

Oracle Database 11g R2 (11.2.0.1)
on
SUSE Linux Enterprise Server 11 SP1

(How to Install)

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Introduction

Oracle Database 11g R2 (11.2.0.1) is fully certified on SUSE Linux Enterprise Server 11. This document is not a replacement of official Oracle Installation manual but provided to help you to get Oracle Database installed on SLES11 SP1 with minimal efforts. Here, x86_64 version of both Oracle Database and SUSE Linux Enterprise Server is used. Similar steps applies to other platforms (x86, ia64, etc.). If you encounter any problem or have general question, please post your query to suse-oracle@listx.novell.com.

Note: Information provided here will work for SUSE Linux Enterprise Desktop

Required Software

Novell

- SUSE Linux Enterprise Server 11 Service Pack 1 (<http://www.novell.com/products/server/eval.html>)

Oracle

- Oracle Database 11g Release 2 (11.2.0.1) Enterprise Edition (<http://www.oracle.com/technology/software/products/database/index.html>)

Hardware Requirements

The system must meet the following minimum hardware requirements:

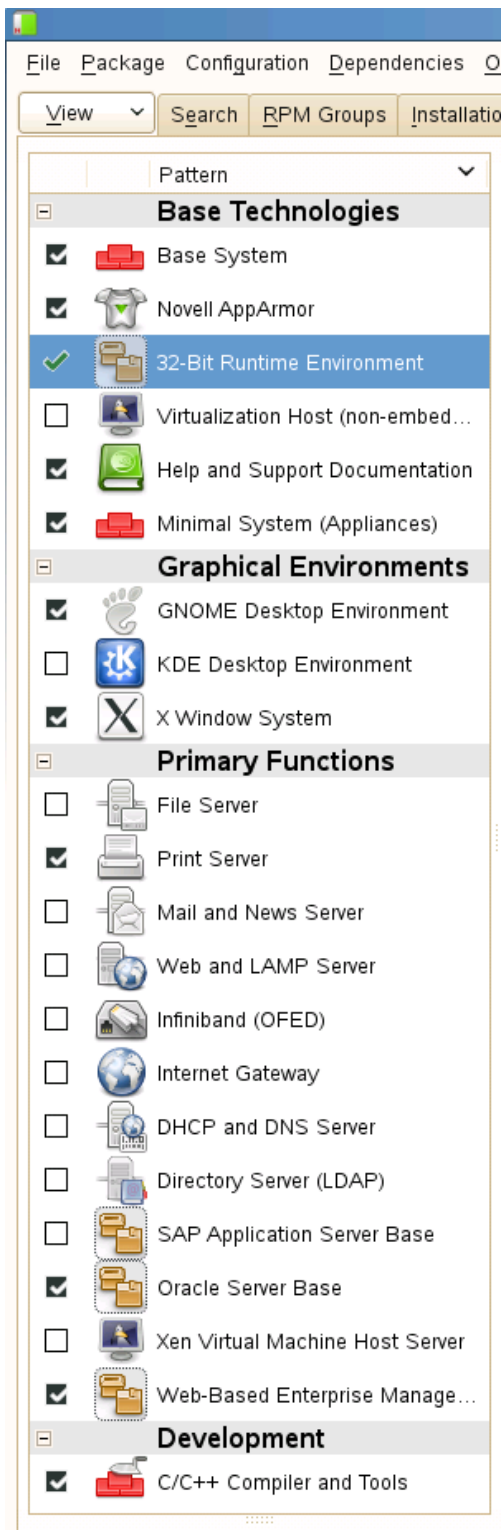
Requirement	Minimum Value
RAM	1024 MB
Swap space	Approx. twice the size of RAM
Disk space in /tmp	1024 MB
Disk space for software files	4 GB
Disk space for database files	1.7 GB

Installation Steps

1. Install SUSE Linux Operating System

Follow the Installation instructions provided in the SLES11 SP1 install manual. SLES11 SP1 with default packages along with Oracle Server Base, and "C/C++ Compiler and Tools" is sufficient for Oracle Database

11g R2 installation. Oracle Server Base provides orarun package, which does most of the Oracle pre-install requirement i.e. setting kernel parameters, oracle user creation, etc.. Here is screen-shot from SLES11 SP1 (x86_64) server.



Check whether C/C++ compiler is installed using "gcc --version". If gcc is not installed, then use YaST setup tool to install "C/C++ Compiler and Tools".

Note: While selecting above pattern, please install libstdc++43-devel-32bit package. For some reason, this package is left out from set of 32-Bit Runtime Environment.

2. **/etc/hosts** - Comment out entry 127.0.0.2 (if present) and make sure that your server's Static IP address is listed.

```
# 127.0.0.2          sles11-sp1.novell.com sles11-sp1
192.168.0.9        sles11-sp1.novell.com sles11-sp1
```

3. Oracle Install prerequisites

SUSE provides orarun packages to automate most of the Oracle pre-install task. Refer to Oracle installation document for complete list of prerequisites.

orarun :

1. If you have selected "Oracle Server Base" option at install time, orarun package is already installed on your server.

Note: For SUSE Linux Enterprise Desktop 11 SP1 get orarun from SLES11 SP1 DVD and install manually:

```
#rpm -ivh orarun-1.9-172.20.21.54.x86_64.rpm
```

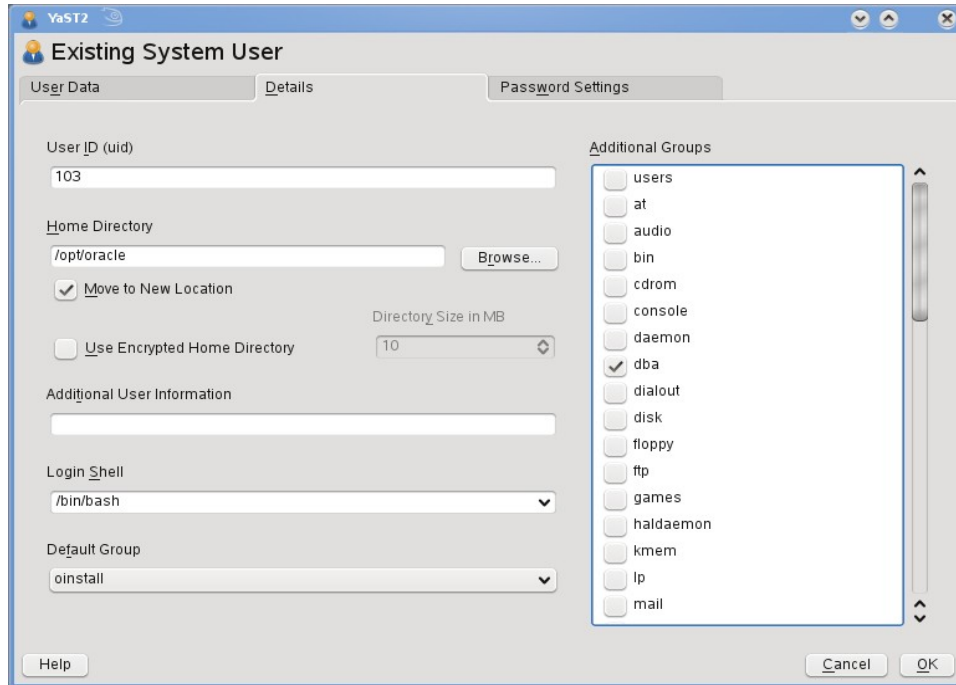
2. The account for **oracle** user is disabled (Default). Please enable it by:
 1. Changing the shell for the "oracle" user from "/bin/false" to "/bin/bash", either by editing the "/etc/passwd" file.

2. Set a new password for user "oracle" i.e. "/usr/bin/passwd oracle".

You can use SUSE setup tool YaST to accomplish above task.

```
/sbin/yast2 -> "security and Users" -> "Edit and create groups"  
(Select users tab and set "System Users" filter to see oracle user.)
```

Here is screen shots of "oracle" user properties:



3. Change Default Oracle environment set by orarun (If required)

1. Change Oracle home directory by editing ORACLE_HOME variable in “/etc/profile.d/oracle.sh” file.

ORACLE_HOME=\$ORACLE_BASE/product/11gR2/db

2. Default ORACLE_SID set by orarun install is “orcl”. Change it to your preferred name in “/etc/profile.d/oracle.sh” file.

Note: Oracle Installer will ask this database name and it should match to ORACLE_SID to avoid any future problem.

4. Run “/usr/sbin/rcoracle start “ to set kernel parameters. Ignore ORACLE_HOME not set message as this will get fixed once Oracle Database is installed.
5. Exit from current session and login as new “oracle” user. Following is a snap-shot verifying current user:

```

File Edit View Terminal Help
oracle@sles11-sp1:~> id
uid=103(oracle) gid=105(oinstall) groups=105(oinstall),106(dba)
oracle@sles11-sp1:~> cat /etc/SuSE-release
SUSE Linux Enterprise Server 11 (x86_64)
VERSION = 11
PATCHLEVEL = 1
oracle@sles11-sp1:~> uname -a
Linux sles11-sp1 2.6.32.12-0.7-default #1 SMP 2010-05-20 11:14:20 +0200 x86_64 x86_64 x86_64 GNU/Linux
oracle@sles11-sp1:~> env |grep ORA
ORACLE_SID=orcl
ORACLE_BASE=/opt/oracle
ORACLE_HOME=/opt/oracle/product/11gR2/db
oracle@sles11-sp1:~> █

```

4. Oracle 11g R2 Installation

Download Oracle 11g R2 Software from oracle web site depending on your platform and extract files in a local directory:

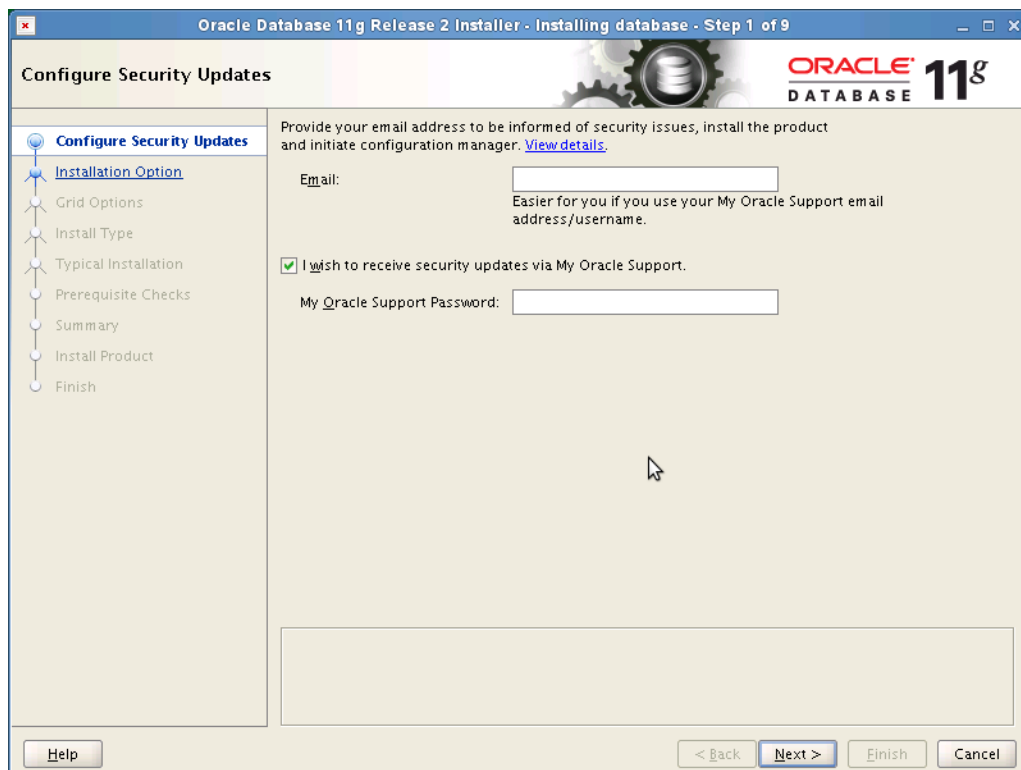
```

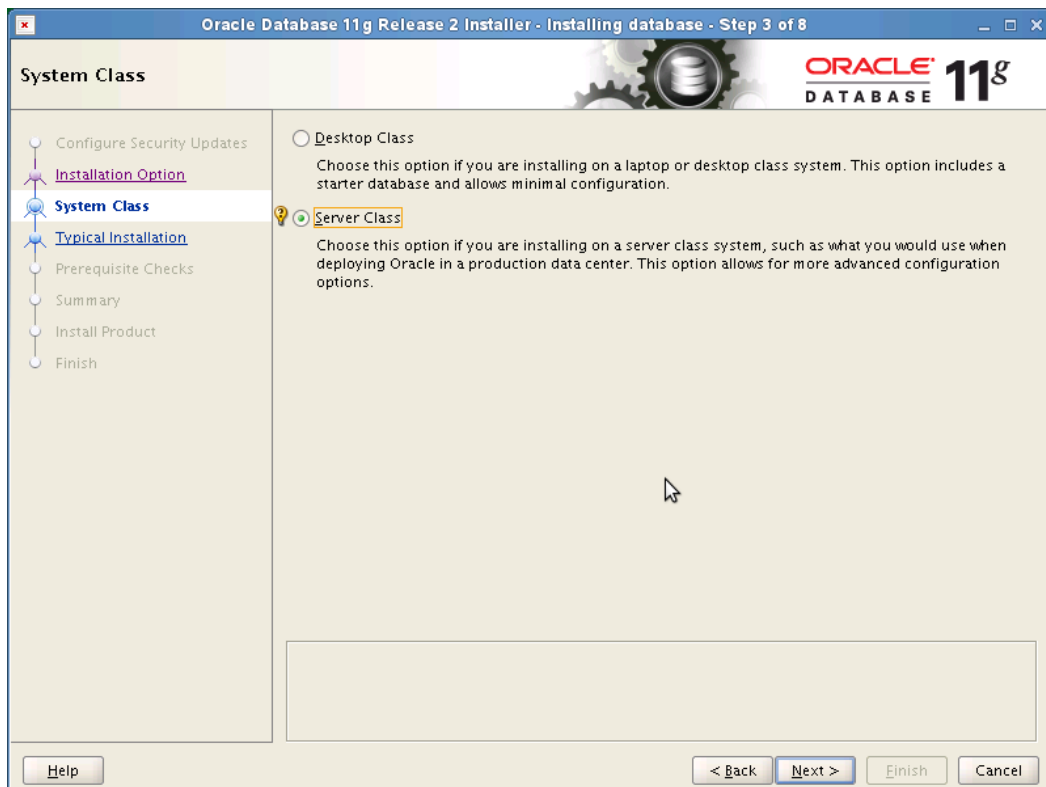
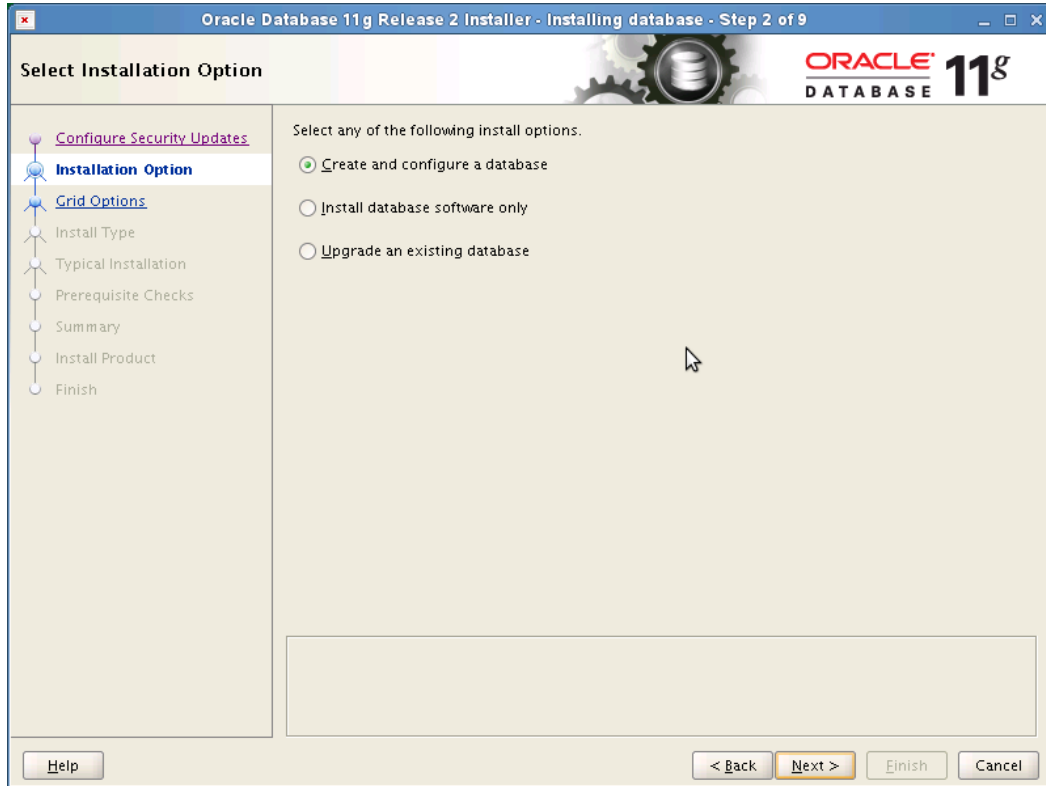
#unzip linux.x64_11gR2_database_1of2.zip
#unzip linux.x64_11gR2_database_2of2.zip

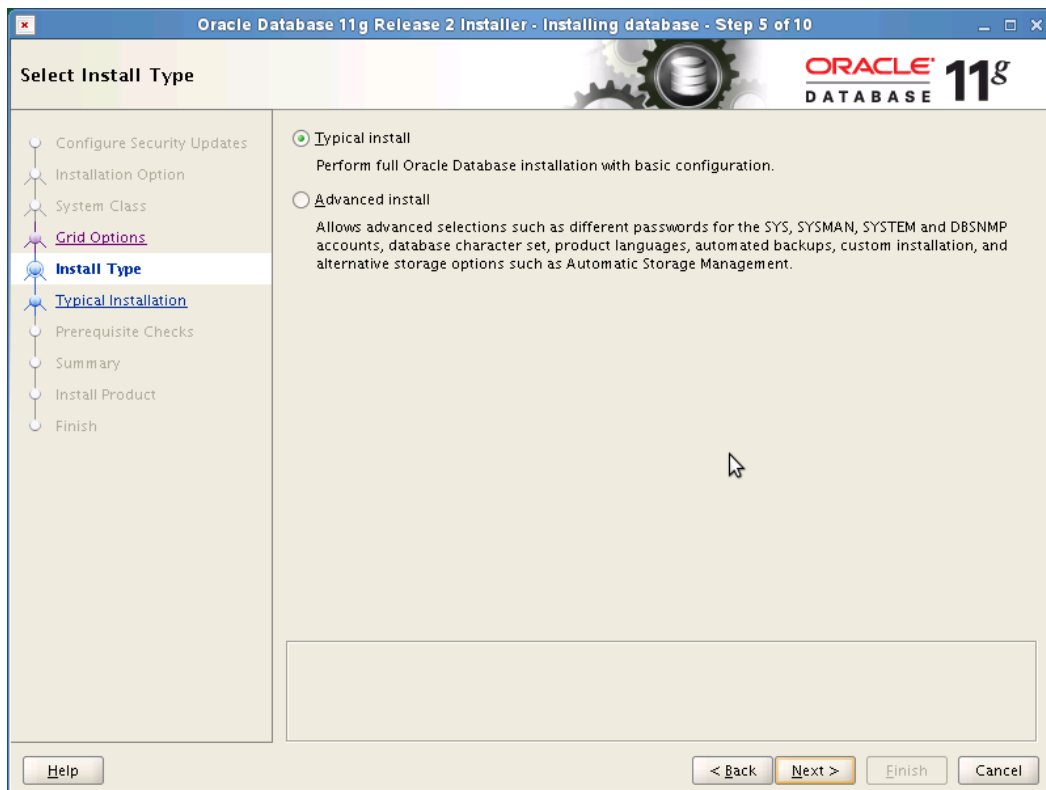
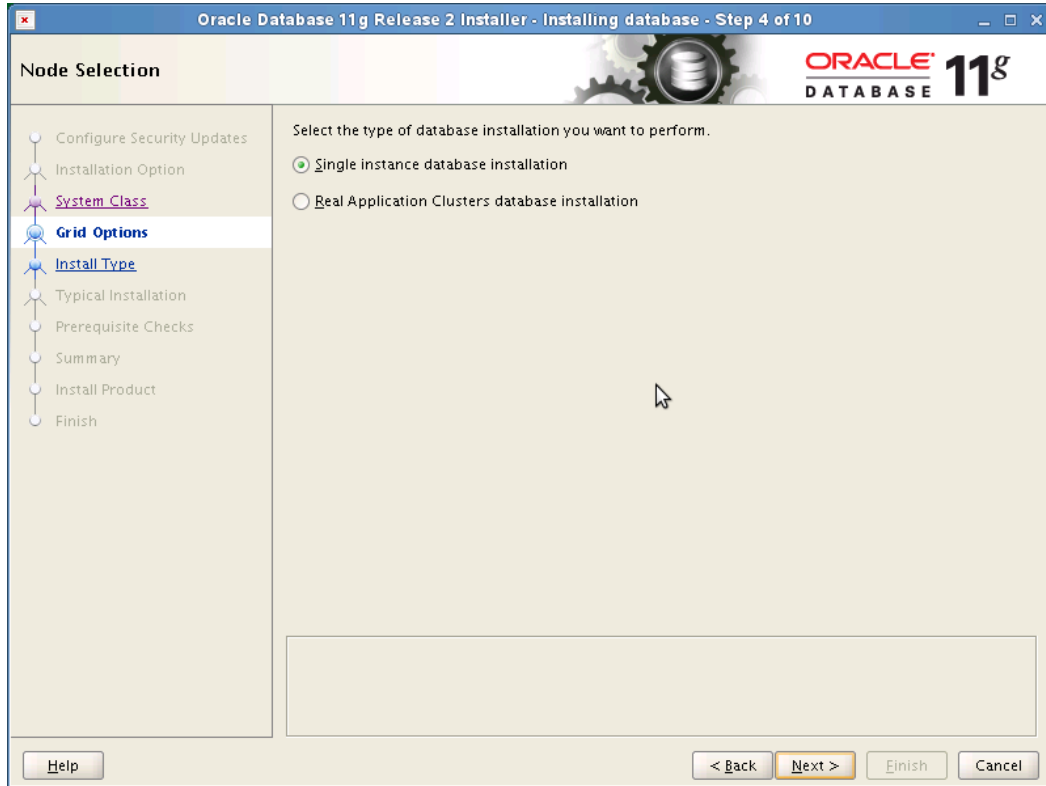
```

1. Make sure you are logged in as “**oracle**” user.
2. cd database & run Oracle Universal installer : ./runInstaller

Installation will walk you through with self explanatory instructions. Here are screen-shots from simple Oracle Database 11gR2 Installation:







Oracle Database 11g Release 2 Installer - Installing database - Step 6 of 10

Typical Install Configuration

Perform full Database installation with basic configuration.

Oracle base:

Software location:

Storage Type:

Database file location:

ASM/SNMP Password:

Database edition:

OSDBA Group:

Global database name:

Administrative password:

Confirm Password:

Oracle Database 11g Release 2 Installer - Installing database - Step 7 of 11

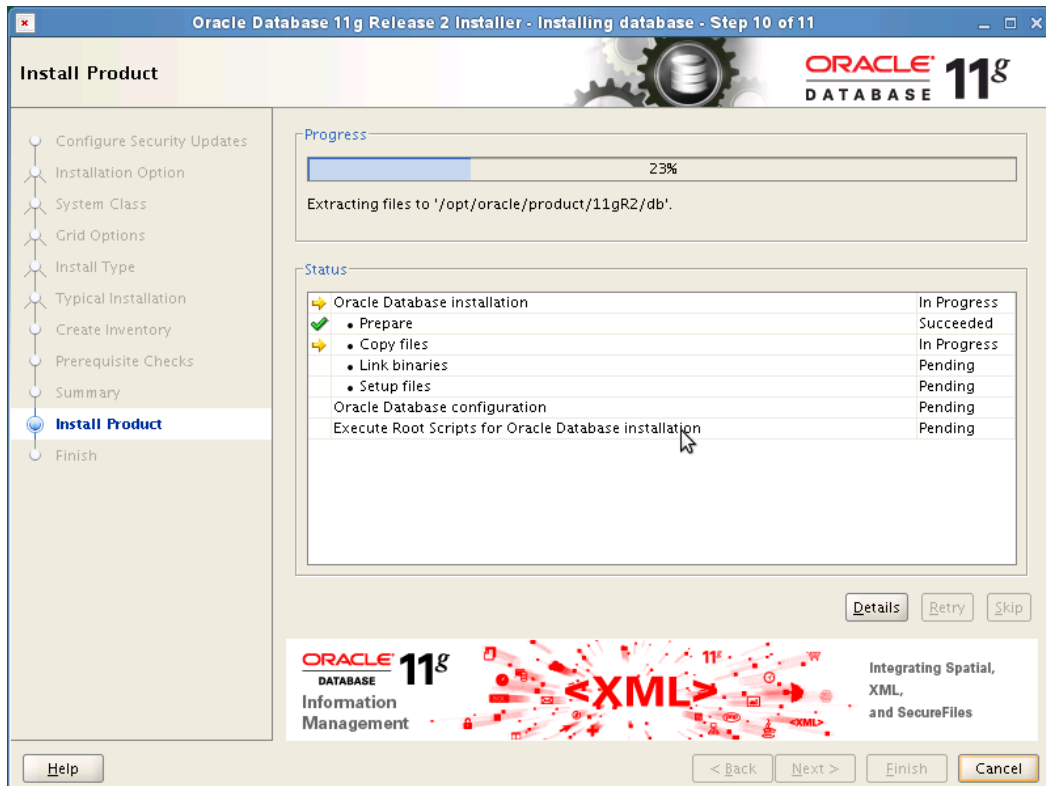
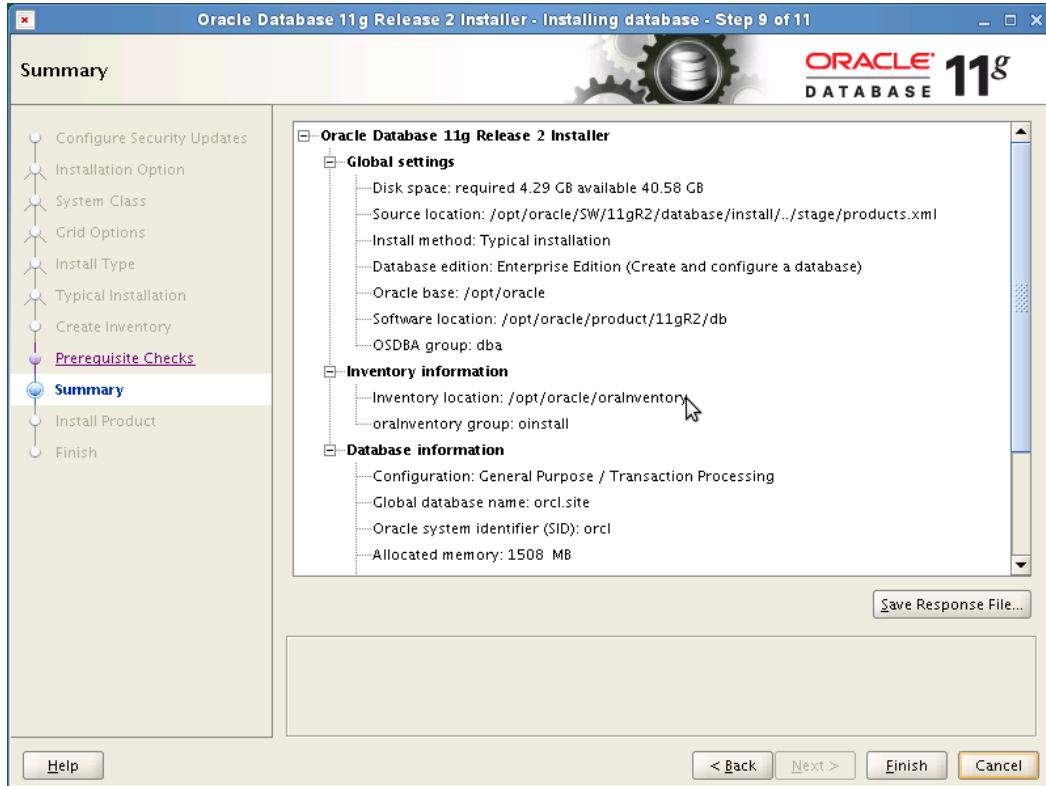
Create Inventory

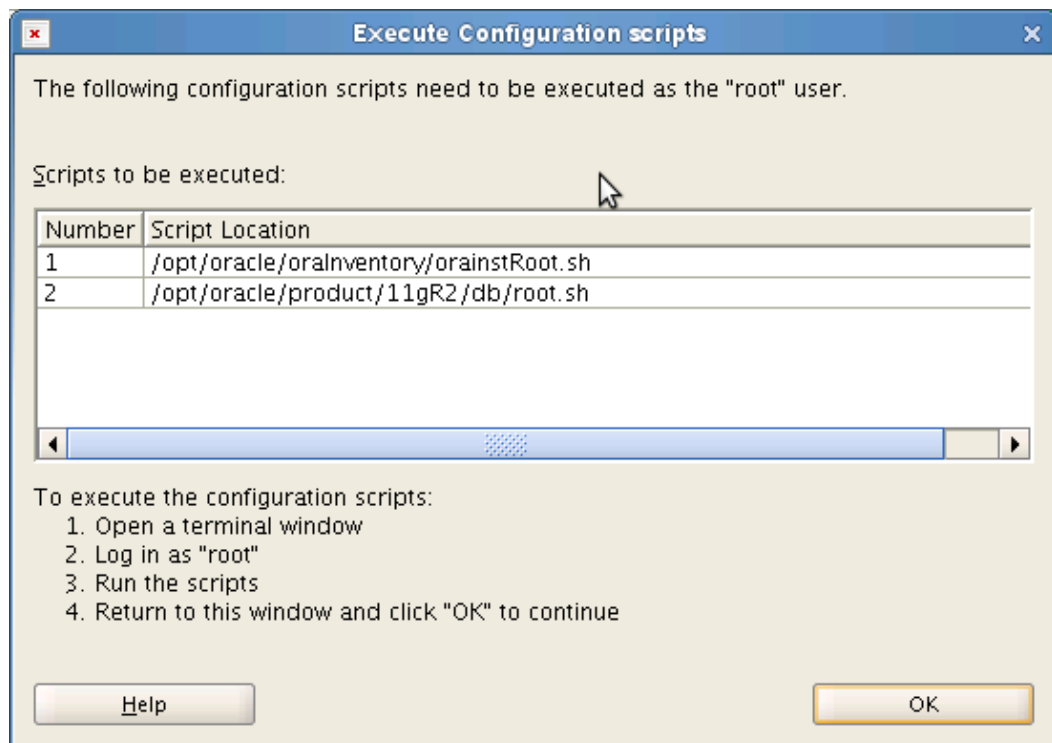
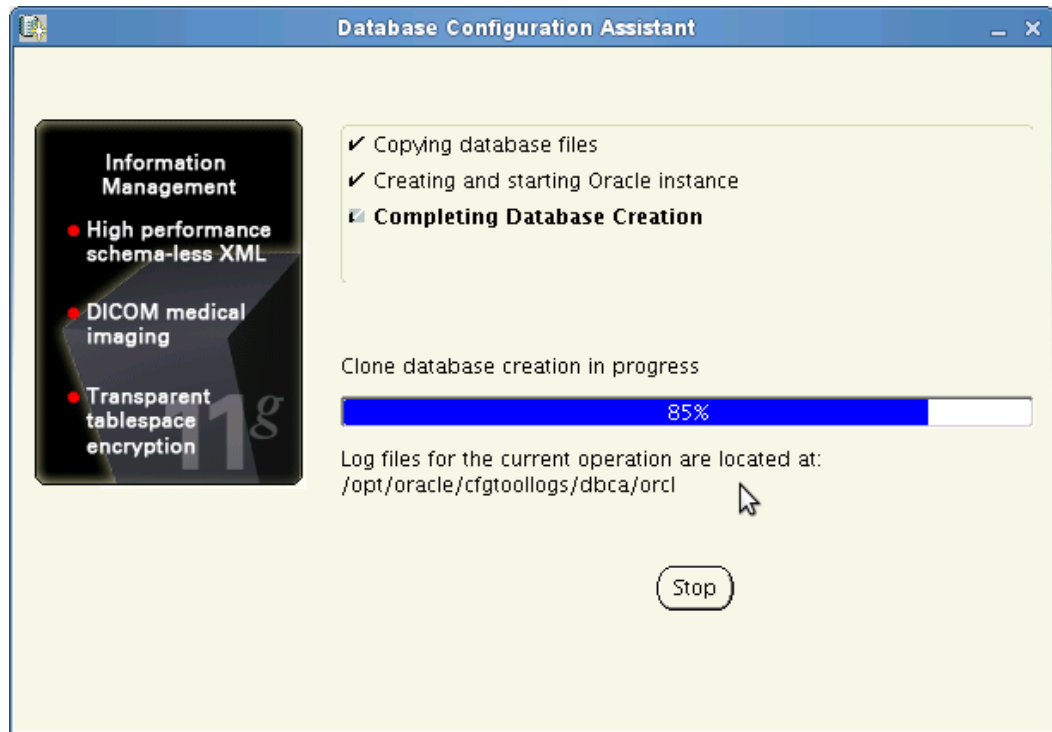
You are starting your first installation on this host. Specify a directory for installation files. This directory is called the "inventory directory". The installer automatically sets up subdirectories for each product to contain inventory data. The subdirectory for each product typically requires 150 kilobytes of disk space.

Inventory Directory:

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

orainventory Group Name:





```
oracle@sles11-sp1:~
File Edit View Terminal Help
sles11-sp1:/opt/oracle # /opt/oracle/oraInventory/orainstRoot.sh
Changing permissions of /opt/oracle/oraInventory.
Adding read,write permissions for group.
Removing read,write,execute permissions for world.

Changing groupname of /opt/oracle/oraInventory to oinstall.
The execution of the script is complete.
sles11-sp1:/opt/oracle # /opt/oracle/product/11gR2/db/root.sh
Running Oracle 11g root.sh script...

The following environment variables are set as:
  ORACLE_OWNER= oracle
  ORACLE_HOME=  /opt/oracle/product/11gR2/db

Enter the full pathname of the local bin directory: [/usr/local/bin]:
  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.sh script.
Now product-specific root actions will be performed.
Finished product-specific root actions.
sles11-sp1:/opt/oracle #
```

Oracle Database 11g Release 2 Installer - Installing database - Step 11 of 11

Finish

The installation of Oracle Database was successful.

Note:

Enterprise Manager Database Control URL - (orcl):
<https://sles11-sp1.site:1158/em>

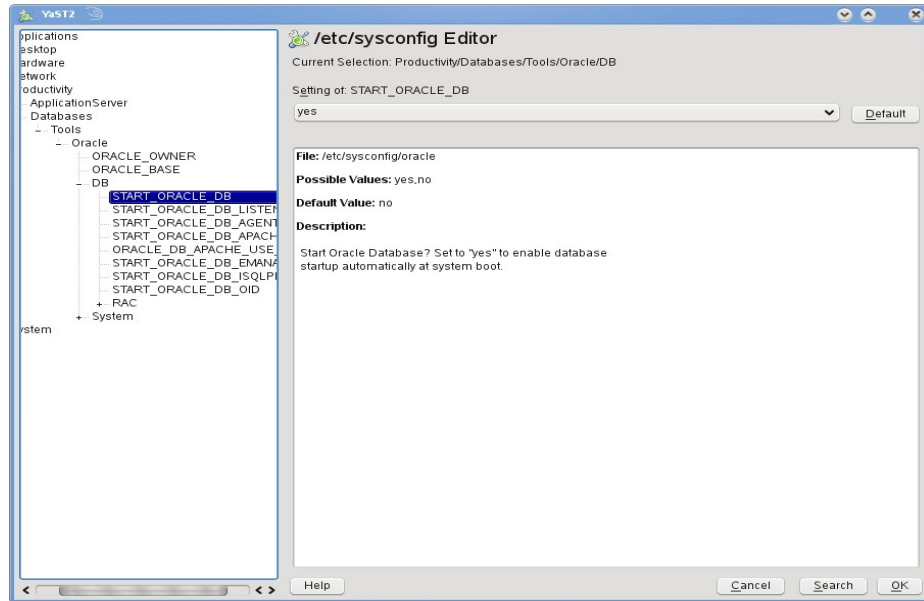
Configure Security Updates
Installation Option
System Class
Grid Options
Install Type
Typical Installation
Create Inventory
Prerequisite Checks
Summary
Install Product
Finish

Help < Back Next > Finish Close

1. Oracle Database Start at boot time

Set parameter `START_ORACLE_DB="yes"` in `"/etc/sysconfig/oracle"` file. You can edit file `"/etc/sysconfig/oracle"` manually or use YaST setup tool to change oracle specific parameters.

`"/sbin/yast2->System->/etc/sysconfig Editor ->Productivity->Databases"`



1. Edit `/etc/oratab` entry corresponding to your database to "Y".
2. Edit `dbstart`, `dbshut` and `dbhome` scripts to reflect correct location for `ORATAB` entry. i.e `ORATAB=/etc/oratab`

2. Oracle Enterprise Manager

1. Start Enterprise Manager services, if is not running: `"emctl start dbconsole"`

Note: If you want to start `dbconsole` services at boot-time, then set Listener (`START_ORACLE_DB_LISTENER`) and Enterprise Manager parameter (`START_ORACLE_DB_EMANAGER`) in `/etc/sysconfig/oracle` to `yes`.

2. Use Enterprise Manager web interface (<https://localhost:1158/em>) to perform routine database administration and performance tuning tasks.

File Edit View History Bookmarks Tools Help

Address bar: [sles11-sp1.site https://sles11-sp1.site:1158/em/console/login/login](https://sles11-sp1.site:1158/em/console/login/login)

Oracle Enterprise Manager 11g

Database Control

Login

* User Name:

* Password:

Connect As:

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Oracle Enterprise Manager (SYS) - Database Instance: orcl.site - Mozilla Firefox

Address bar: [sles11-sp1.site https://sles11-sp1.site:1158/em/console/database/instance/sitemap?ev](https://sles11-sp1.site:1158/em/console/database/instance/sitemap?ev)

Oracle Enterprise Manager 11g

Database Control

Setup Preferences Help Logout

Database

Logged in As SYS

Database Instance: orcl.site

Home Performance Availability Server Schema Data Movement Software and Support

Page Refreshed Jul 6, 2010 2:21:01 PM PDT Refresh View Data Automatically (60 sec)

General

Status [Up](#)

Up Since **Jul 6, 2010 2:08:29 PM PDT**

Instance Name **orcl**

Version **11.2.0.1.0**

Host [sles11-sp1.site](#)

Listener [LISTENER_sles11-sp1.site](#)

[View All Properties](#)

Host CPU

Load **0.11** Paging **0.00**

Active Sessions

Core Count **2**

SQL Response Time

SQL Response Time **Unavailable** (%)

Diagnostic Summary

ADDM Findings: No ADDM run available

Alert Log: [No ORA- errors](#)

Active Incidents: **0**

Key SQL Profiles: **Unavailable**

[Database Instance Health](#)

Space Summary

Database Size (GB)	1,386
Problem Tablespaces	0
Segment Advisor Recommendations	Details
Policy Violations	0
Dump Area Used (%)	26

High Availability

Console	Details
Oracle Restart	n/a
Instance Recovery Time (sec)	7
Last Backup	n/a
Usable Flash Recovery Area (%)	100
Flashback Database Logging	Disabled

Alerts

Category: Critical: 0 Warning: 0

Severity	Category	Name	Impact	Message	Alert Triggered
(No alerts)					

Related Alerts

Policy Violations

All: 7 Critical Rules Violated: 7 Critical Security Patches: 0 Compliance Score (%) [96](#)

Job Activity

Jobs scheduled to start no more than 7 days ago

Done

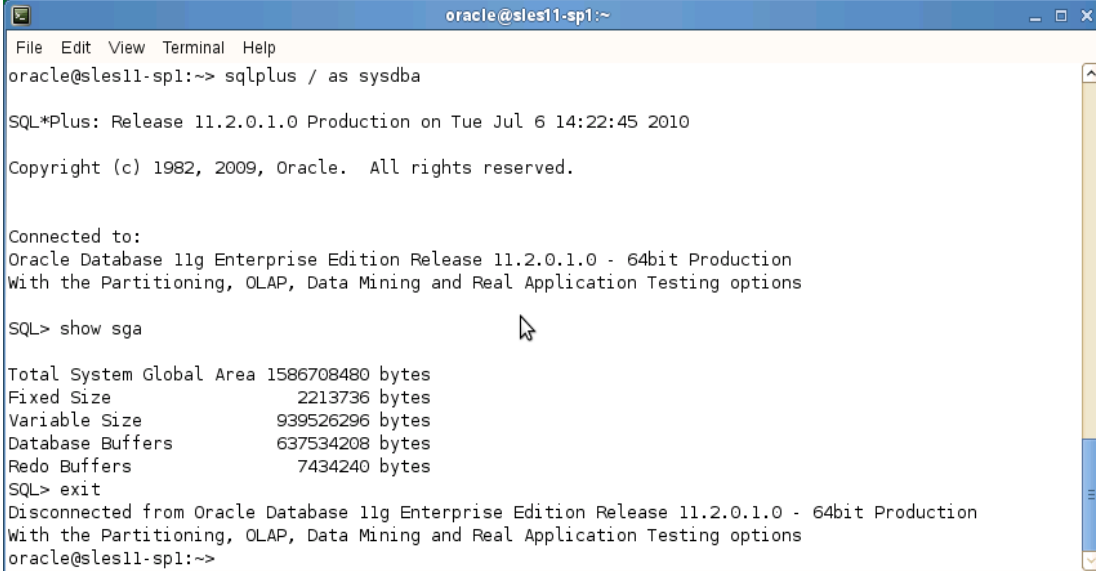
3. sqlplus: Startup and Shutdown (Manual)

From diagnostic point of view it is very important to check sqlplus is functioning properly. If not then your installation is having problems.

1. To startup the database:
sles10\$ sqlplus /nolog
SQL> connect / as sysdba
SQL> startup

2. To shutdown the database:
sles10\$ sqlplus /nolog
SQL> connect / as sysdba
SQL> shutdown

Note: "/" connects you to the schema owned by SYS with the privilege SYSDBA.



```
oracle@sles11-sp1:~  
File Edit View Terminal Help  
oracle@sles11-sp1:~> sqlplus / as sysdba  
  
SQL*Plus: Release 11.2.0.1.0 Production on Tue Jul 6 14:22:45 2010  
Copyright (c) 1982, 2009, Oracle. All rights reserved.  
  
Connected to:  
Oracle Database 11g Enterprise Edition Release 11.2.0.1.0 - 64bit Production  
With the Partitioning, OLAP, Data Mining and Real Application Testing options  
  
SQL> show sga  
  
Total System Global Area 1586708480 bytes  
Fixed Size 2213736 bytes  
Variable Size 939526296 bytes  
Database Buffers 637534208 bytes  
Redo Buffers 7434240 bytes  
SQL> exit  
Disconnected from Oracle Database 11g Enterprise Edition Release 11.2.0.1.0 - 64bit Production  
With the Partitioning, OLAP, Data Mining and Real Application Testing options  
oracle@sles11-sp1:~>
```

History:

Date	Changes
07/06/10	Initial Document created.

Enjoy!