Oracle 11*g* R1(11.1.0.6.0)
on
SUSE Linux Enterprise Server 10 (SP1) - x86

(How to Install)

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Introduction

Oracle 11g R1 is the latest release from Oracle and at this time it's released and certified on x86 version of SUSE Linux Enterprise Server 10 Service Pack 1 (SLES10 SP1). Visit Oracle Metalink for latest updates on certification of other platforms (http://www.oracle.com/technology/support/metalink/index.html).

This document is not a replacement of an official Oracle Installation manual but provided as a quick steps to install Oracle 11g R1 on SLES10 SP1. If you encounter any problem, please post your question to suse-oracle@suse.com.

Note: Information provided here are applicable to openSUSE 10.x (http://en.opensuse.org/Oracle_on_openSUSE) but it's not supported in production environment by Oracle and Novell.

Required Software and Reference Documents

Novell

- SUSE Linux Enterprise Server 10 SP1 (http://www.novell.com/products/server/eval.html)
- SUSE Linux Enterprise Server 10 SP1 Documentation (http://www.novell.com/documentation/sles10/)

Oracle

- Oracle Database 11g Release 1 (11.1) Enterprise/Standard Edition (http://www.oracle.com/technology/software/products/database/index.html)
- Oracle Database 11g Release 1 (11.1) Documentation (http://www.oracle.com/technology/documentation/database.html)

Hardware Requirements

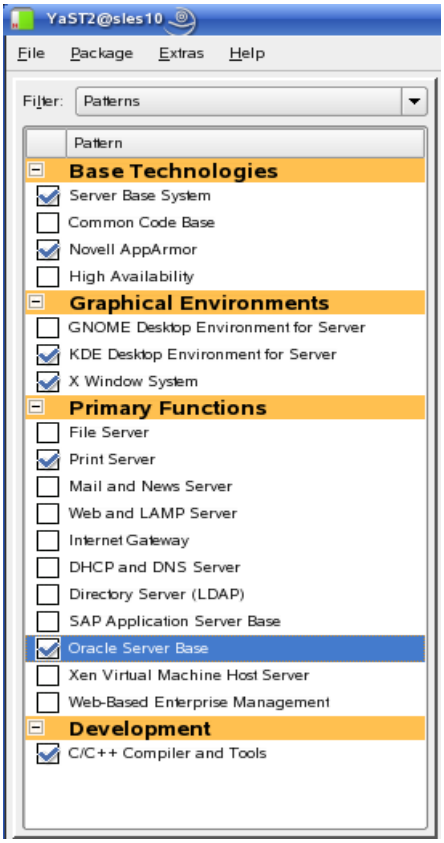
The system must meet the following minimum hardware requirements:

Requirement	Minimum Value
RAM	1024 MB
Swap space	Approx. twice the size of RAM
Disk space in /tmp	400 MB
Disk space for software files	3.5 GB
Disk space for database files	1.2 GB

Installation Steps

1. Install SUSE Linux Operating System

Follow the Installation instructions provided in the SLES10 SP1 installation manual. In general, SLES10 SP1 with default packages along with Oracle Server Base, and “C/C++ Compiler and Tools” is sufficient for Oracle 11g R1 install. Oracle Server Base selection provides orarun package. Here is screen-shot of selected patterns from SLES10 SP1 (x86) server.



Note: Oracle Installer checks for two additional packages (unixODBC-devel and sysstat). Please add these two manually (use search option) to avoid Oracle Universal Installer warning later.

2. SUSE Linux Server Checks

1. Please 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”. Please refer Oracle Install manual If you want to install only selected packages.

```
sles10:/ # gcc --version
gcc (GCC) 4.1.2 20070115 (prerelease) (SUSE Linux)
Copyright (C) 2006 Free Software Foundation, Inc.
This is free software; see the source for copying conditions.  There is NO
warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

sles10:/ #
```

2. Use SPident command or view contents of SuSE-release file to verify that server is updated properly to Service Pack 1.

```
sles10:/ # cat /etc/SuSE-release
SUSE Linux Enterprise Server 10 (i586)
VERSION = 10
PATCHLEVEL = 1
sles10:/ # SPident -v

Summary           (using 644 packages)
Product/ServicePack     conflict        match  update      (shipped)
SLE-10-i386          0    0%    290 45.0%       0   (2524 11.5%)
SLE-10-i386-SP1      0    0%    644  100%       0   (2005 32.1%)


CONCLUSION: System is up-to-date!
  found    SLE-10-i386-SP1

sles10:/ #
```

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

```
# 127.0.0.2        sles10.novell.com sles10
  192.168.0.12     sles10.novell.com sles10
```

3. Oracle Install prerequisites

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

orarun :

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

   For SUSE Linux Enterprise Desktop 10 and openSUSE 10.x, you can download orarun package from Novell ftp site (http://ftp.novell.com/partners/oracle/sles-10/) and install manually.

   #rpm -ivh orarun-1.9-21.15.i586.rpm

Note: Please edit the value of RMEM_MAX and RMEM_DEFAULT from 262144 (old) to 4194304 (new) in /etc/sysconfig/oracle. Next version of orarun package will have this new value.

2. The account created by orarun package for oracle user is by default disabled. Enable oracle user account either manually or by using YaST as a root user:

    1. Manual

        1. Change the shell for the "oracle" user from "/bin/false" to "/bin/bash" by editing the "/etc/passwd" file.

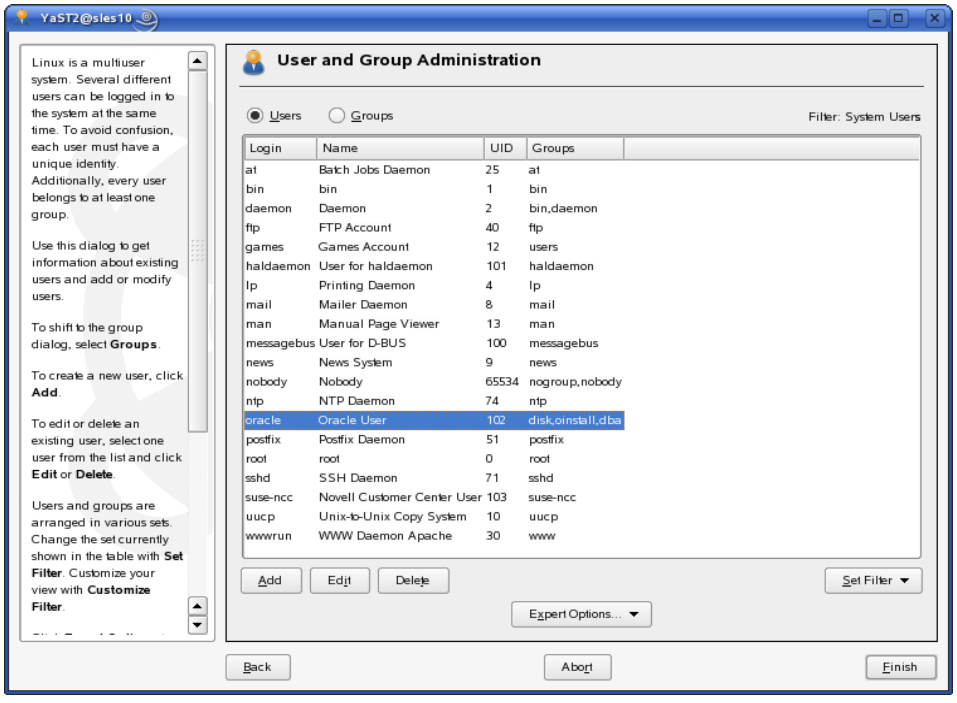
        2. Set a new password for user “oracle” i.e. “/usr/bin/passwd oracle”.

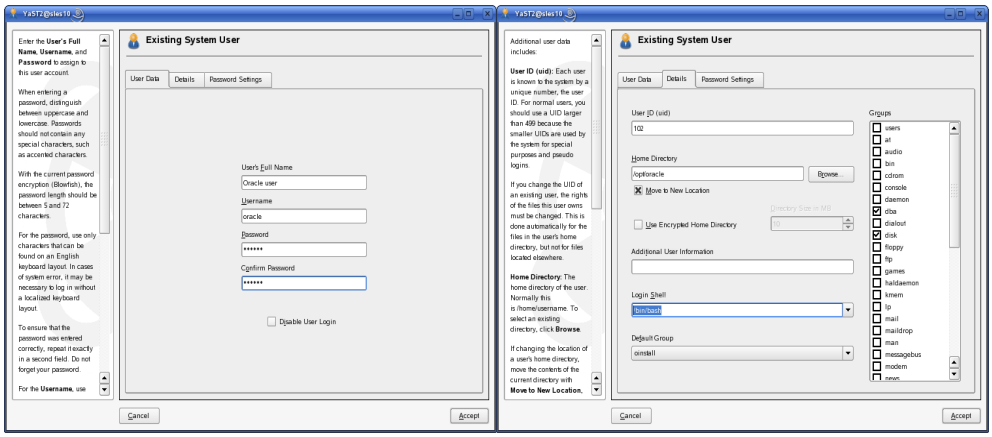
```
sles10:/ # grep oracle /etc/passwd
oracle:x:102:103:Oracle user:/opt/oracle:/bin/bash
sles10:/ # passwd oracle
Changing password for oracle.
New Password:
Reenter New Password:
Password changed.
sles10:/ #
```

    2. Using YaST - SUSE GUI setup tool.

    /sbin/yast2 -> “security and Users” -> ”User Management”
    (Select "Users" and set “System Users” filter to see oracle user.)

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





3. Change default oracle environment variables set by orarun in /etc/profile.d/oracle.sh file:

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

       ORACLE_HOME=$ORACLE_BASE/product/11gR1/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 Universal Installer will ask Global Database Name, this name should match to ORACLE_SID defined here.

4. Run "/usr/sbin/rcoracle start " to set kernel parameters.

```
sles10:/ # /usr/sbin/rcoracle start

################################################################################
#                  Begin of   O R A C L E   startup section                    #
################################################################################

Oracle Database Software not yet installed!

 SETTINGS start from /etc/sysconfig/oracle
 - Set Kernel Parameters for Oracle:   yes
```

5. Logout from current root session and login as a user "**oracle**". Following is a snap-shot verifying current user:

```
ORACLE_SID=orcl
ORACLE_BASE=/opt/oracle
ORACLE_HOME=/opt/oracle/product/11gR1/db
oracle@sles10:~> id
uid=102(oracle) gid=103(oinstall) groups=6(disk),103(oinstall),104(dba)
oracle@sles10:~>
```

4. Oracle 11g Installation

1. Download Oracle 11g R1 (11.1.0.6.0) Software from oracle web site (linux_11gR1_database.zip) and extract files:

```
-rw-r--r-- 1 oracle oinstall 1844533232 2007-09-16 22:07 linux_11gR1_database.zip
oracle@sles10:~/SW> unzip linux_11gR1_database.zip
```

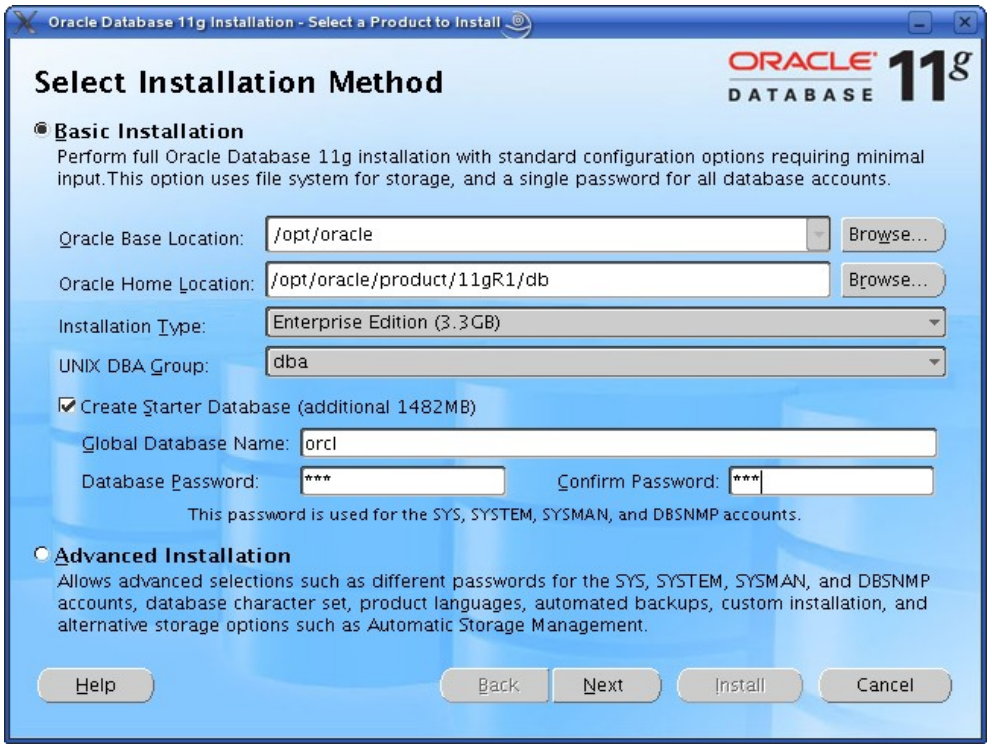
   1. Make sure you are logged in as "**oracle**" user.

   2. Run Oracle Universal installer : database/runInstaller

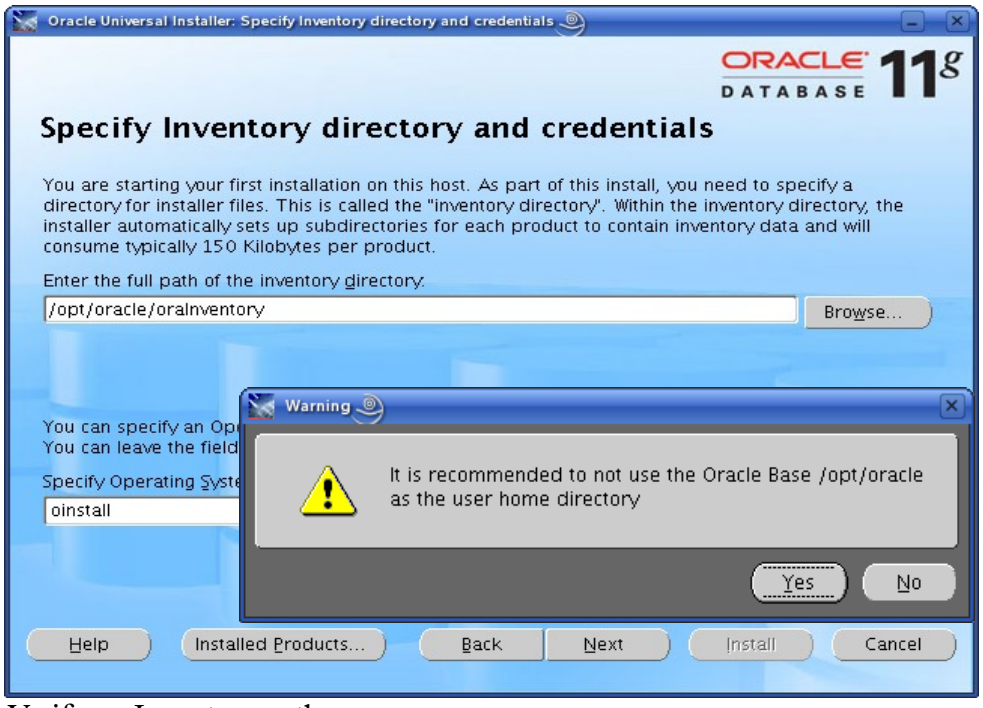
```
oracle@sles10:~/SW> database/runInstaller
Starting Oracle Universal Installer...

Checking Temp space: must be greater than 80 MB.   Actual 13144 MB    Passed
Checking swap space: must be greater than 150 MB.   Actual 2055 MB    Passed
Checking monitor: must be configured to display at least 256 colors.    Actual 16777
216    Passed
Preparing to launch Oracle Universal Installer from /tmp/OraInstall2007-09-16_10-14-
19PM. Please wait ...oracle@sles10:~/SW>
```

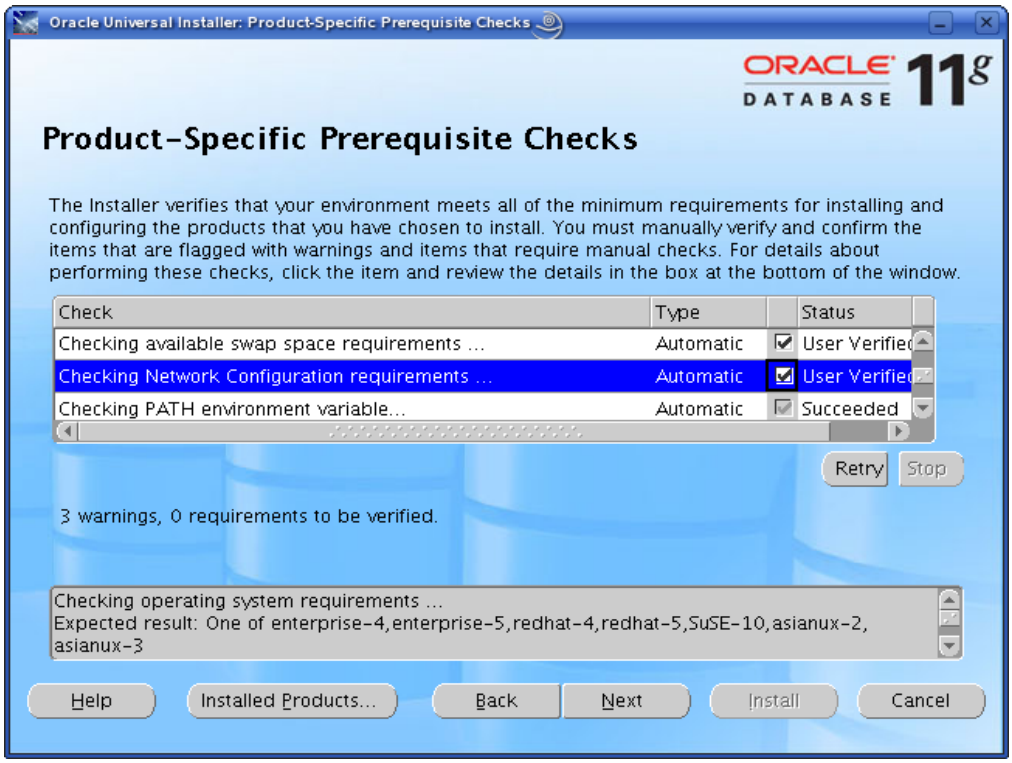
Oracle Universal Installer will walk you through with self explanatory instructions. Here are screen-shots from simple Oracle 11g Installation:



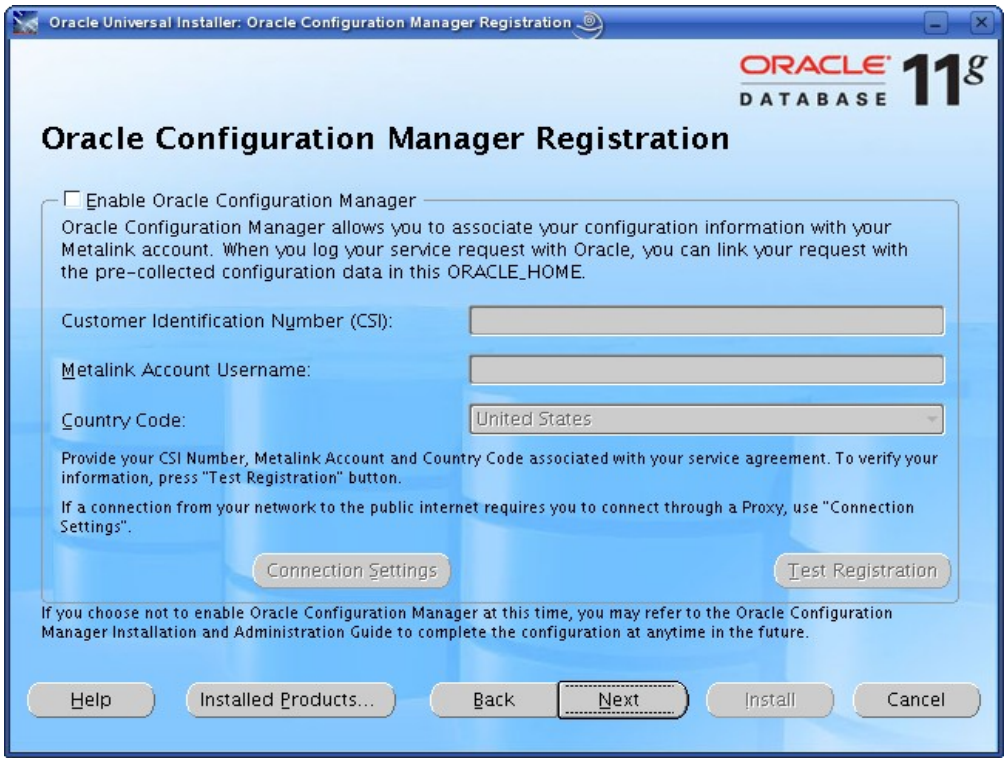
Verify Oracle Install location and Assign Database Password.



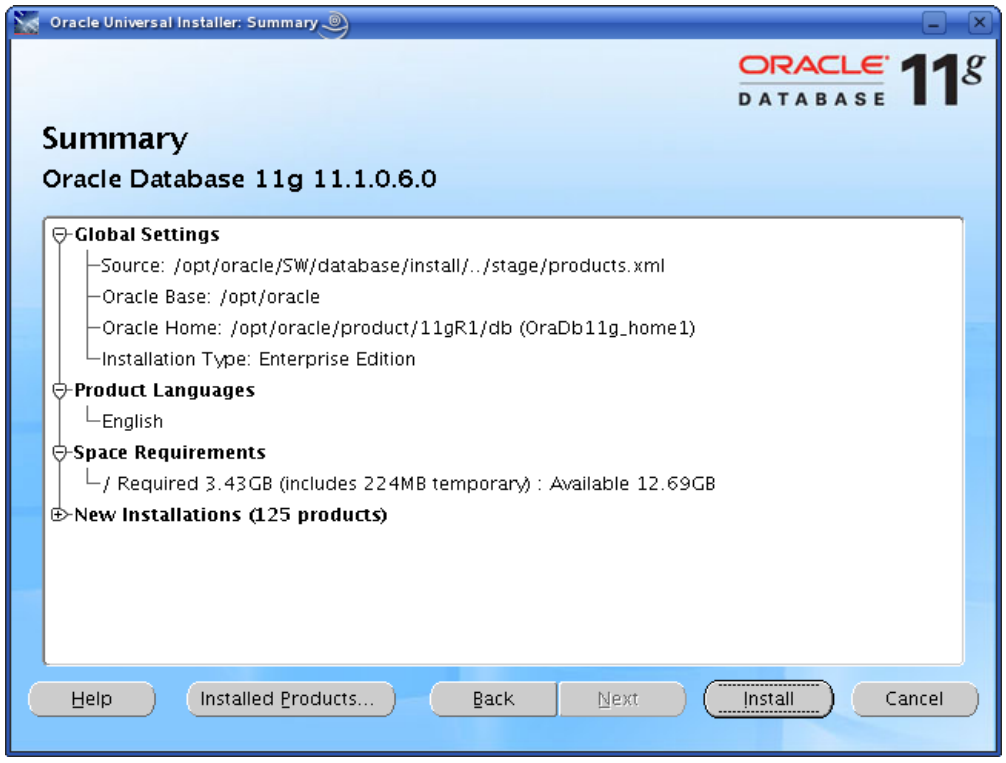
Verify oraInventory path.



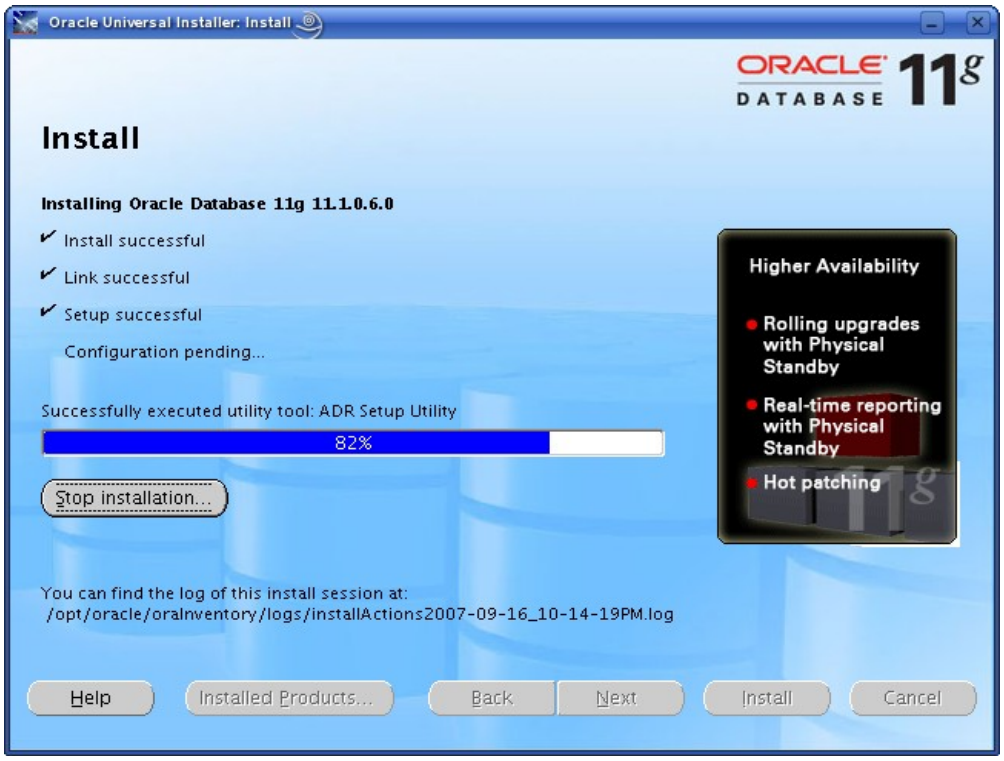
Here verify all prerequisite checks.

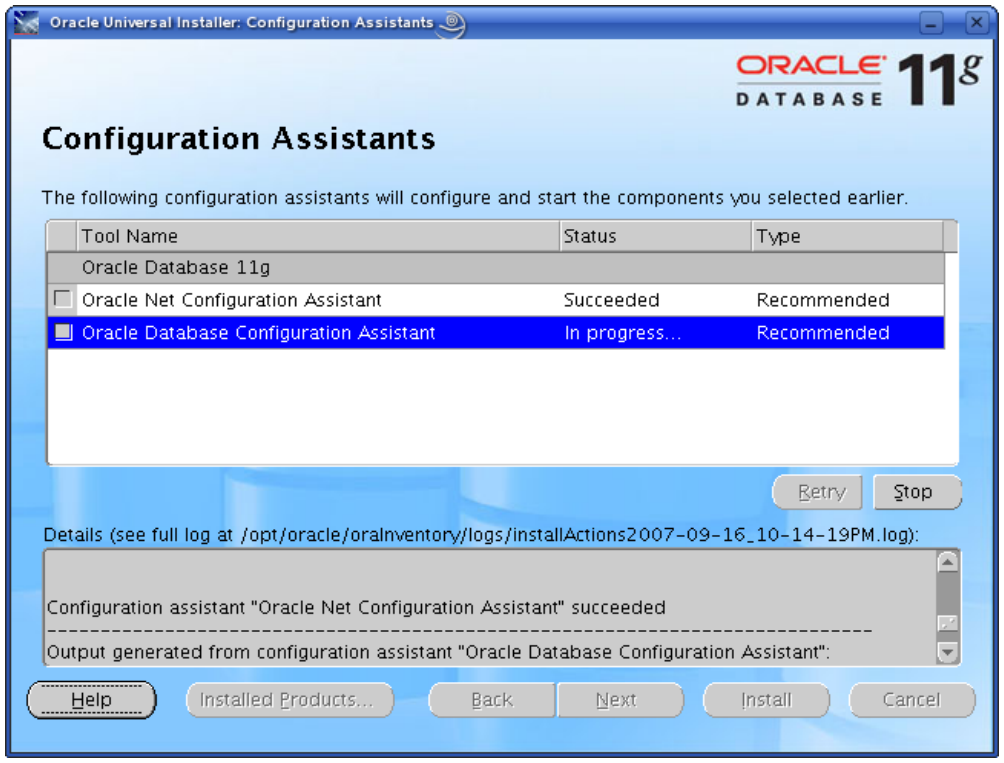


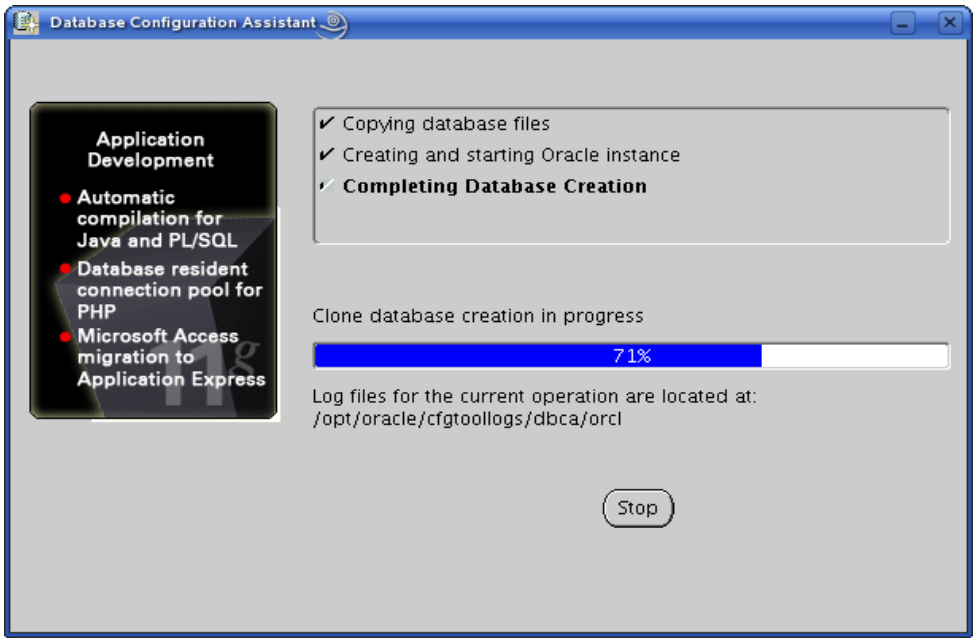
Enter credentials to use Oracle Configuration Manager. Skip for test server.

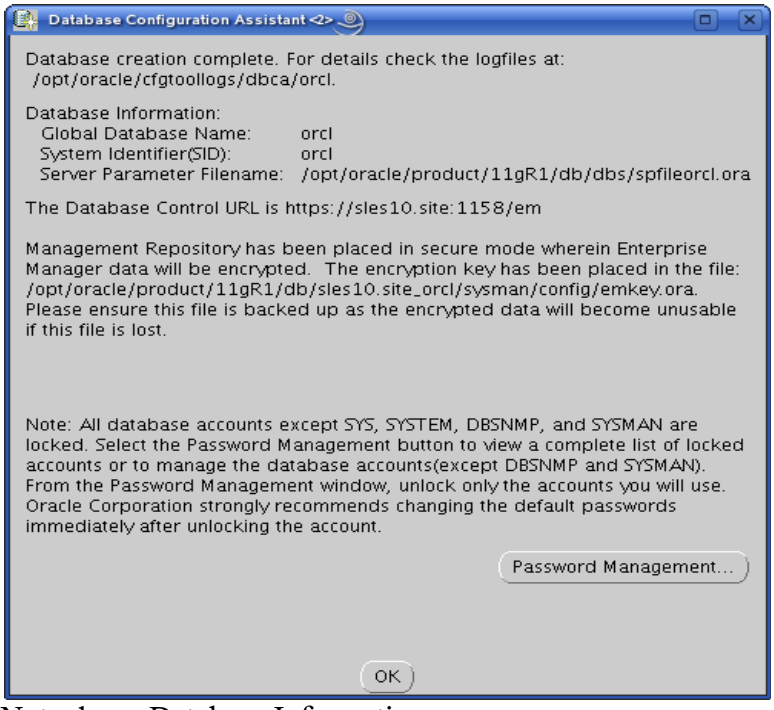


Review Oracle Database 11g Installation summary and click Install.

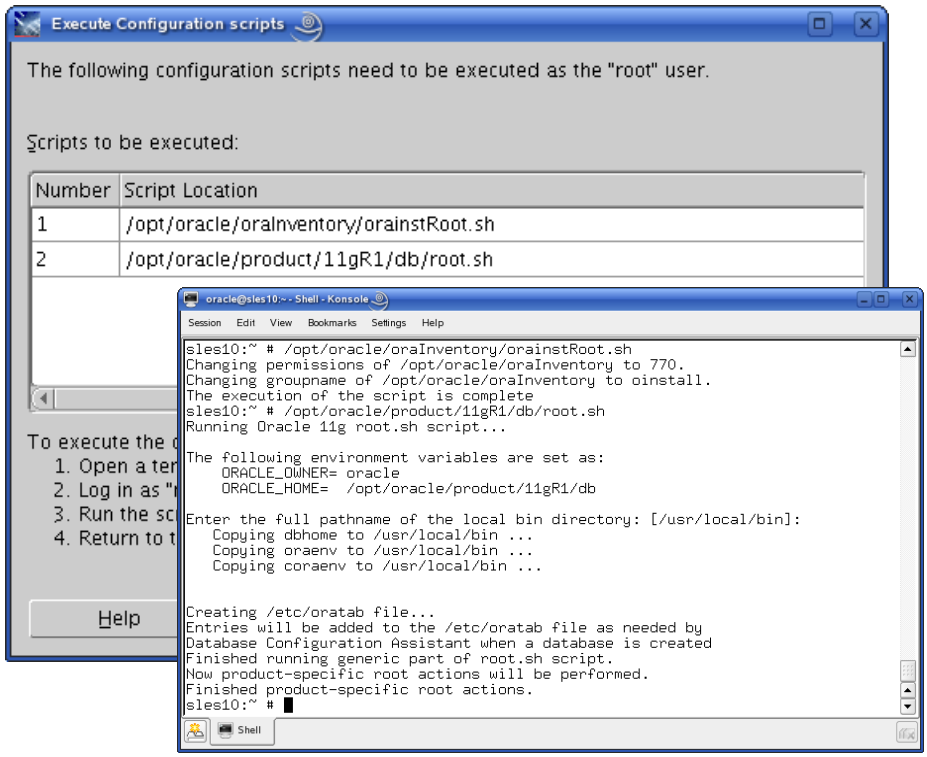

Oracle Universal Installer: Install
ORACLE DATABASE 11g
Install
Installing Oracle Database 11g 11.1.0.6.0
Install successful
Link successful
Setup successful
Configuration pending...
Successfully executed utility tool: ADR Setup Utility
82%
Stop installation...
Higher Availability
Rolling upgrades with Physical Standby
Real-time reporting with Physical Standby
Hot patching
You can find the log of this install session at:
/opt/oracle/oraInventory/logs/installActions2007-09-16_10-14-19PM.log
Help
Installed Products...
Back
Next
Install
Cancel


Oracle Universal Installer: Configuration Assistants
ORACLE DATABASE 11g
Configuration Assistants
The following configuration assistants will configure and start the components you selected earlier.
Tool Name
Status
Type
Oracle Database 11g
Oracle Net Configuration Assistant
Succeeded
Recommended
Oracle Database Configuration Assistant
In progress...
Recommended
Retry
Stop
Details (see full log at /opt/oracle/oraInventory/logs/installActions2007-09-16_10-14-19PM.log):
Configuration assistant "Oracle Net Configuration Assistant" succeeded
Output generated from configuration assistant "Oracle Database Configuration Assistant":
Help
Installed Products...
Back
Next
Install
Cancel

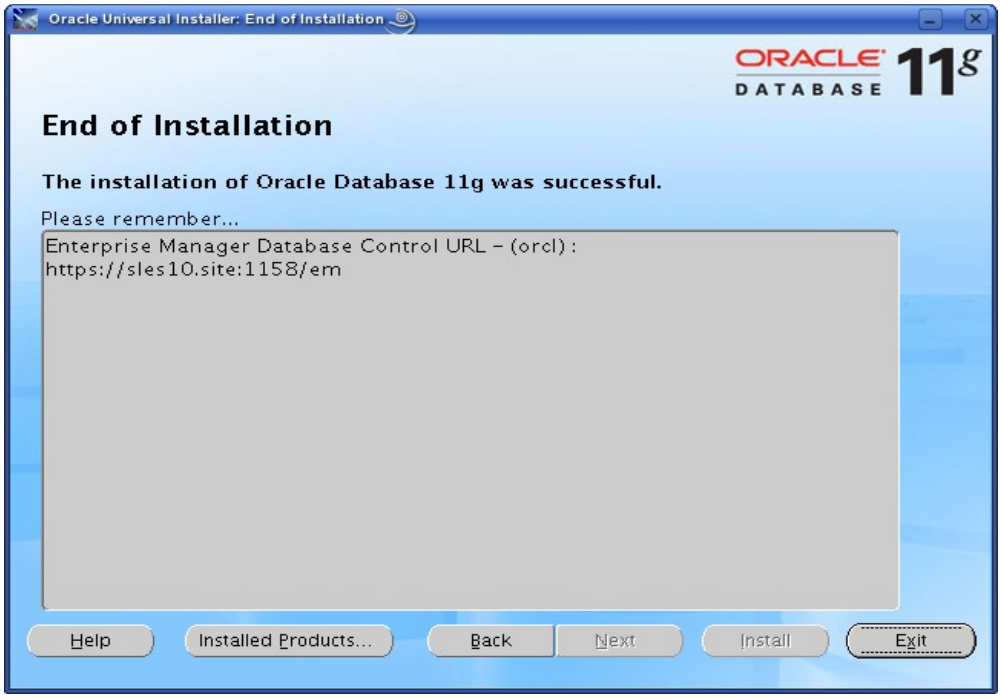




Note down Database Information.



Execute orainstRoot.sh and root.sh configuration scripts as a root user.



Installation completed successfully.

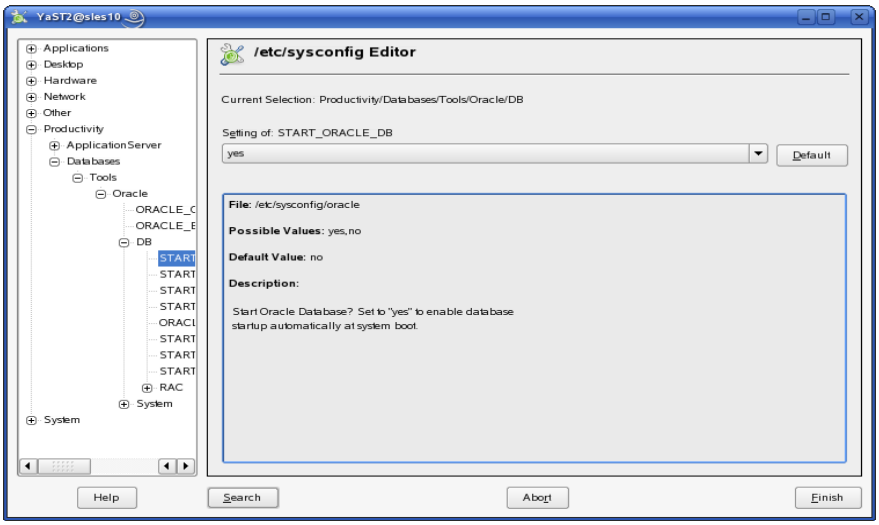
5. Oracle Database Start at boot time

1. Edit /etc/oratab entry corresponding to your database to “Y”.

```
orcl:/opt/oracle/product/11gR1/db:Y
```

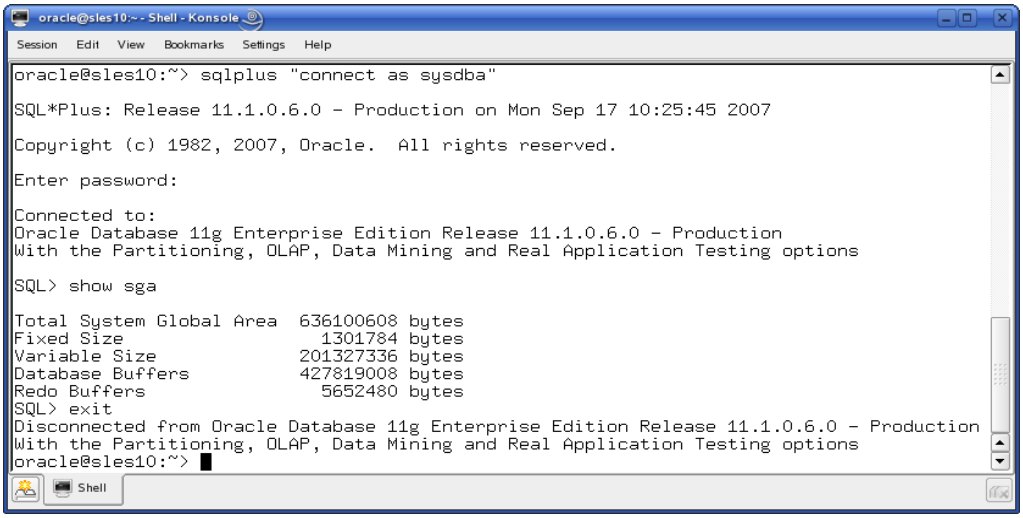
2. Set parameter START_ORACLE_DB="yes" in “/etc/sysconfig/oracle” file. You can edit file “/etc/sysconfig/oracle” manually or use YaST setup tool to change oracle specific parameters.

   “/sbin/yast2->System->/etc/sysconfig Editor ->Productivity->Databases”



6. sqlplus: Startup and Shutdown of the Oracle11g Database (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.

7. Oracle Enterprise Manager

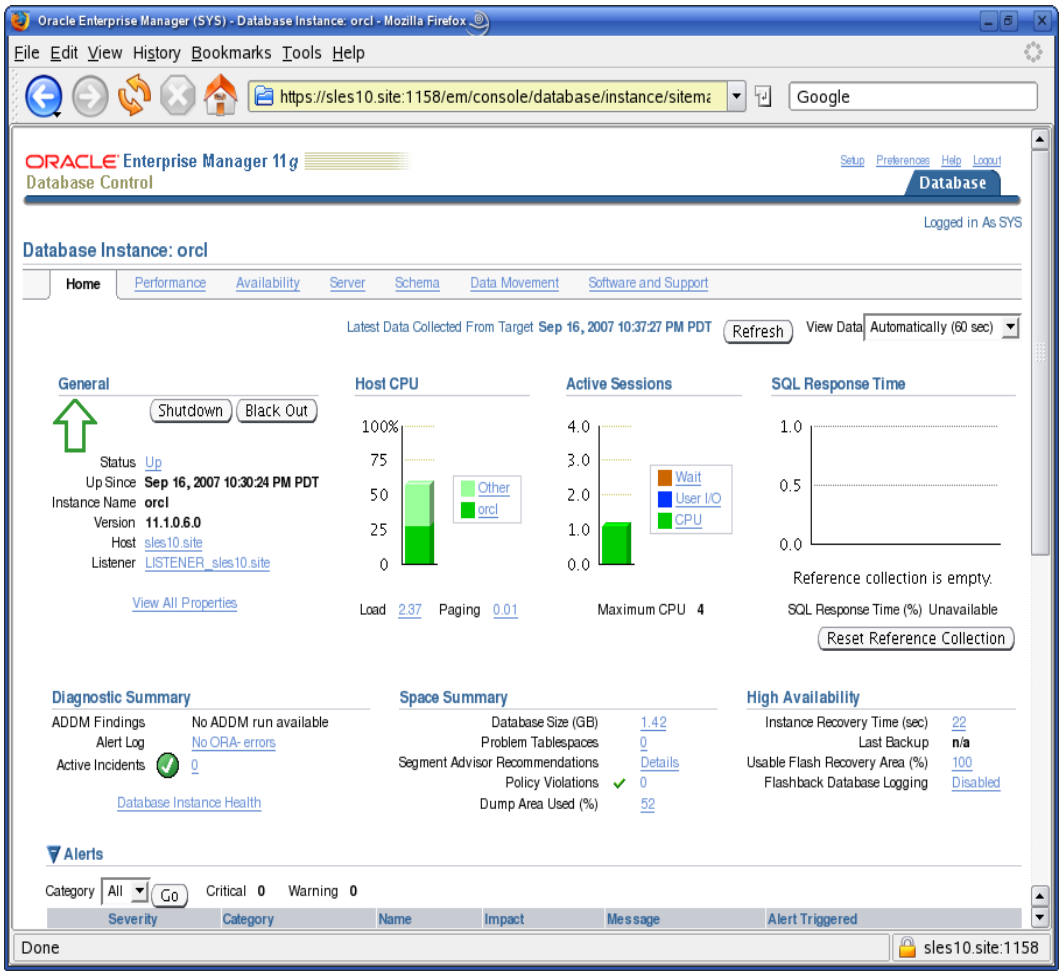
1. Start Enterprise Manager services, if is not running: "emctl start dbconsole"

   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. Verify Enterprise Manager service is running:

```
oracle@sles10:~> emctl status dbconsole
Oracle Enterprise Manager 11g Database Control Release 11.1.0.6.0
Copyright (c) 1996, 2007 Oracle Corporation.  All rights reserved.
https://sles10.site:1158/em/console/aboutApplication
Oracle Enterprise Manager 11g is running.
------------------------------------------------------------------
Logs are generated in directory /opt/oracle/product/11gR1/db/sles10.site_orcl/sysman/log
oracle@sles10:~>
```

3. Use Enterprise Manager web interface (http://localhost:1158/em) to perform routine database administration and performance tuning tasks.



History:

Date	Changes
09/17/2007	Initial Release.
11/08/2007	Added RMEM_* , sysstat, and unixODBC information

Enjoy!