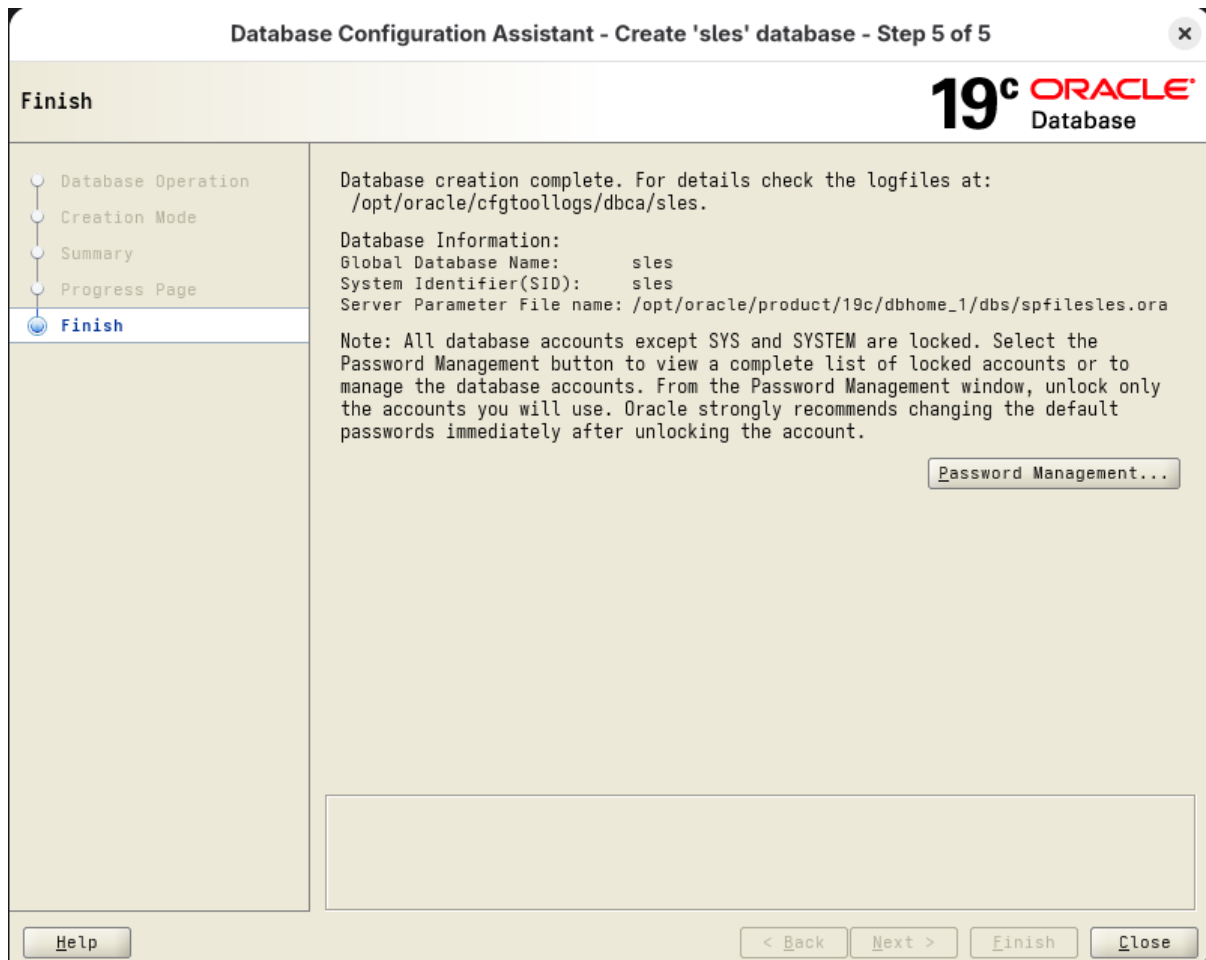
Database Configuration Summary as shown above, review the information, then click **Finish** to continue.

4). Progress Page.



Database creating progress as shown above, waiting until the creation is complete.

5). Finish.



Database creation complete, some details as shown above. Click **Close** to dismiss the screen.

6. Oracle Database 19c(19.26.0.0.0) Post-Install Checks

1). Checking database status

```
oracle@c3n1-sles16vm:~> export ORACLE_HOME=/opt/oracle/product/19c/dbhome_1/
oracle@c3n1-sles16vm:~> export ORACLE_SID=sles
oracle@c3n1-sles16vm:~> /opt/oracle/product/19c/dbhome_1/bin/sqlplus /nolog

SQL*Plus: Release 19.0.0.0.0 - Production on Wed Oct 22 18:41:57 2025
Version 19.29.0.0.0

Copyright (c) 1982, 2025, Oracle. All rights reserved.

SQL> conn sys/[REDACTED]@c3n1-sles16vm:1521/sles as sysdba
Connected.
SQL> show sga

Total System Global Area 1.5167E+10 bytes
Fixed Size 18666064 bytes
Variable Size 2113929216 bytes
Database Buffers 1.3019E+10 bytes
Redo Buffers 14884864 bytes
SQL> show pdbs

  CON_ID CON_NAME                                OPEN MODE RESTRICTED
  -----
         2 PDB$SEED                                READ ONLY NO
         3 SLES PDB1                             READ WRITE NO
SQL> exec DBMS_XDB_CONFIG.SETHTTPSPORT(5500);

PL/SQL procedure successfully completed.

SQL> exit
Disconnected from Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.29.0.0.0
oracle@c3n1-sles16vm:~> █
```

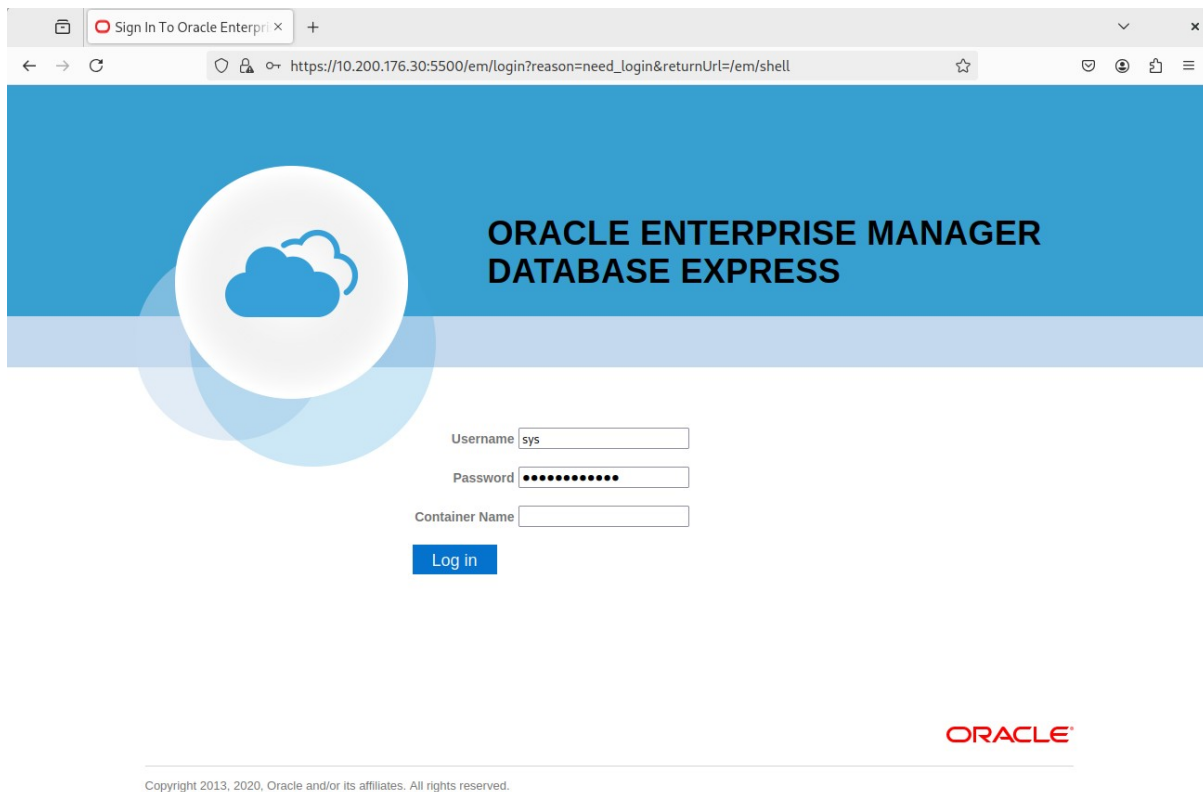
```
oracle@c3n1-sles16vm:~> /opt/oracle/product/19c/dbhome_1/bin/lsnrctl status

LSNRCTL for Linux: Version 19.0.0.0.0 - Production on 22-OCT-2025 18:44:31

Copyright (c) 1991, 2025, Oracle. All rights reserved.

Connecting to (ADDRESS=(PROTOCOL=tcp)(HOST=)(PORT=1521))
STATUS of the LISTENER
-----
Alias                LISTENER
Version              TNSLSNR for Linux: Version 19.0.0.0.0 - Production
Start Date           22-OCT-2025 18:40:54
Uptime                0 days 0 hr. 3 min. 37 sec
Trace Level           off
Security              ON: Local OS Authentication
SNMP                 OFF
Listener Log File     /opt/oracle/diag/tnslsnr/c3n1-sles16vm/listener/alert/log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=c3n1-sles16vm)(PORT=1521)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=c3n1-sles16vm)(PORT=5500))(Security=(my_wallet_directory=/opt/oracle/admin/sles/xdw_wallet))(Presentation=HTTP)(Session=RAW))
Services Summary...
Service "41bde927c49f20ffe0631eb0c80a5bc4" has 1 instance(s).
  Instance "sles", status READY, has 1 handler(s) for this service...
Service "86b637b62fd7a65e053f706e80a27ca" has 1 instance(s).
  Instance "sles", status READY, has 1 handler(s) for this service...
Service "sles" has 1 instance(s).
  Instance "sles", status READY, has 1 handler(s) for this service...
Service "slesXDB" has 1 instance(s).
  Instance "sles", status READY, has 1 handler(s) for this service...
Service "slespdb1" has 1 instance(s).
  Instance "sles", status READY, has 1 handler(s) for this service...
The command completed successfully
oracle@c3n1-sles16vm:~> █
```

2). Access to Oracle Enterprise Manager.



Sign In To Oracle Enterprise Manager

https://10.200.176.30:5500/em/login?reason=need_login&returnUrl=/em/shell

ORACLE ENTERPRISE MANAGER
DATABASE EXPRESS

Username

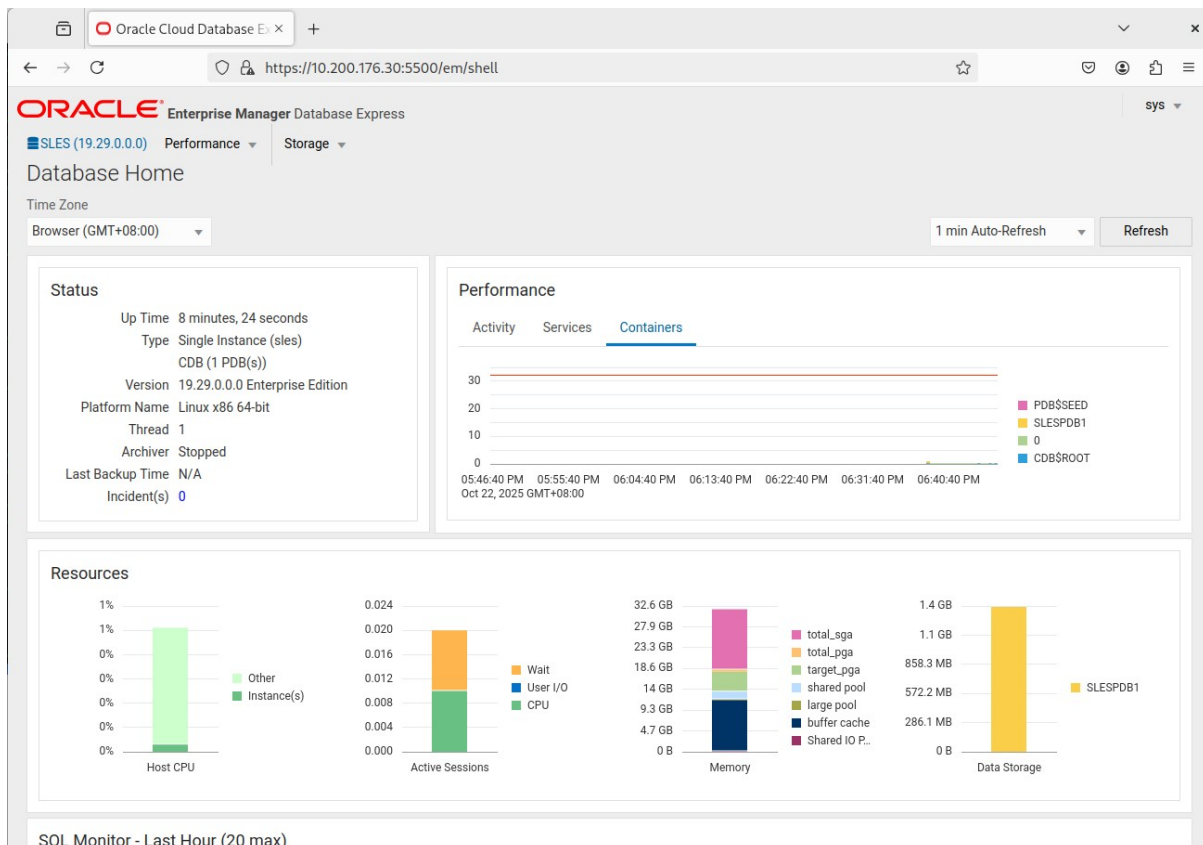
Password

Container Name

[Log in](#)

ORACLE

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Case 2 - Installing Oracle Database 19c(zip version) for x86-64 with patch 19.29.0.0.0

1. Please make sure that the following packages are installed with SLES16.

```
-----  
bc  
binutils  
glibc  
glibc-devel  
insserv-compat  
libaio-devel  
libaio1  
libX11-6  
libXau6  
libXext-devel  
libXext6  
libXi-devel  
libXi6  
libXrender-devel  
libXrender1  
libXtst6  
libcap-ng-utils  
libcap-ng0  
libcap-progs  
libcap1  
libcap2  
libelf1  
libgcc_s1  
libjpeg8  
libpcap1  
libpcre1  
libpcre16-0  
libpng16-16  
libstdc++6  
libtiff6  
libgfortran5  
mksh  
make  
pixz  
rdma-core  
rdma-core-devel  
smartmontools  
sysstat  
xorg-x11-libs  
xz  
xdpyinfo  
+ libnsl-stub1 (Newly added in Beta3)  
-----
```

2. Installing Oracle Database 19c(zip version).

2-1. Extract LINUX.X64_193000_db_home.zip and replace the OPatch directory located in the Database 19.3 ShipHome with OPatch version 12.2.0.1.47.

```
# mv /opt/oracle/db_19c/OPatch /opt/oracle/db_19c/OPatch.bak
# unzip p6880880_190000_Linux-x86-64.zip -d /opt/oracle/db_19c/
```

2-2. Launch the Oracle Universal Installer (runInstaller) from the Database ShipHome.

```
# export CV_ASSUME_DISTID=SLES16;
```

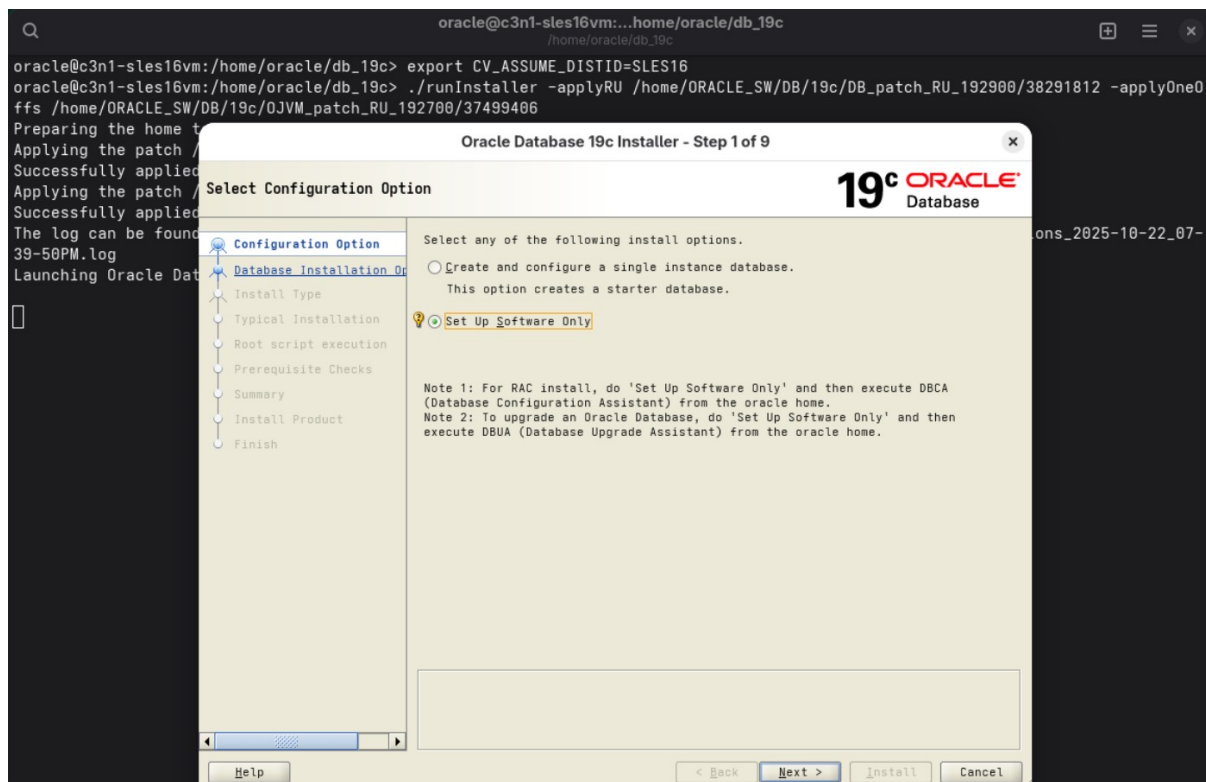
Then, launch the Oracle Universal Installer(runInstaller) from the Database ShipHome with the parameters to apply the required patches:

```
-applyRU $STAGE/38291812
-applyOneOffs $STAGE/37499406
```

These parameters will apply the recommended 19.29.0.0.0 DB release updates (RUs) and 19.27.0.0.0 OJVM one-off patches to the database.

Install Flow:

1). Select Configuration Option.



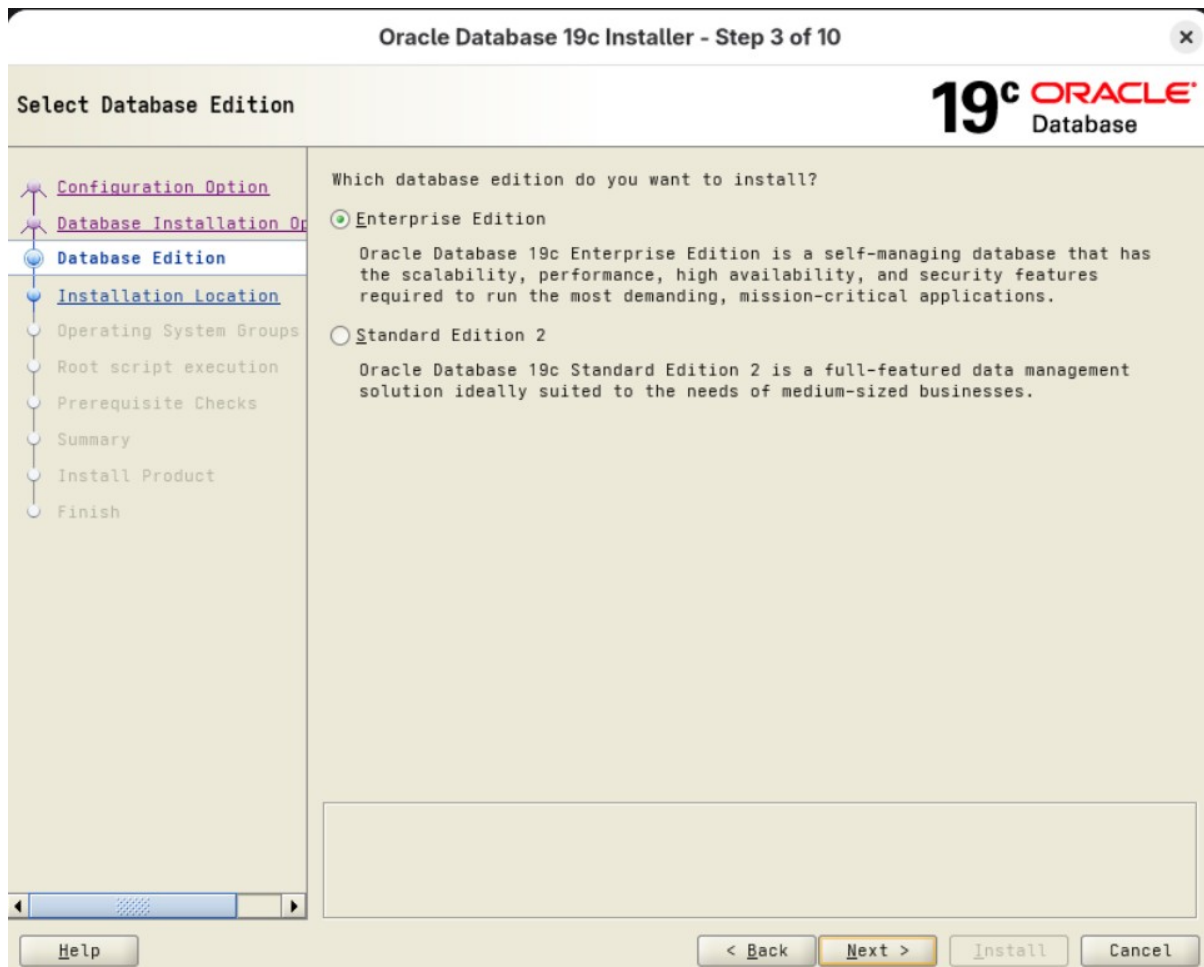
Select option "**Set Up Software Only**", then click **Next** to continue.

2). Select Database Installation Option.



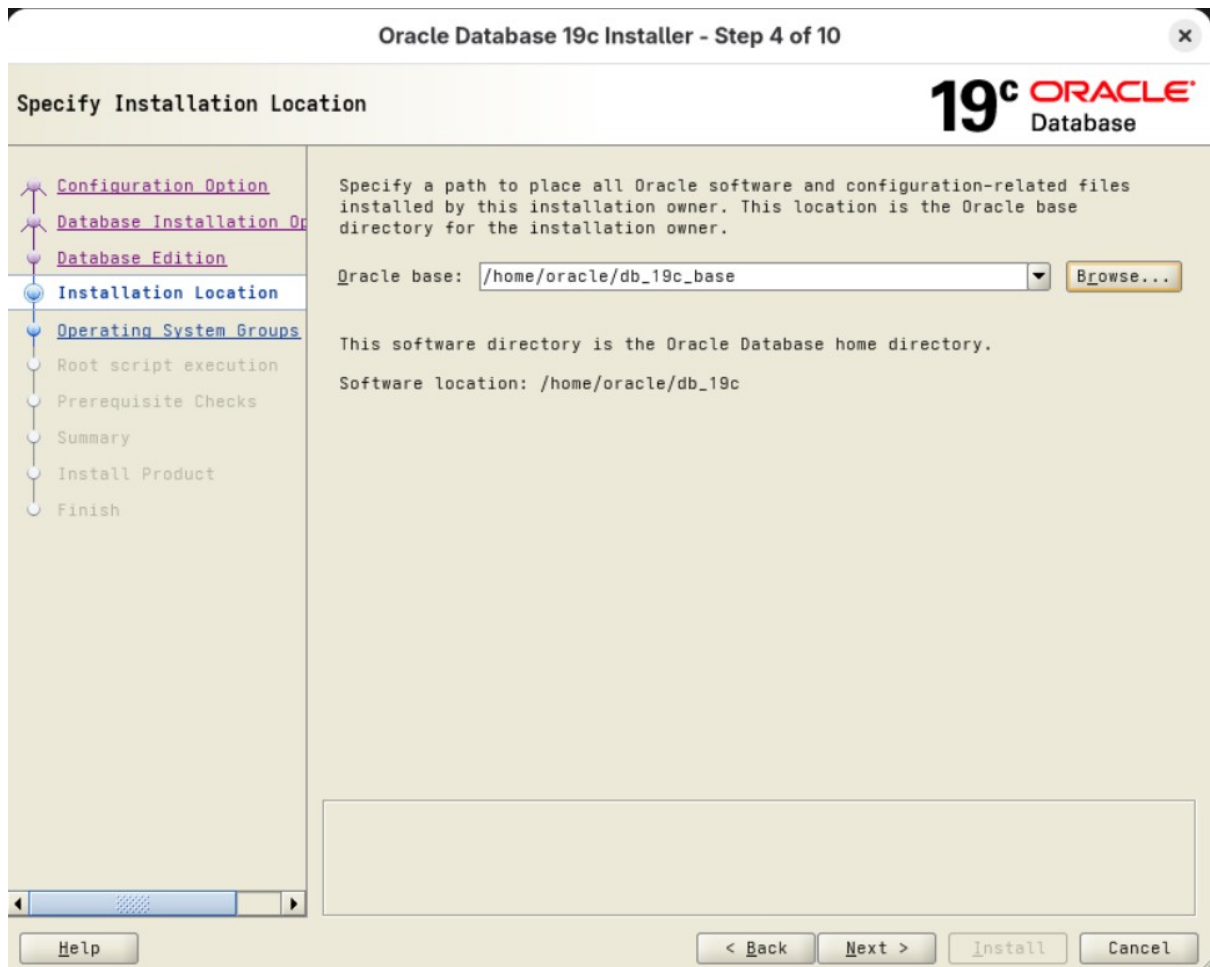
Choose option "**Single instance database installation**", then click **Next** to continue.

3). Select Database Edition.



Choose option "**Enterprise Edition**", then click **Next** to continue.

4). Specify Installation Location.



Fill in **Oracle base** as shown above, then click **Next** to continue.

5). Privileged Operating System groups.

Oracle Database 19c Installer - Step 5 of 10

Privileged Operating System groups

19c ORACLE Database

SYS privileges are required to create a database using operating system (OS) authentication. Membership in OS Groups grants the corresponding SYS privilege, eg. membership in OSDBA grants the SYSDBA privilege.

Database Administrator (OSDBA) group:	dba
Database Operator (OSOPER) group (Optional):	oper
Database Backup and Recovery (OSBACKUPDBA) group:	backupdba
Data Guard administrative (OSDGDBA) group:	dgdba
Encryption Key Management administrative (OSKMDBA) group:	kmdba
Real Application Cluster administrative (OSRACDBA) group:	racdba

Help < Back Next > Install Cancel

Selected by default, then click **Next** to continue.

6). Root script execution configuration.

The screenshot shows the 'Oracle Database 19c Installer - Step 6 of 10' window. The title bar includes the Oracle logo and 'Database'. The main window has a sidebar on the left with a tree view of installation steps: Configuration Option, Database Installation Options, Database Edition, Installation Location, Operating System Groups, Root script execution (selected), Prerequisite Checks, Summary, Install Product, and Finish. The main area is titled 'Root script execution configuration'. It contains a text block explaining that certain operations must be performed as the 'root' user and can be automated. Below this, there is a checkbox 'Automatically run configuration scripts' which is checked. Two radio buttons are present: 'Use "root" user credential' (selected) and 'Use sudo'. The 'Use "root" user credential' option has a 'Password' field with a masked password '*****'. The 'Use sudo' option has a 'Program path' field with '/usr/bin/sudo' and a 'Browse...' button, a 'User name' field with 'oracle', and a 'Password' field. At the bottom, there are buttons for 'Help', '< Back', 'Next >', 'Install', and 'Cancel'.

Oracle Database 19c Installer - Step 6 of 10

Root script execution configuration

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 Browse...

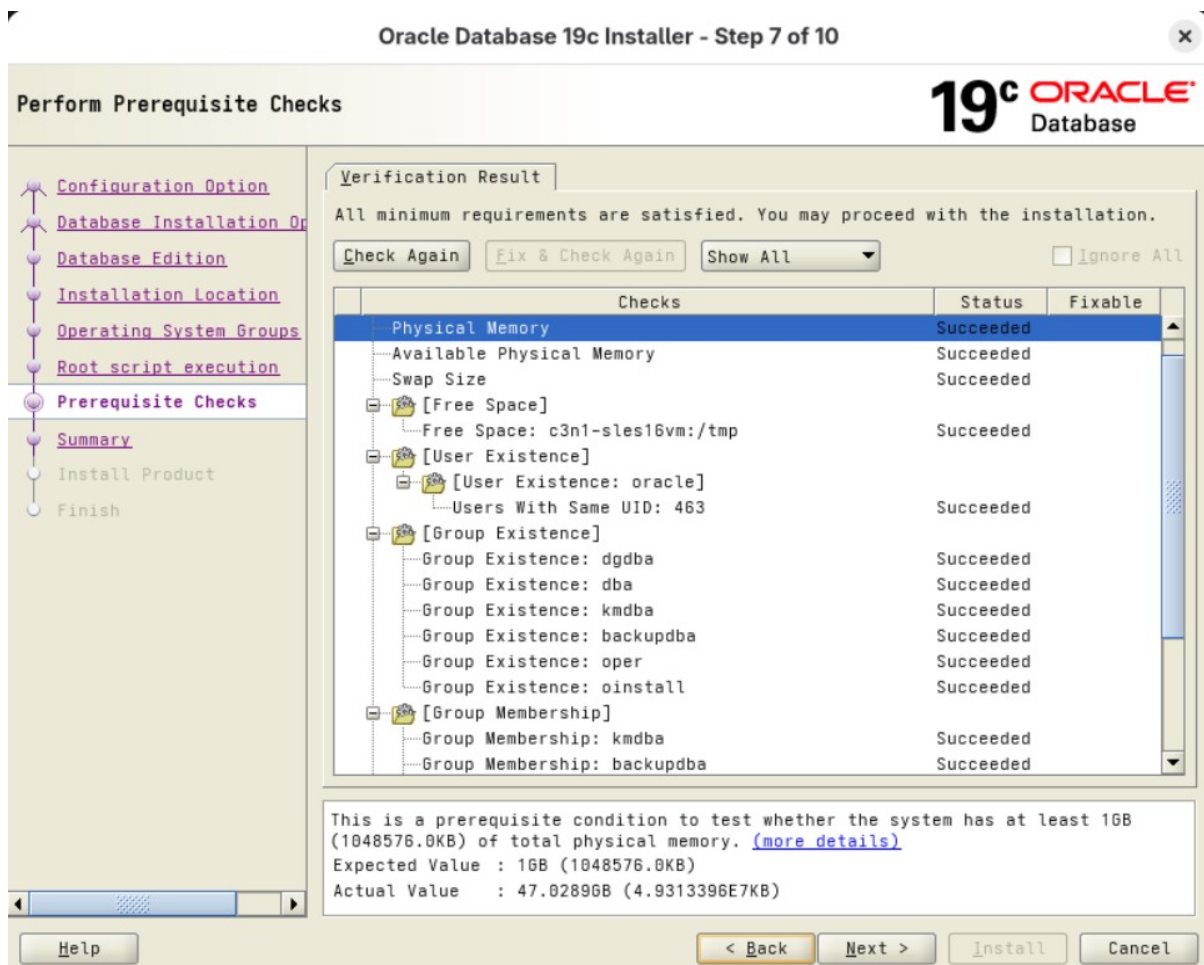
User name : oracle

Password :

Help < Back Next > Install Cancel

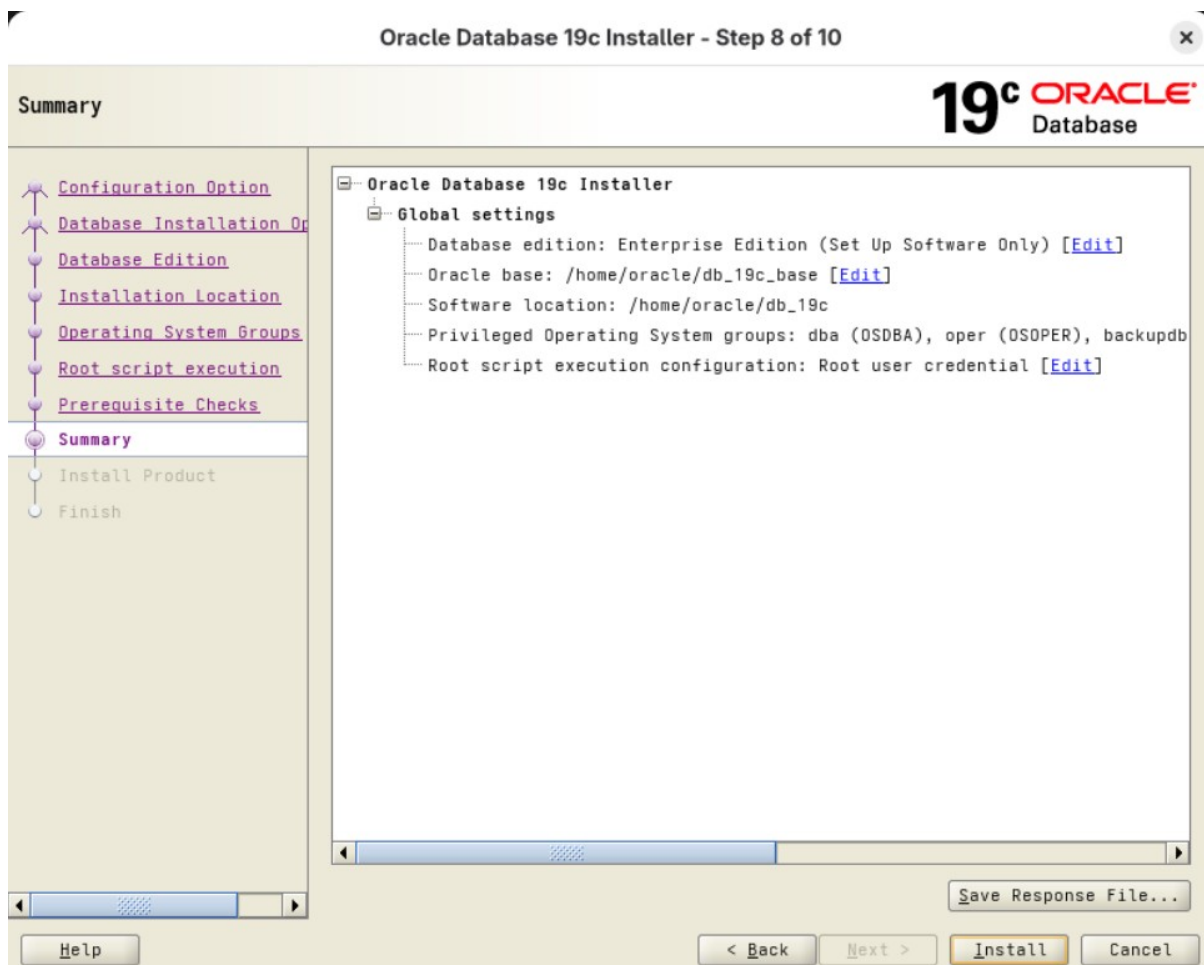
If select the option **Automatically run configuration scripts**, enter the credentials for the root user or a sudo account. Alternatively, run the scripts manually as the root user at the installation process when prompted by the installer. Click **Next** to continue.

7). Perform Prerequisite Checks.



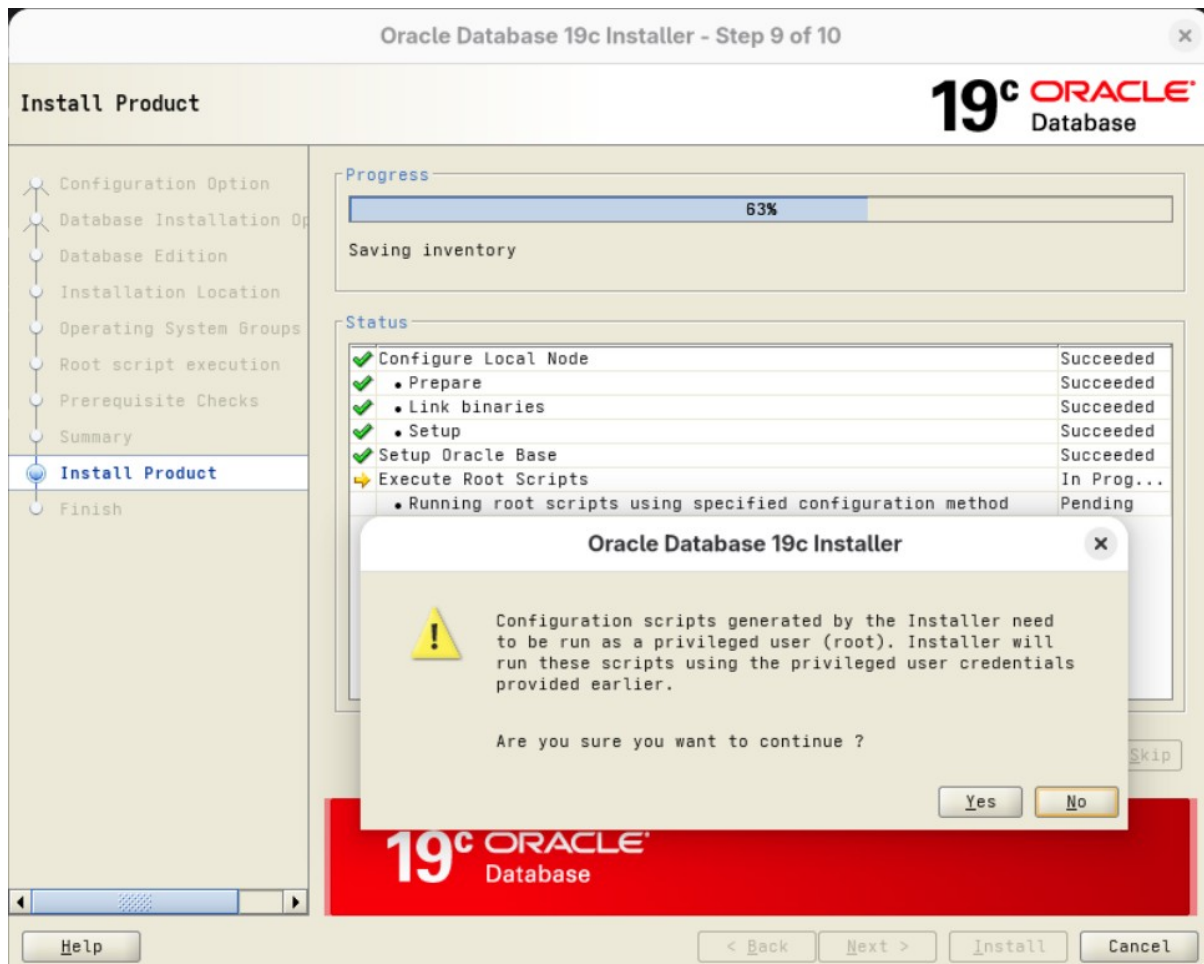
Perform Pre-Check as shown above. Select **Ignore All**, then click **Next** to continue.

8). Summary.



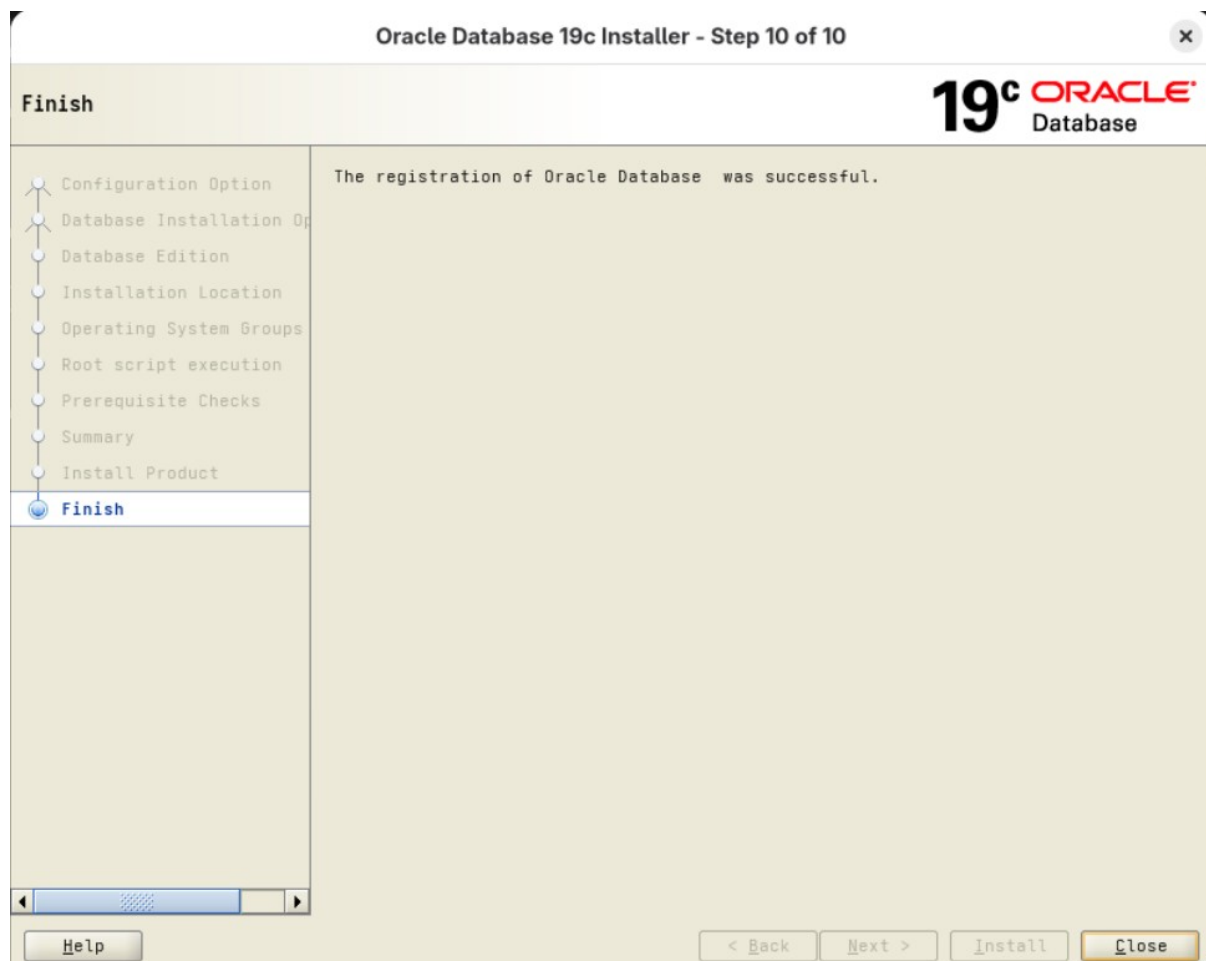
Installation Summary as shown above, click **Install** to continue.

9). Install Product.



Installer prompted you to run the root.sh scripts. Click **Yes** to continue. Monitoring the installation until the Finish window appears.

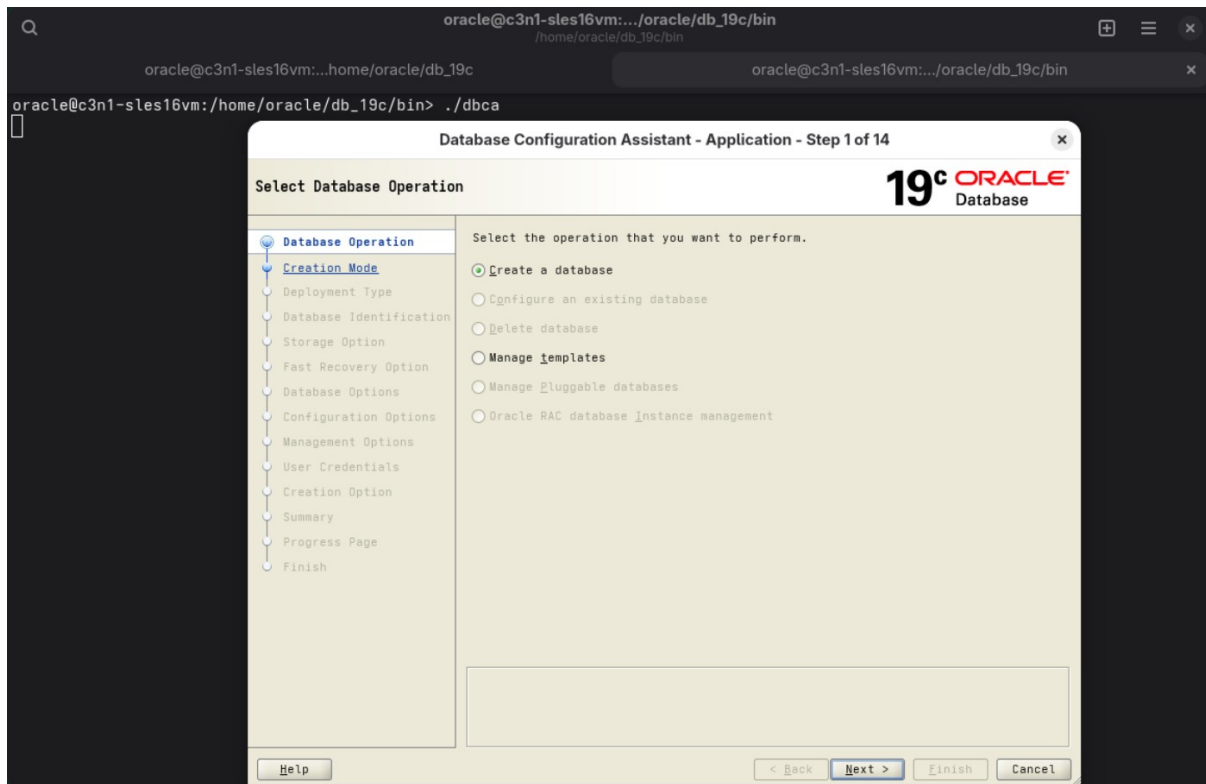
10). Finish



The installation of Oracle Database is finished, click **Close** to dismiss the screen.

3. Using DBCA to create a database.

1). Select Database Operation.



Select Create a database, then click **Next** to continue.

2). Select Database Creation Mode.

Database Configuration Assistant - Create a database - Step 2 of 14

Select Database Creation Mode

19c ORACLE Database

Database Operation

Creation Mode

Deployment Type

Database Identification

Storage Option

Fast Recovery Option

Database Options

Configuration Options

Management Options

User Credentials

Creation Option

Summary

Progress Page

Finish

Typical configuration

Global database name: suse

Storage type: File System

Database files location: {ORACLE_BASE}/oradata/{DB_UNIQUE_NAME} Browse...

Fast Recovery Area (FRA): {ORACLE_BASE}/fast_recovery_area/{DB} Browse...

Database character set: AL32UTF8 - Unicode UTF-8 Universal character set

Administrative password:

Confirm password:

☒ Create as Container database

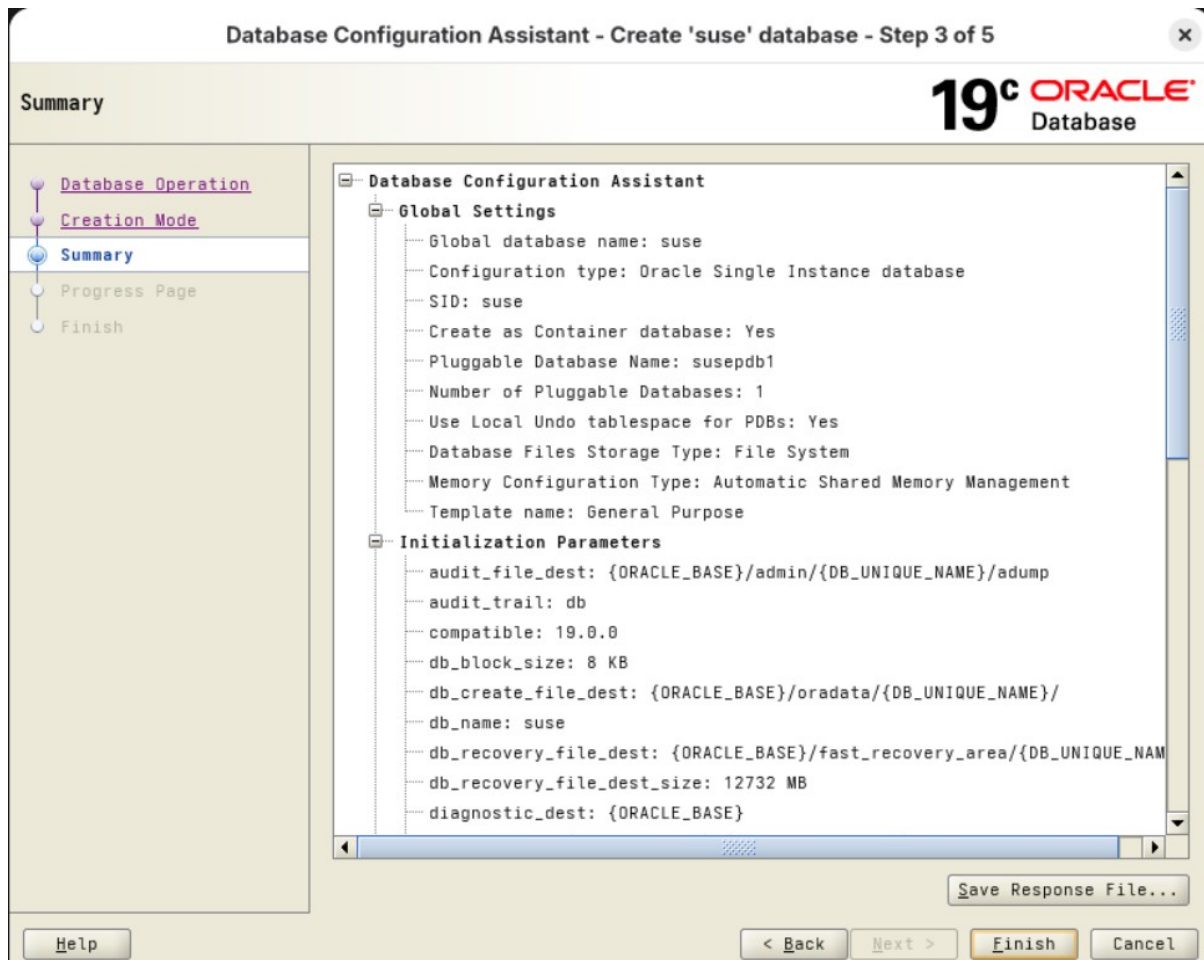
Pluggable database name: susepdb1

Advanced configuration

Help < Back Next > Finish Cancel

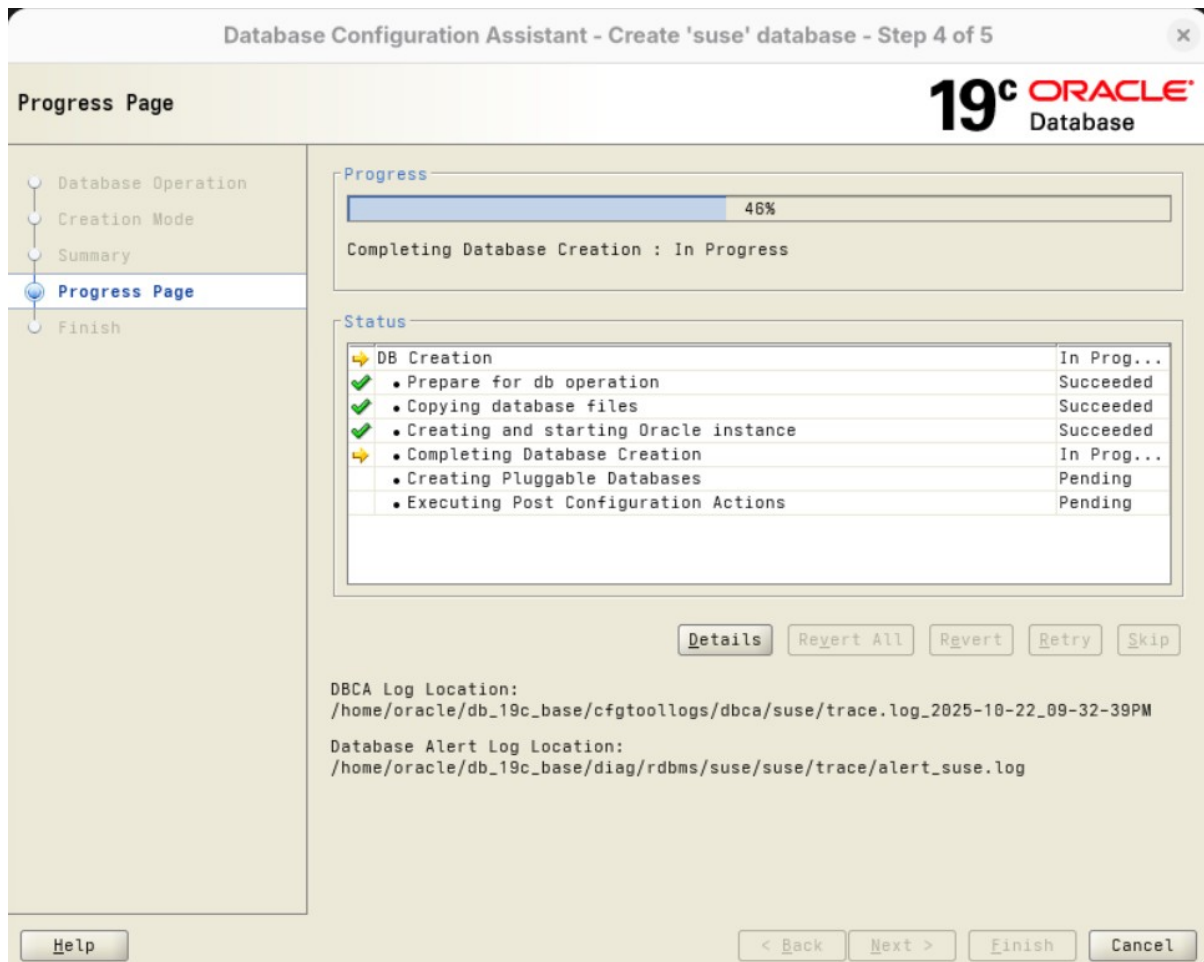
Select option "**Typical configuration**" and fill in administrator password. Then, click **Next** to continue.

3). Summary.



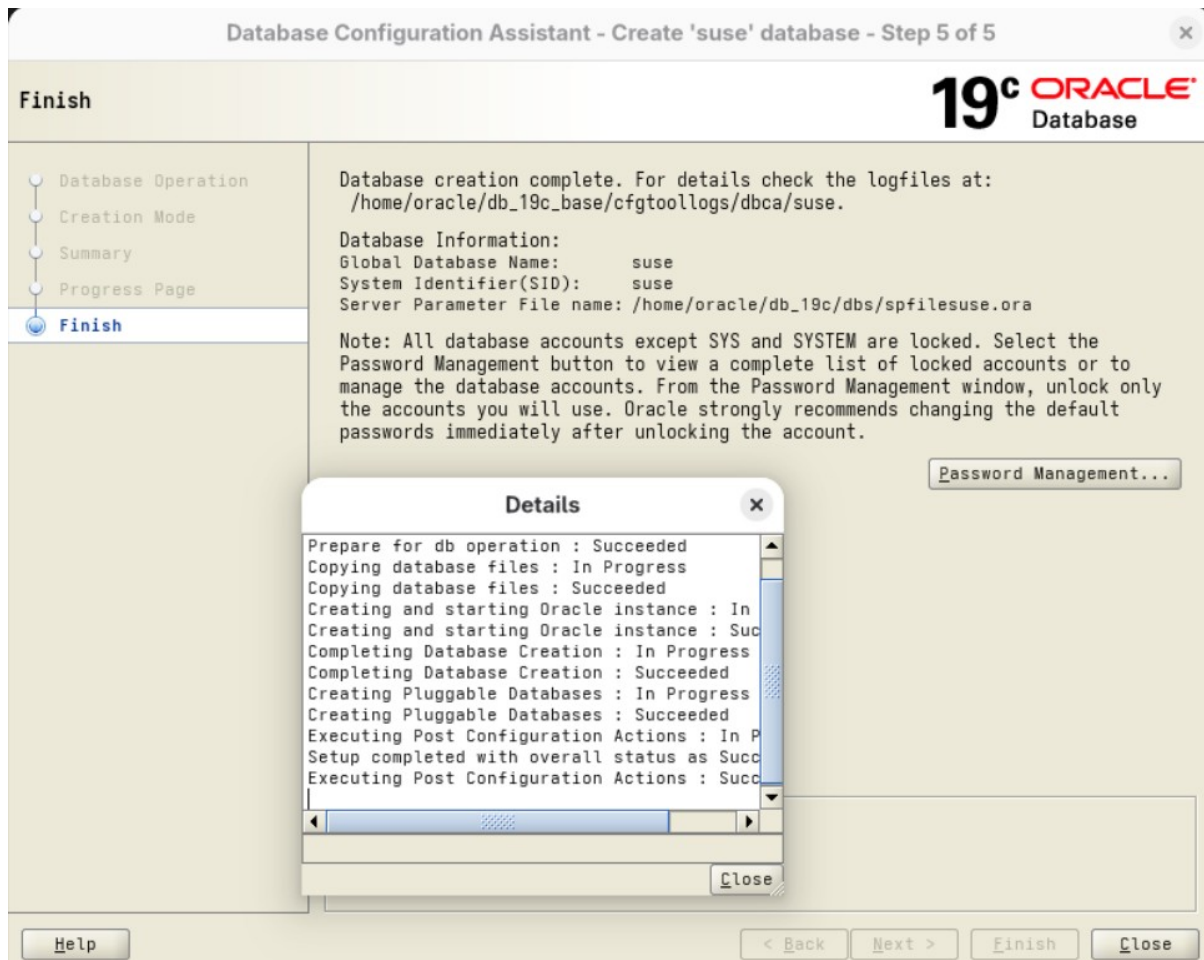
Database Configuration Summary as shown above, review the information, then click **Finish** to continue.

4). Progress Page.



Database creating progress as shown above, waiting until the creation is complete.

5). Finish.



Database creation complete, some details as shown above. Click **Close** to dismiss the screen.

4. Oracle Database 19c(19.26.0.0.0) Post-Install Checks

1. Checking database status

```
oracle@c3n1-sles16vm:~> export ORACLE_HOME=/home/oracle/db_19c
oracle@c3n1-sles16vm:~> export ORACLE_SID=suse
oracle@c3n1-sles16vm:~> /home/oracle/db_19c/bin/sqlplus /nolog

SQL*Plus: Release 19.0.0.0.0 - Production on Wed Oct 22 23:03:43 2025
Version 19.29.0.0.0

Copyright (c) 1982, 2025, Oracle. All rights reserved.

SQL> conn /as sysdba
Connected.
SQL> show sga

Total System Global Area 1.5167E+10 bytes
Fixed Size 18666064 bytes
Variable Size 2113929216 bytes
Database Buffers 1.3019E+10 bytes
Redo Buffers 14884864 bytes
SQL> show pdbs

      CON_ID CON_NAME                                OPEN MODE RESTRICTED
-----
          2 PDB$SEED                                READ ONLY NO
          3 SUSEPDB1                                READ WRITE NO
SQL> exec DBMS_XDB_CONFIG.SETHTTPSPORT(5500);

PL/SQL procedure successfully completed.

SQL> exit
Disconnected from Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.29.0.0.0
oracle@c3n1-sles16vm:~> █
```

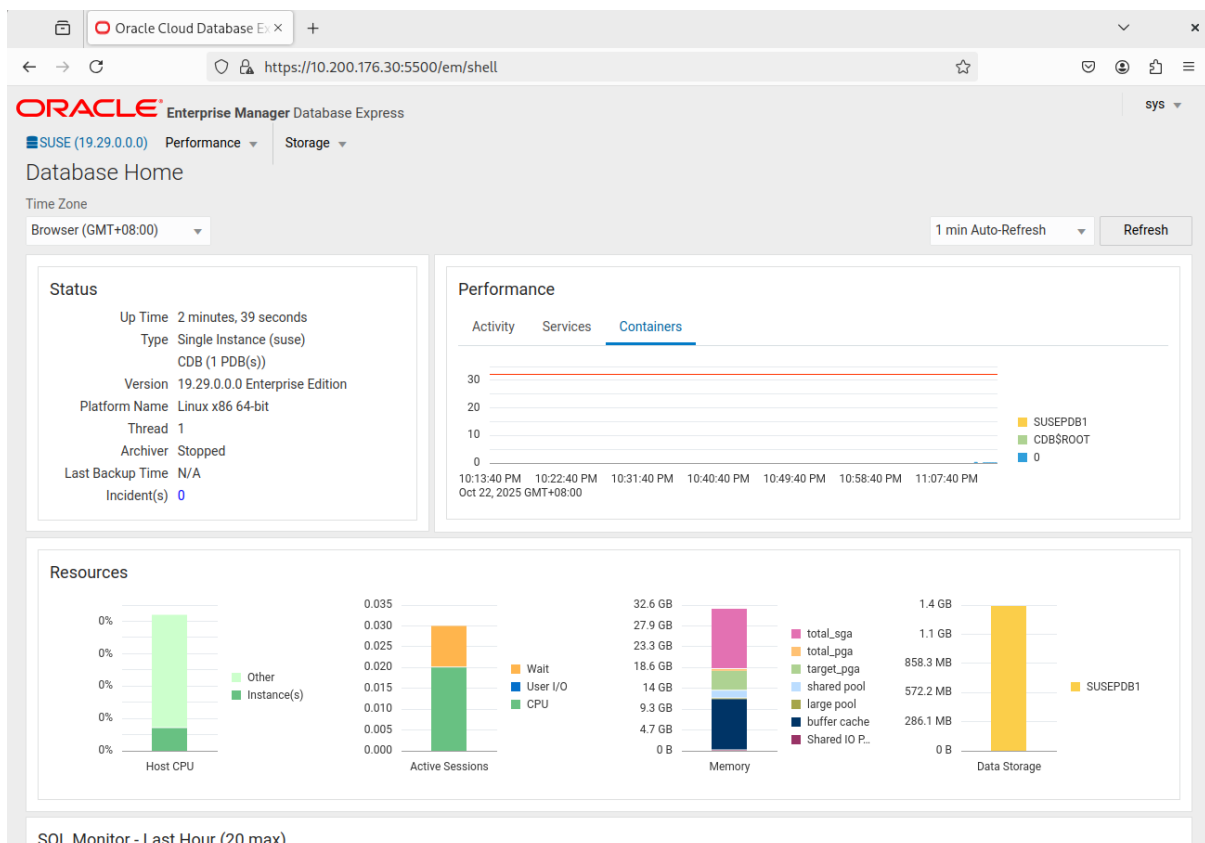
```
oracle@c3n1-sles16vm:~> /home/oracle/db_19c/bin/lsnrctl status

LSNRCTL for Linux: Version 19.0.0.0.0 - Production on 22-OCT-2025 23:05:18

Copyright (c) 1991, 2025, Oracle. All rights reserved.

Connecting to (ADDRESS=(PROTOCOL=tcp)(HOST=)(PORT=1521))
STATUS of the LISTENER
-----
Alias                     LISTENER
Version                   TNSLSNR for Linux: Version 19.0.0.0.0 - Production
Start Date                22-OCT-2025 22:38:35
Uptime                    0 days 0 hr. 26 min. 43 sec
Trace Level               off
Security                  ON: Local OS Authentication
SNMP                      OFF
Listener Log File         /home/oracle/db_19c_base/diag/tnslsnr/c3n1-sles16vm/listener/alert/log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=c3n1-sles16vm)(PORT=1521)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcps)(HOST=c3n1-sles16vm)(PORT=5500))(Presentation=HTTP)(Session=RAW))
Services Summary...
Service "41c0ed5342c24006e0631eb0c80a4a76" has 1 instance(s).
  Instance "suse", status READY, has 1 handler(s) for this service...
Service "86b637b62fdf7a65e053f706e80a27ca" has 1 instance(s).
  Instance "suse", status READY, has 1 handler(s) for this service...
Service "suse" has 1 instance(s).
  Instance "suse", status READY, has 1 handler(s) for this service...
Service "suseXDB" has 1 instance(s).
  Instance "suse", status READY, has 1 handler(s) for this service...
Service "susepdb1" has 1 instance(s).
  Instance "suse", status READY, has 1 handler(s) for this service...
The command completed successfully
oracle@c3n1-sles16vm:~> █
```

2. Access to Oracle Enterprise Manager.



Troubleshooting

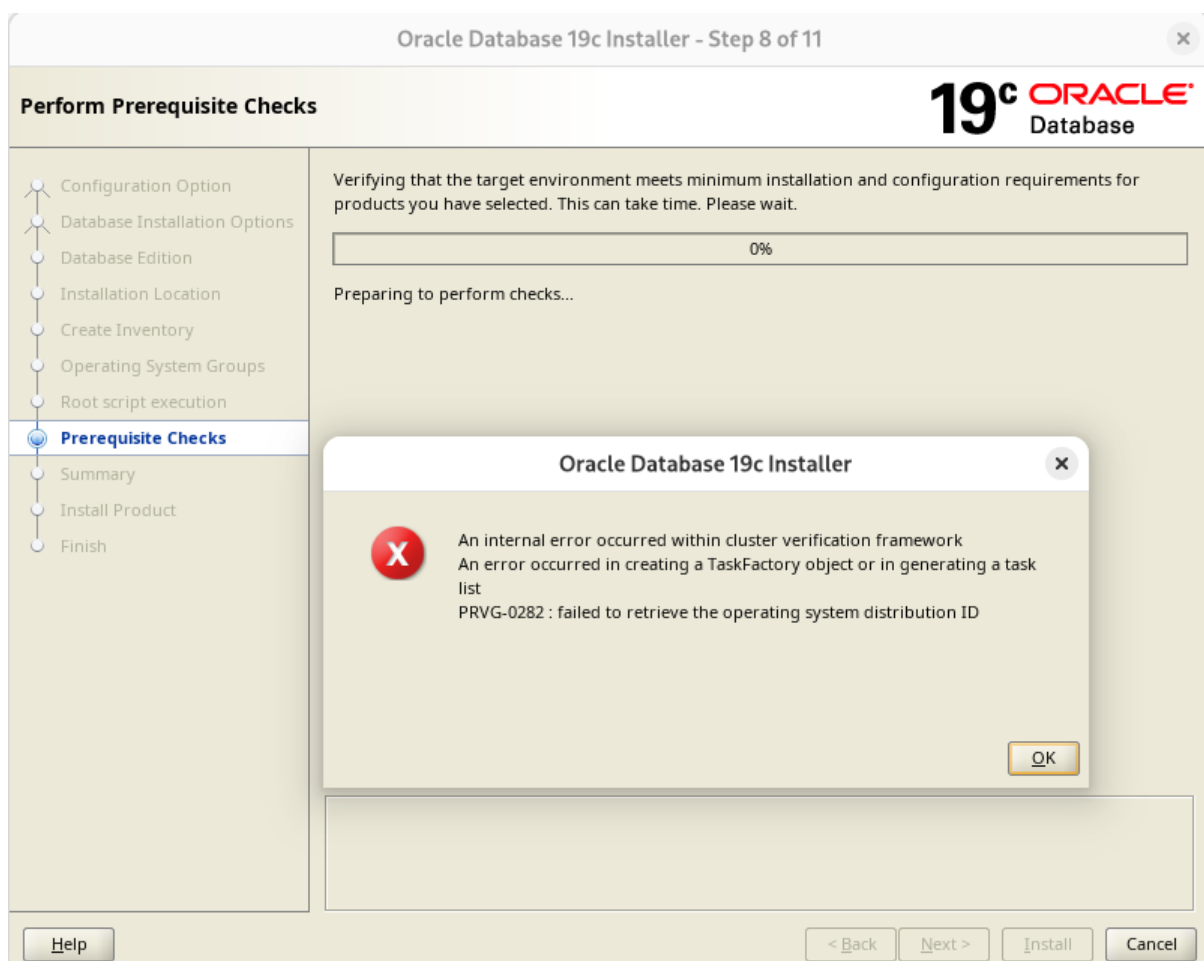
- *Dependency issue - When installing the "oracle-database-ee-19c-1.0-1.x86_64.rpm" and "oracle-database-preinstall-19c-1.0-1.el9.x86_64.rpm" packages, dependency issues may arise.*

Workaround: Use the "--nodeps" option to resolve dependency issues during rpm installation.

```
rpm -ivh --nodeps oracle-database-preinstall-19c-1.0-1.el9.x86_64.rpm
```

```
rpm -ivh --nodeps oracle-database-ee-19c-1.0-1.x86_64.rpm
```

- *PRVG-0282: failed to retrieve the operating system distribution ID*



Workaround: Specify the "CV_ASSUME_DISTID".

For example:

```
#export CV_ASSUME_DISTID=SUSE16
```

Additional Comments

This document provides a brief instruction to install Oracle Database 19c on SLES 16. You can extend this topology to make it highly available and secure so it is suitable for a production system.

*Thanks for selecting **SUSE Linux Enterprise Server** as your Linux platform of choice!*