

Oracle 10g R1 (10.1.0.3)  
on  
SUSE LINUX Enterprise Server 9

( How to Install )

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## Introduction

Oracle 10g R1 (10.1.0.3) is Novell SUSE LINUX Enterprise Server 9 (SLES9) certified. This document will help you to install Oracle 10g R1 on SLES9.

**Note:** Oracle only provides support for SUSE LINUX Enterprise Server (SLES). The steps provided here will also work on SUSE Professional 9.2.

## Required Software

**SUSE :** SUSE LINUX Enterprise Server 9

**Oracle :** Oracle Database 10g Release 1 (10.1.0.3)  
Enterprise/Standard Edition for Linux x86.

## Oracle Documents

Please refer to *Oracle 10g Release 1 Notes* for detailed information on SLES9 Installation: (Part number B15521-01, URL: <http://www.oracle.com/technology/documentation/database10g.html>)

## Novell SLES9 Documents

<http://www.novell.com/documentation/sles9/index.html>

## Hardware Requirements

The system must meet the following minimum hardware requirements:

Requirement	Minimum Value
RAM	512 MB
Swap space	Approx. twice the size of RAM
Disk space in /tmp	400 MB
Disk space for software files	2.5 GB (2621440 KB)
Disk space for database files	1.2 GB

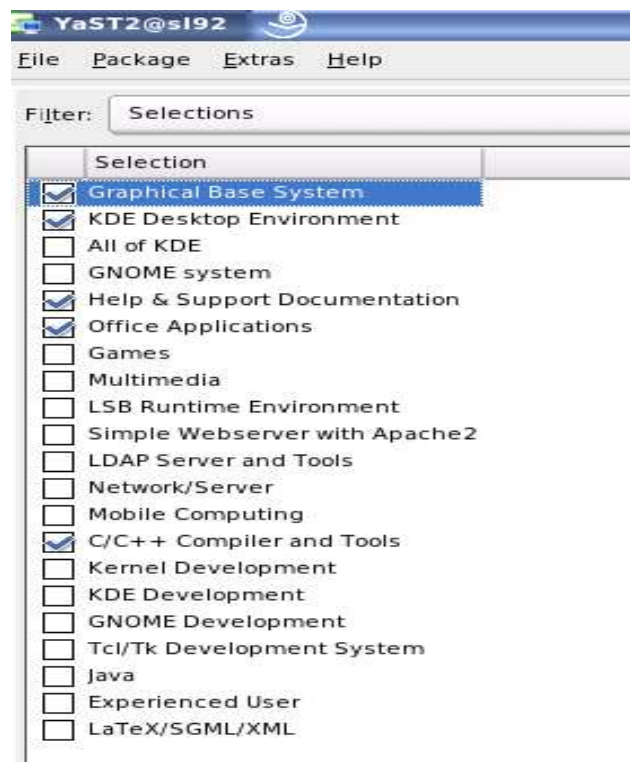
## Installation Steps

### 1. Install SUSE LINUX Operating System

Follow the Installation instructions provided in the SLES9 install manual.

SLES9 with default packages along with “C/C++ Compiler and Tools” is sufficient for Oracle 10g R1 (10.1.0.3) install.

Check whether C/C++ compiler is installed. “gcc --version” will show “gcc (GCC) 3.3.3 (SUSE LINUX)”. If gcc is not installed, then use YaST setup tool to install “C/C++ Compiler and Tools”.



### 2. 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.

**Note:** orarun is only available on x-86. You can use this orarun to other platforms (x86-64). On these platforms please comment following line from “/etc/profile.d/oracle.sh” and “/etc/init.d/oracle file”:

```
#test -d /lib/i686 && export LD_ASSUME_KERNEL=2.2.5
```

## orarun :

1. Install orarun package from SLES9 (mount CD3). You can use YaST setup tool or manual installation instruction to install orarun packages.

```
rpm -i /media/cdrom/suse/i586/orarun-1.8-109.5.i586.rpm
```

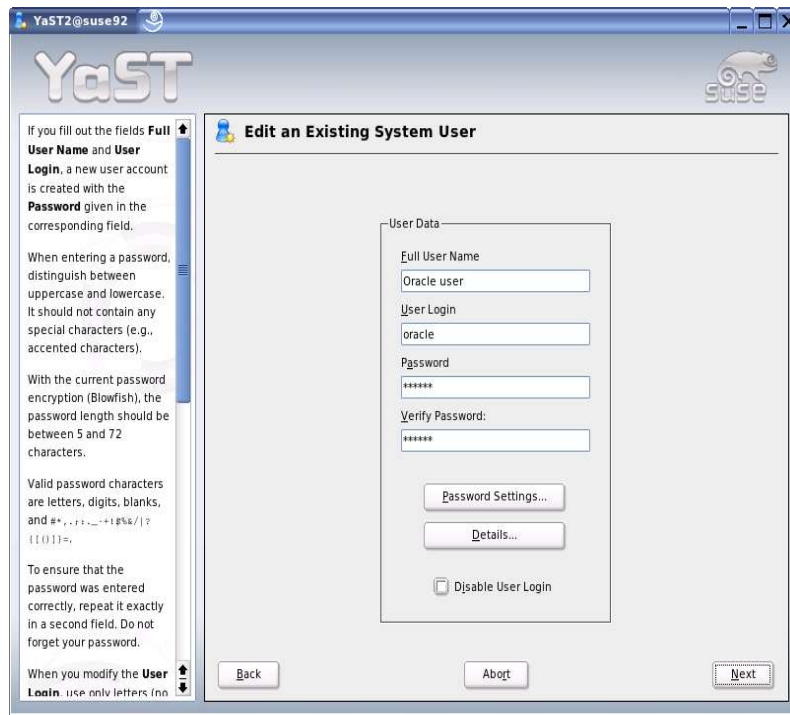
2. The account for oracle user is disabled. Enable it, by changing the shell for the "oracle" user from "/bin/false" to "/bin/bash", either by using YaST setup tool or by editing the "/etc/passwd" file.

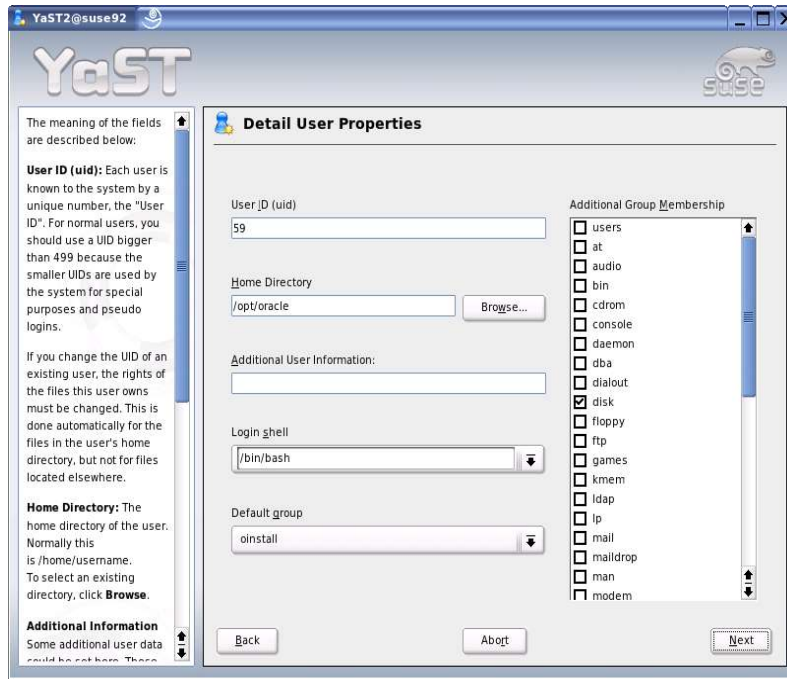
Also, set a new password for user "oracle" i.e. "/usr/bin/passwd oracle".

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:





6. Change Oracle home directory by editing ORACLE\_HOME variable in “/etc/profile.d/oracle.sh” file.  
ORACLE\_HOME=\$ORACLE\_BASE/product/10gR1
7. Default ORACLE\_SID set by orarun install is “mydb”. Change it to your preferred name in “/etc/profile.d/oracle.sh” file.
8. Run “/usr/sbin/rcoracle start “ to set kernel parameters.
9. Exist from current session and login as new “**oracle**” user.

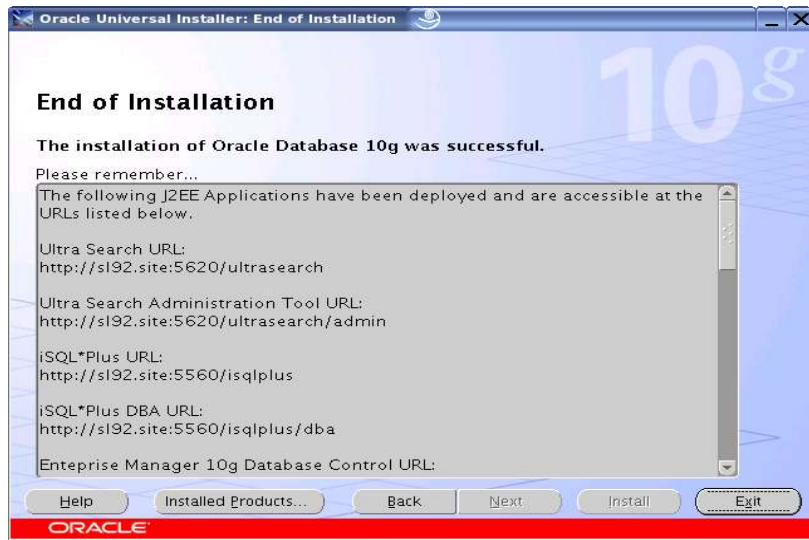
### 3. Oracle 10g R1 (10.1.0.3) Installation

1. Get Oracle 10g R1 (10.1.0.3) Software from oracle web (<http://www.oracle.com/technology/software/products/database/oracle10g/htdocs/linuxsoft.html>) or use your Oracle 10g\_DB CD. If you have downloaded SW ( ship.db.lnx32.cpio.gz) then use gunzip and cpio to extract files:
  - a) gunzip ship.db.lnx32.cpio.gz
  - b) cpio -idmv < ship.db.lnx32.cpio
2. Make sure you are logged in as “**oracle**” user.
3. Run Oracle Universal installer : ./runInstaller

**Note:** SLES9 comes with latest version of openmotif package.  
Please ignore openmotif warning and continue with the installation.

4. Installation will walk you through with self explanatory instructions. Here are screen-shots from simple Oracle 10g Installation:



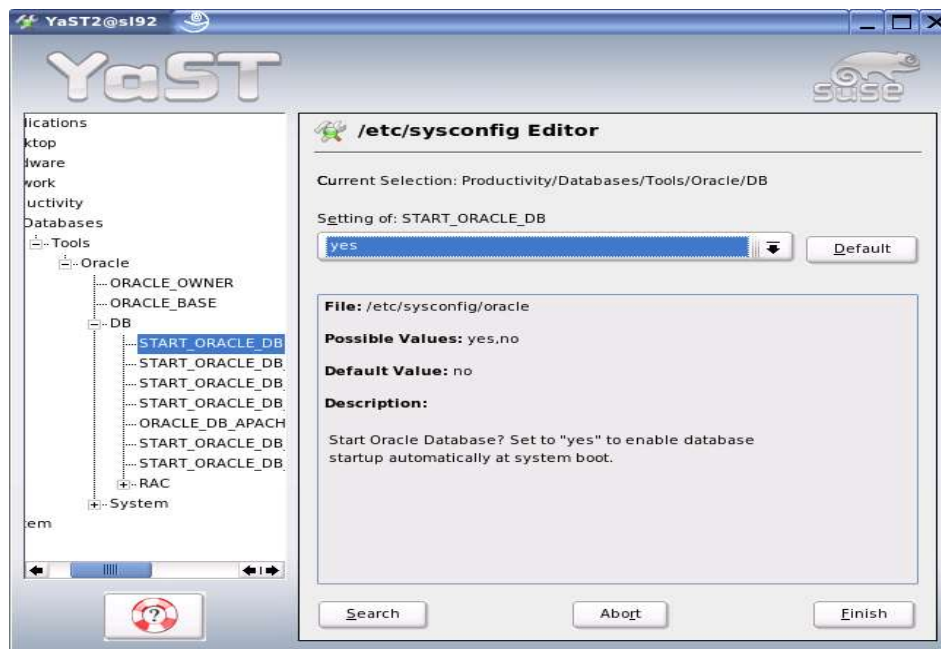


#### 4. Oracle Database Start at boot time

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`



## 5. Oracle Enterprise Manager

1. Start Oracle listener, If it is not already started by “lsnrctl start”. If it fails, then make sure your listener.ora file has proper SID\_DESC entry.

```
# listener.ora Network Configuration File: /
opt/oracle/product/10gR1/network/admin/listener.ora
# Generated by Oracle configuration tools.

...
(SID_DESC =
(SID_NAME = orcl)
(ORACLE_HOME = /opt/oracle/product/10gR1)
(GLOBAL_NAME = ORCL)
)
....
```

2. If dbconsole Oracle services is not started, then start it manually by entering following command “emctl start dbconsole”.
3. Use Enterprise Manager web interface to do routine database administration and performance tuning tasks.

URL: <http://localhost:5500/em>

The screenshot displays the Oracle Enterprise Manager (SYS) interface for database 'orcl'. The page is titled 'ORACLE Enterprise Manager 10g Database Control' and shows the following details:

- General:** Status is Up, Up Since Nov 9, 2004 9:55:17 AM, Time Zone PST, Availability (%) 86.58 (Last 24 hours), Instance Name orcl, Version 10.1.0.3.0, Read Only No, Oracle Home /opt/oracle/product/10gR1, Listener LISTENER\_sles9.site, Host sles9.site. A 'Shutdown' button is visible.
- Host CPU:** A line graph showing CPU usage for 'Other' and 'orcl' over time. Run Queue is 0.07, Paging (pages per second) is 0.0.
- Active Sessions:** A pie chart showing session distribution: CPU (0.01), User I/O (0.01), and Wait (97.06). Active Sessions is 0.01, SQL Response Time (%) is 97.06 (compared to baseline).
- High Availability:** Instance Recovery Time (seconds) 12, Last Backup n/a, Archiving Disabled, Archive Area Used (%) n/a, Flashback Logging Disabled.
- Space Usage:** Database Size (GB) 1, Problem Tablespaces 0, Segment Findings Not Configured, Policy Violations 0, Dump Area Used (%) 33.
- Diagnostic Summary:** Performance Findings 0, All Policy Violations 11 (with a red 'x' icon), Alert Log No ORA-errors.
- Alerts:** Critical 0, Warnings 0.

## 6. HTML DB Install

Please do following before starting Oracle Universal Installer.

1. Make sure Oracle database is up and It is manageable via Enterprise Manager web interface.
2. Edit **/etc/profile.d/oracle.sh** file to unset ORA\_NLS33 variables.  
`#unset ORA_NLS33`
3. Create symbolic link to start Apache Server.  
`#ln -s /usr/lib/libdb.so.3 /usr/lib/libdb.so.2`

## 7. Async I/O

You can enable async i/o by doing:

1. `cd $ORACLE_HOME/rdbms/lib`  
`make -f ins_rdbms.mk async_on`  
`make -f ins_rdbms.mk ioracle`
2. Add "filesystemio\_options=asynch" to  
`$ORACLE_BASE/admin/<your_SID>/pfile`
3. Restart your database by `dbshut; dbstart` to make this change effective.

**Enjoy!**