

# Oracle 10g R2 (10.2.0.3) on SUSE Linux Enterprise Server 10

( For Sentinel 6.0 )

## Introduction

Oracle 10g R2 is Oracle Certified and supported on SUSE Linux Enterprise Server 10 (SLES10). This document is not a replacement of Oracle Installation manual but help you to prepare your server for Sentinel 6.0 software install using orarun package. Visit (<http://www.novell.com/products/server/oracle/documents.html>) for complete list of Novell/Oracle documents.

## Required Software (For x86\_64 Server)

### Novell

1. SUSE Linux Enterprise Server 10 (x86\_64)
2. Sentinel 6.0

### Oracle

1. Oracle Database 10g Release 2 (10.2.0.1) Enterprise Edition (x86\_64)
2. Oracle 10g Release 2 (10.2.0.3) Patch Set 2 for Linux x86-64
3. Latest Oracle Critical Patch Update (for 10.2.0.3)

## Hardware Requirements

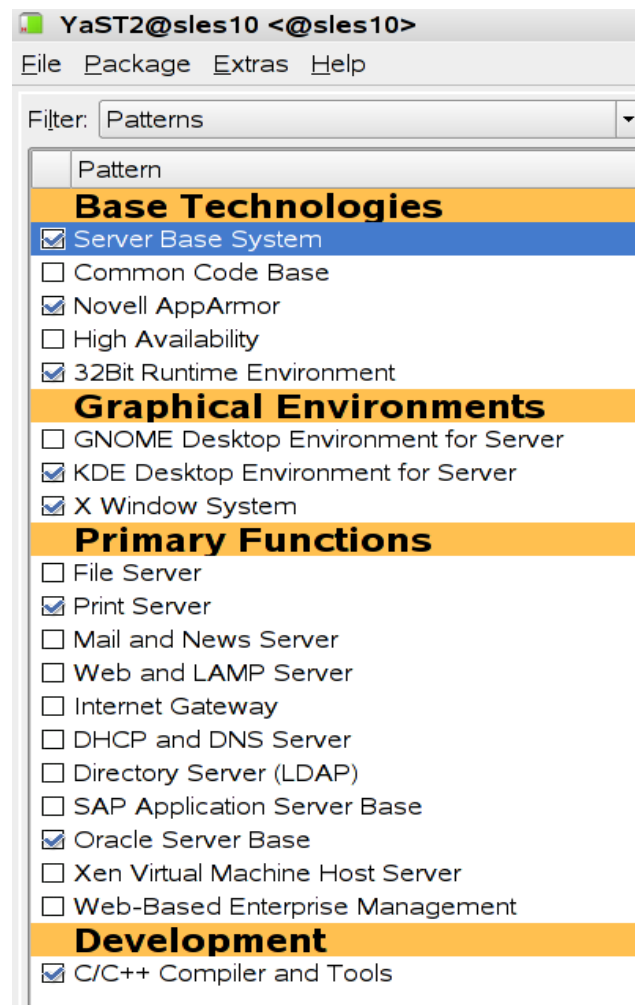
The system must meet the following minimum hardware requirements:

Requirement	Minimum Value
RAM	1024 MB
Swap space	Approx. twice the size of RAM
Disk space in /tmp	400 MB
Disk space for OS files	3.5 GB
Disk space for Oracle database files	1.2 GB
Disk Space for Sentinel database files	20+ GB

## Installation Steps

### 1. Install SUSE Linux Operating System

If this is your first time Install, please follow the Installation instructions provided in the SLES10 install manual. For experienced SLES user, SLES10 with default packages along with Oracle Server Base, and “C/C++ Compiler and Tools” is sufficient for Oracle 10g R2 (10.2.0.1) install. Oracle Server Base pattern provides orarun package. Make sure 32bit Runtime Environment is selected (default).



(Here is screen-shot showing selected packages for SLES10 (x86\_64))

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".

### 2. Install SLES10 Service Pack (Future: When Service Pack is released)

At this point no Service Pack for SLES10 is released. Use SPident or 'cat /etc/SuSE-release' to verify.

```
oracle@sles10:~> cat /etc/SuSE-release
SUSE Linux Enterprise Server 10 (x86_64)
VERSION = 10
oracle@sles10:~> SPident -v

Summary (using 778 packages)
Product/ServicePack conflict match update (shipped)
SLES-10-x86_64-current 0 0% 778 100% 0 (2099 37.1%)

CONCLUSION: System is up-to-date!
found SLES-10-x86_64-current
```

3. **/etc/hosts** - Comment out 127.0.0.2 and put your server's IP address.

```
# 127.0.0.2 sles10.novell.com sles10
192.168.0.2 sles10.novell.com sles10
```

#### 4. 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.

You can download and install orarun package manually i.e.

1. Download: <http://ftp.novell.com/partners/oracle/sles-10/>
2. Install: `#rpm -ivh orarun-1.9-21.2.x86_64.rpm`

2. The account for **oracle** user is disabled. 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.)

Following are the screen shots of “oracle” user properties:

## Change /bin/fasle to /bin/bash

YaST2@sles10 <@sles10>

**Existing System User**

User Data | Details | Password Settings

Additional user data includes:

**User ID (uid):** Each user is known to the system by a unique number, the user ID. For normal users, you should use a UID larger than 499 because the smaller UIDs are used by the system for special purposes and pseudo logins.

If you change the UID of an existing user, the rights of the files this user owns must be changed. This is done automatically for the files in the user's home directory, but not for files located elsewhere.

**Home Directory:** The home directory of the user. Normally this is /home/username. To select an existing directory, click **Browse**.

User ID (uid): 102

Home Directory: /opt/oracle [Browse...]

Additional User Information: [ ]

Login Shell: /bin/bash

Default Group: oinstall

Groups:

- users
- at
- audio
- bin
- cdrom
- console
- daemon
- dba
- dialout
- disk
- floppy
- ftp
- games
- haldaemon
- kmem
- lp
- mail
- maildrop
- man
- messagebus

Cancel Accept

## Set new password.

YaST2@sles10 <@sles10>

**Existing System User**

User Data | Details | Password Settings

Enter the **User's Full Name**, **Username**, and **Password** to assign to this user account.

When entering a password, distinguish between uppercase and lowercase. Passwords should not contain any special characters, such as accented characters.

With the current password encryption (Blowfish), the password length should be between 5 and 72 characters.

Valid password characters are letters, digits, blanks, and #\*, ., ;, : , \_ - + ! \$%& / ? [ ( ) ] =.

To ensure that the password was entered correctly, repeat it exactly in a second field. Do not forget your password.

For the Username use

User's Full Name: Oracle user

Username: oracle

Password: \*\*\*\*\*

Confirm Password: \*\*\*\*\*

Disable User Login

Cancel Accept

### 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/10gR2/db**

2. Default ORACLE\_SID set by orarun install is “**orcl**”. Change it to ESEC in “/etc/profile.d/oracle.sh” file.

**Note:** Sentinel SW creates it's own database name ESEC.

4. Run “/usr/sbin/rcoracle start “ to set kernel parameters. Ignore ORACLE\_HOME not set message as this will get fixed once Oracle 10g is installed.
5. Exist from current session and login as new “**oracle**” user. Following is a snap-shot verifying current user:

```
oracle@sles10:~> id
uid=102(oracle) gid=103(oinstall) groups=6(disk),103(oinstall),104(dba)
oracle@sles10:~> █
```

## 5. Oracle 10g R2 Installation

Get Oracle 10g R2 (10.2.0.1) Software from oracle web site depending on your platform ([10201\\_database\\_linux\\_x86\\_64.cpio.gz](#)) and extract files:

```
#gunzip 10201_database_linux_x86_64.cpio.gz
#cpio -idmv < 10201_database_linux_x86_64.cpio
```

1. Make sure you are logged in as “**oracle**” user.
2. Change to database directory.
3. Run Oracle Universal Installer (OUI): ./runInstaller

You will get an error such as.

```
oracle@ca-sent4:/shared/SW/database> id
uid=102(oracle) gid=103(oinstall) groups=6(disk),103(oinstall),104(dba)
oracle@ca-sent4:/shared/SW/database> ./runInstaller
Starting Oracle Universal Installer...

Checking installer requirements...

Checking operating system version: must be redhat-3, SuSE-9, redhat-4, UnitedLin
ux-1.0, asianux-1 or asianux-2
                                Failed <<<<

Exiting Oracle Universal Installer, log for this session can be found at /tmp/Or
aInstall2007-02-10_01-00-19PM/installActions2007-02-10_01-00-19PM.log
oracle@ca-sent4:/shared/SW/database> █
```

4. Any of the following will fix OUI install Error:

1. Modify "database/install/oraparam.ini" file to add support for SUSE Linux 10. After modifying oraparam.ini file "[Certified Versions]" line will look like:

```
[Certified Versions]
Linux=redhat-3,SuSE-9,SuSE-10,redhat-4,UnitedLinux-1.0,asianux-1,asianux-2
```

2. Install with option -ignoreSysPrereqs  
i.e. ./runInstaller -ignoreSysPrereqs

Installation will walk you through with simple self explanatory instructions. Here are screen-shots from Oracle 10g R2 Installation (Database Software Only):

Select "Advanced Installation"

**Select Installation Method**

**Basic Installation**  
Perform full Oracle Database 10g installation with standard configuration options requiring minimal input. This option uses file system for storage, and a single password for all database accounts.

Oracle Home Location:

Installation Type:

UNIX DBA Group:

**Create Starter Database (additional 720MB)**

Global Database Name:

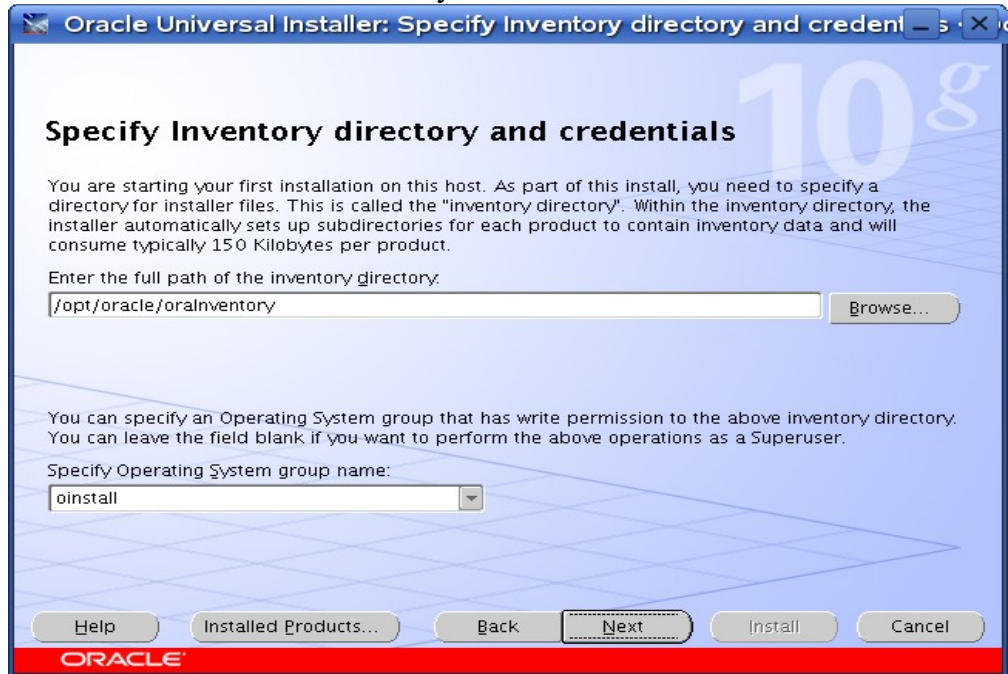
Database Password:  Confirm Password:

This password is used for the SYS, SYSTEM, SYSMAN, and DBSNMP accounts.

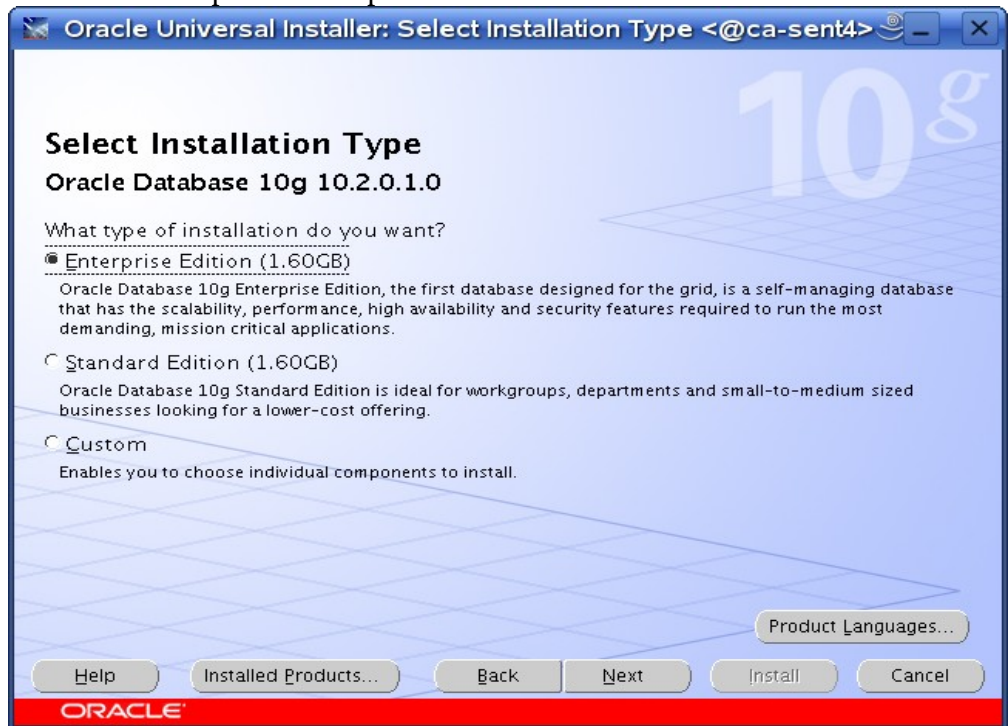
**Advanced Installation**  
Allows advanced selections such as different passwords for the SYS, SYSTEM, SYSMAN, and DBSNMP accounts, database character set, product languages, automated backups, custom installation, and alternative storage options such as Automatic Storage Management.

ORACLE

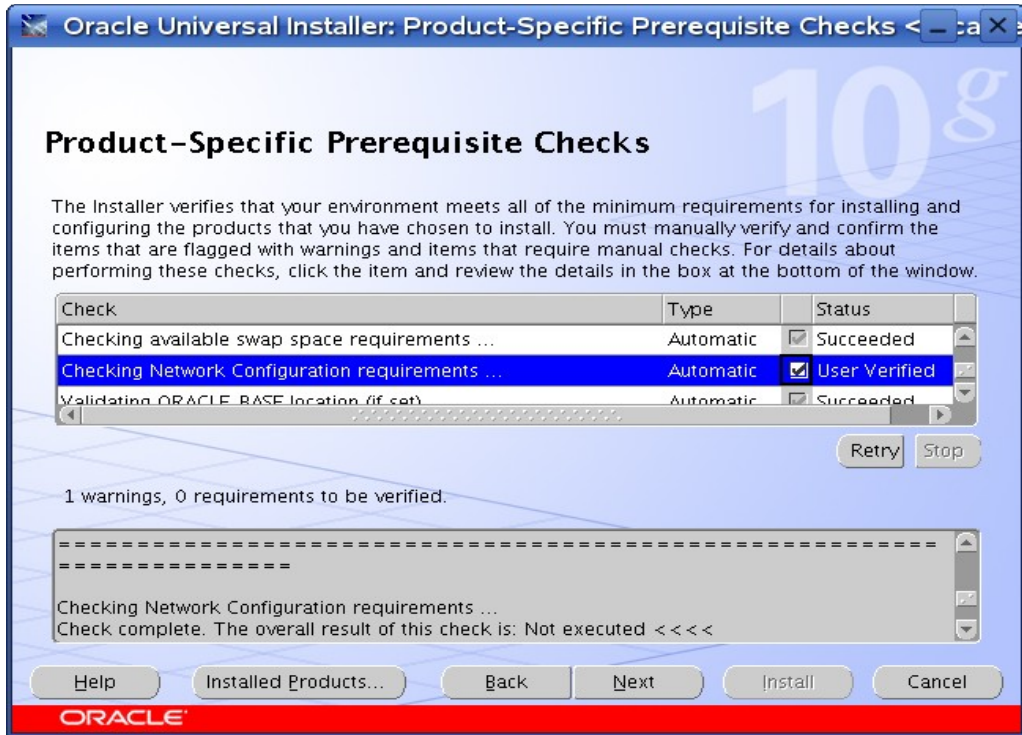
Select Default values for Inventory and Click "Next"



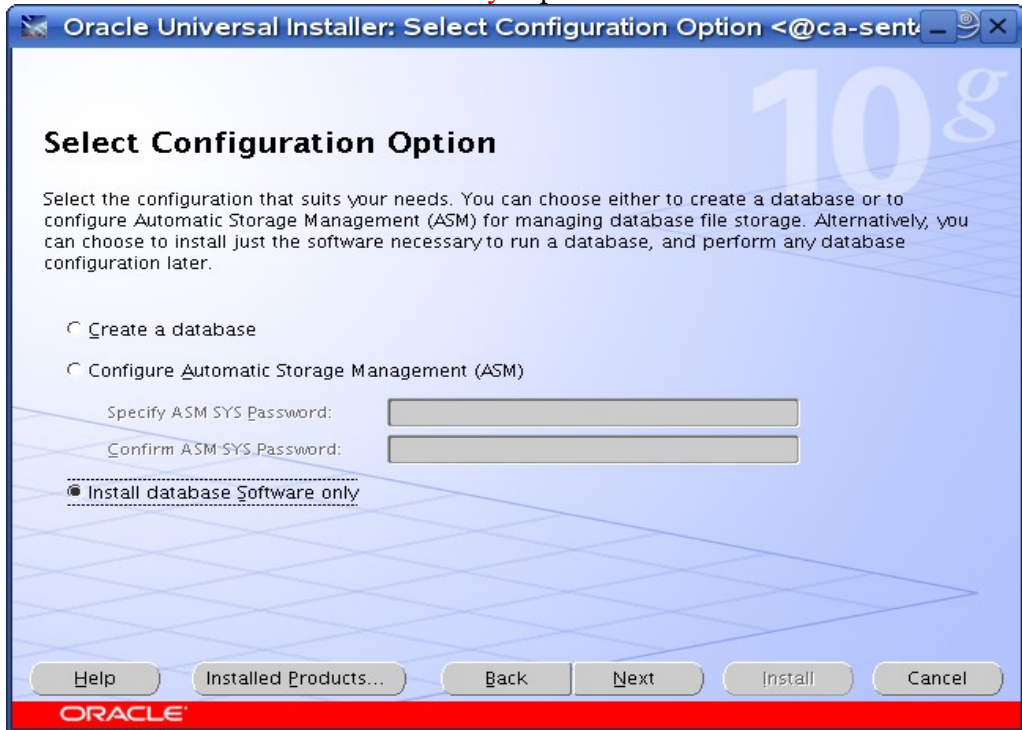
Select Default option "Enterprise Edition" and Click "Next".



Select 'User Verified' for Checks and Click 'Next'

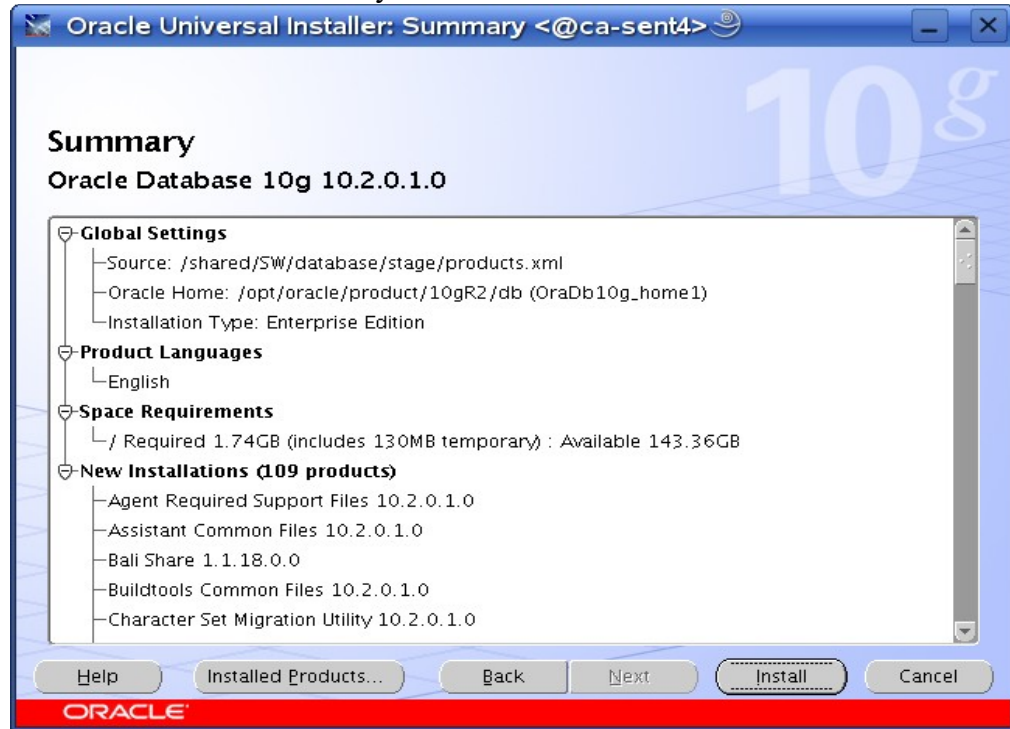


Select "Install Database Software Only" option and Click "Next"

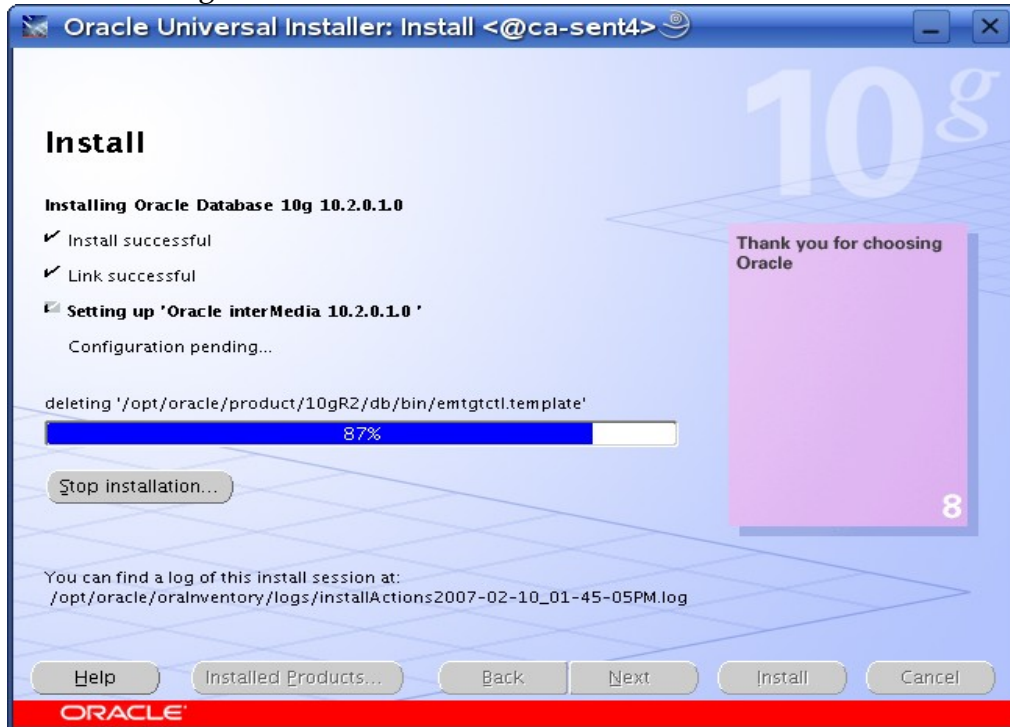




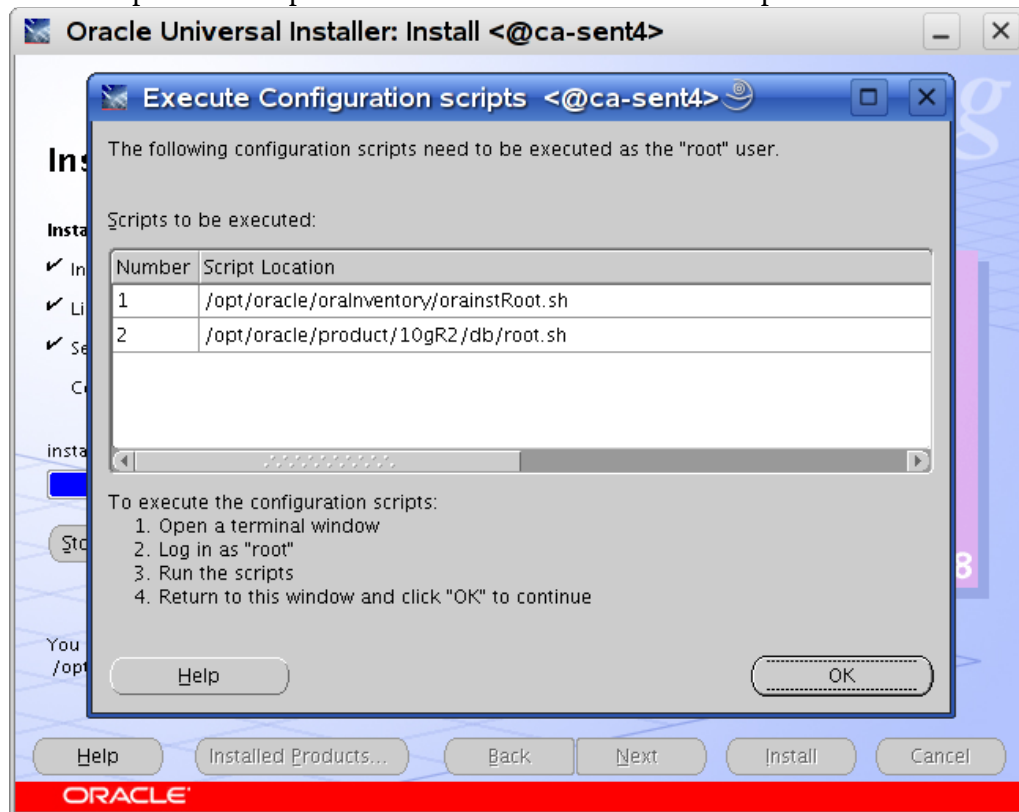
Review Installation Summary and Click "Install"



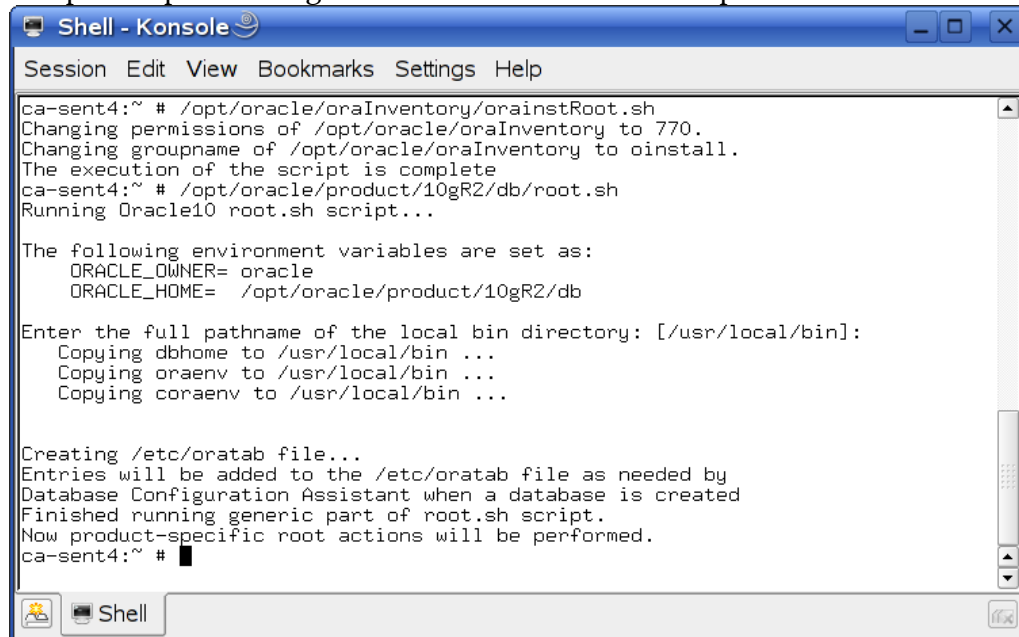
Installation Progress window...



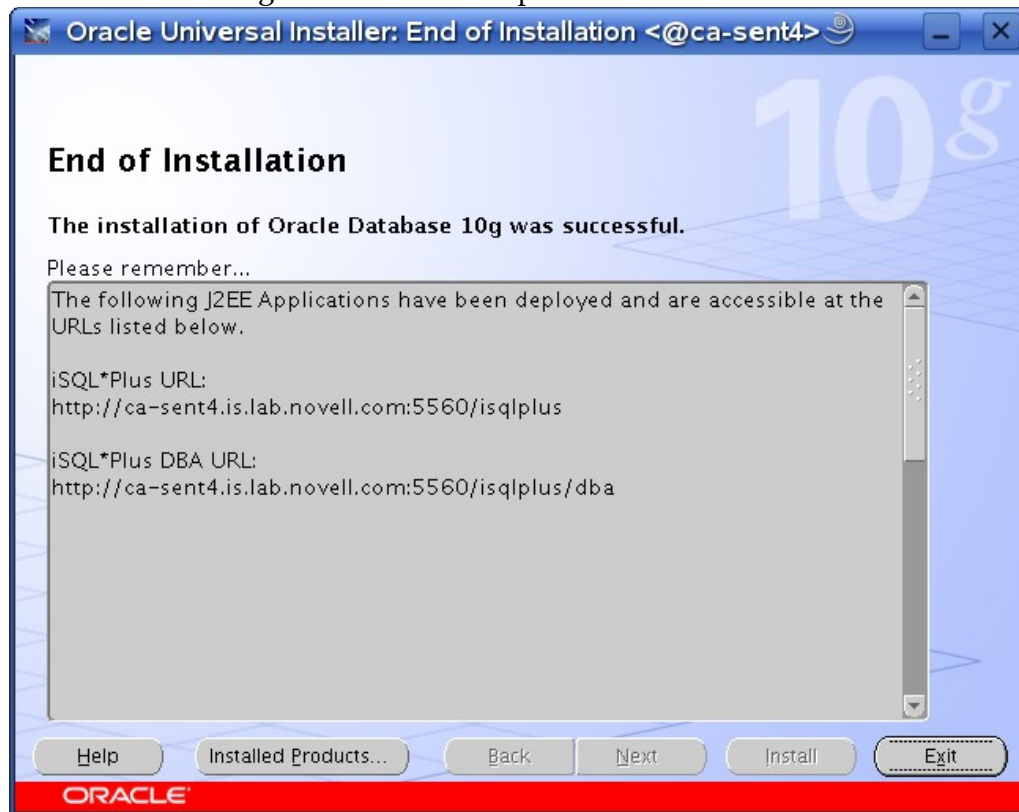
Execute specified scripts as root and Click "OK" after completion.



Sample out-put showing orainstRoot.sh and root.sh script execution.



Oracle Database 10g Installation is completed . Click "Exit".



## 6. Apply Required Oracle Patches

Refer Sentinel 6.0 Install document for required version of Oracle patches. Oracle patches are available on <http://metalink.oracle.com>, and you need Oracle support contract to get these patches.

### 1. Apply Oracle 10gR2 (10.2.0.3) Patch (using runInstaller)

Download required Oracle 10gR2 patch (p5337014\_10203\_Linux-x86-64.zip) and unzip in /tmp directory.

1. Make sure you are logged in as “**oracle**” user.
2. #unzip p5337014\_10203\_Linux-x86-64.zip
3. cd Disk1 and run Oracle Universal Installer : ./runInstaller  
(Installer will fail to detect OS. Apply same changes as in step #5)

### 2. Apply Oracle Critical Patch (using opatch)

Download Oracle 10gR2 patch (p5881721\_10203\_Linux-x86-64.zip) in /tmp directory.

1. Make sure you are logged in as “**oracle**” user.
2. #unzip p5881721\_10203\_Linux-x86-64.zip
3. cd 5881721 and run \$ORACLE\_HOME/OPatch/opatch apply -local
4. Follow README attached with this patch for any post installation task.

### 3. Oracle Patch Status Check: \$ORACLE\_HOME/OPatch/opatch lsinventory

```

oracle@sles10:~ - Shell - Konsole
Session Edit View Bookmarks Settings Help
oracle@sles10:~> /opt/oracle/db/OPatch/opatch lsinventory
Invoking OPatch 10.2.0.3.0

Oracle interim Patch Installer version 10.2.0.3.0
Copyright (c) 2005, Oracle Corporation. All rights reserved..

Oracle Home      : /opt/oracle/db
Central Inventory : /opt/oracle/oraInventory
  from           : /etc/oraInst.loc
OPatch version   : 10.2.0.3.0
OUI version      : 10.2.0.3.0
OUI location     : /opt/oracle/db/oui
Log file location : /opt/oracle/db/cfgtoollogs/opatch/opatch2007-05-21_05-37-58AM.log

Lsinventory Output file location : /opt/oracle/db/cfgtoollogs/opatch/lsinv/lsinventory2007-05-21_05-37-58AM.txt

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Installed Top-level Products (2):

Oracle Database 10g                          10.2.0.1.0
Oracle Database 10g Release 2 Patch Set 2    10.2.0.3.0
There are 2 products installed in this Oracle Home.

Interim patches (3) :

Patch 5881721      : applied on Mon May 21 05:30:30 PDT 2007
  Created on 19 Feb 2007, 02:16:34 hrs US/Pacific
  Bugs fixed:
    5885186, 5881721

Patch 5556081     : applied on Mon May 21 05:24:19 PDT 2007
  Created on 9 Nov 2006, 22:20:50 hrs PST8PDT
  Bugs fixed:
    5556081

Patch 5557962     : applied on Mon May 21 05:24:10 PDT 2007
  Created on 9 Nov 2006, 23:23:06 hrs PST8PDT
  Bugs fixed:
    4269423, 5557962, 5528974

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Shell
  
```

Screen-shot showing Oracle version and Patch status.

**Congratulations!** You are all set to Install Novell Sentinel 6.0 Software.

### History

Date	Changes
02/10/2007	Initial Document created. - Arun Singh
05/17/2007	Update to Oracle 10gR2 (10.2.0.3) - Arun Singh