Oracle Database10*g* R2 (10.2.0.1)
on
SUSE Linux 10.0

Introduction

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Introduction

This white paper is designed to help you get started with Oracle 10g R2 on SUSE Linux 10.0. This will help you to work with latest SUSE OS and Oracle Database 10g R2. Oracle 10g R2 is supported and certified only on SUSE LINUX Enterprise Server 9 (SLES 9) but occasionally for development and testing purposes you will prefer to have it up and running on your desktop for quick access.

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

Required Software

You need SUSE Linux 10.0 and Oracle 10g R2. Also, optional orarun package will help you to make Oracle pre-Install task simple.

Novell/SUSE

1. Novell SUSE Linux 10.0 (SUSE OSS version: http://www.opensuse.org)
2. orarun : Get latest version from (http://ftp.novell.com/partners/oracle/sles-9/)
3. Novell/SUSE Documents are available here: http://www.novell.com/documentation/
4. For more “Oracle on SUSE” related information visit http://www.novell.com/oracle .

Oracle

Oracle database 10g R2 Software is available for download from OTN.
File name: 10201_database_linux32.zip

1. URL to download SW:
   http://www.oracle.com/technology/software/products/database/oracle10g/htdocs/10201linuxsoft.html.

2. Oracle Documents are available on :
   http://www.oracle.com/technology/documentation/database10gr2.html

3. Oracle Development Tools : http://www.oracle.com/tools/index.html

Installation Steps

1. Install SUSE Linux Operating System

Follow the Installation instructions provided in the SUSE LINUX 10.0 installation manual. We will focus on Oracle related component and make sure you meet Oracle software space requirement.

SUSE Linux 10.0 with default packages along with “C/C++ Compiler and Tools” is sufficient for Oracle 10g R2 install. Here is snap-shot:

Check whether C/C++ compiler is installed. “gcc --version” will show “gcc (GCC) 4.0.2 (SUSE Linux)”. If gcc is not installed, then use YaST setup tool to install “C/C++ Compiler and Tools”.

```
sl10:/ # gcc --version
gcc (GCC) 4.0.2 20050901 (prerelease) (SUSE Linux)
Copyright (C) 2005 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.

sl10:/ #
```

2. Oracle Install prerequisites

Refer to Oracle installation document for complete list of prerequisites. Novell/SUSE provides orarun packages to automate most of the Oracle pre-install task. orarun package is not included in SUSE LINUX 10.0 as this is for SUSE LINUX Enterprise Server.

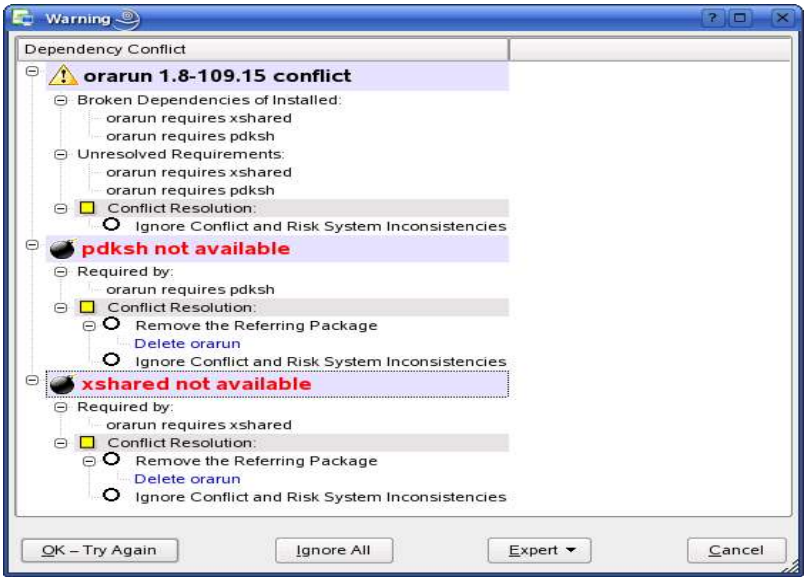
orarun :

1. Install orarun package. It will ask to install dependent packages first.

   # rpm -ivh --nodeps orarun-1.8-109.15.i586.rpm

2. Install libaio and libaio-devel from SUSE LINUX 10.0 media.

3. You might see xshared and pdksh not available conflict next time you use YaST. Ignore this as this is cosmetic error. Here is snap-shot:



4. Now orarun package is installed. Please enable newly created “oracle” user for Oracle 10g installation.

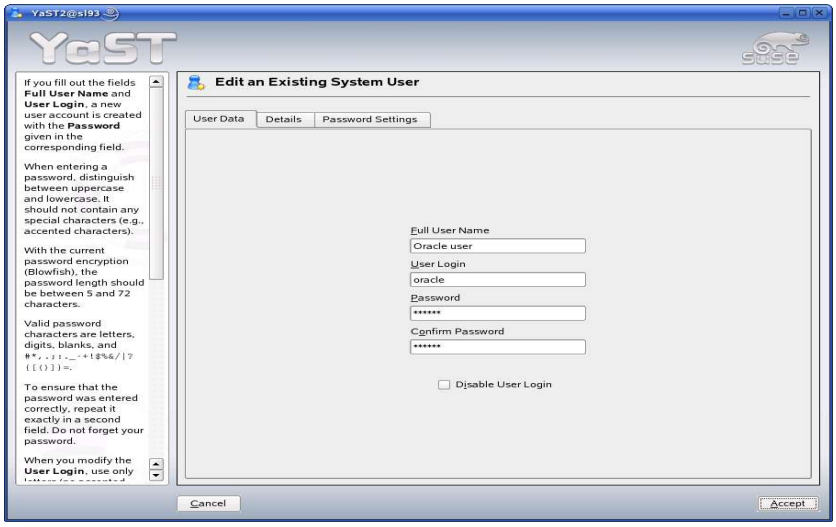
    1. The account for oracle user is disabled. Enable it, by changing the shell for the "oracle" user from "/bin/false" to "/bin/bash", either by using YaST setup tool or by editing the "/etc/passwd" file.

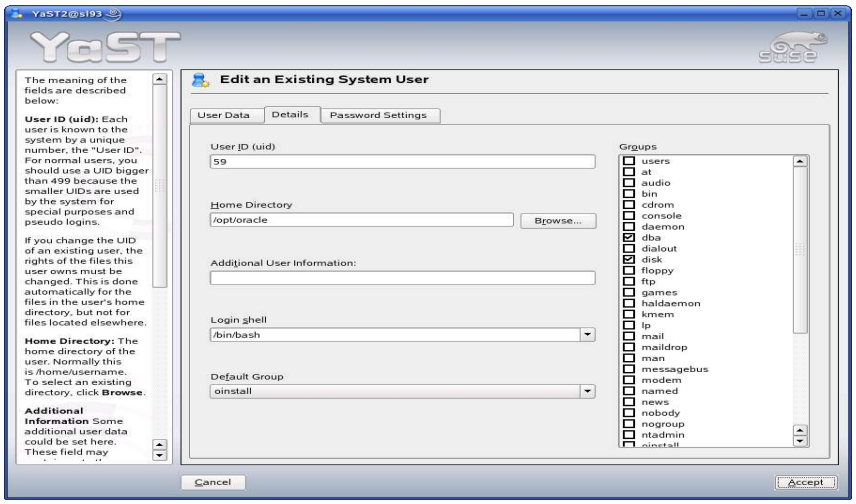
    2. Set a new password for user “oracle” i.e. “/usr/bin/passwd oracle”.

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

/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:





5. Now set your Oracle environment variables.

    1. Change Oracle home directory by editing ORACLE_HOME variable in "/etc/profile.d/oracle.sh" file.
       ORACLE_HOME=$ORACLE_BASE/product/10gR2

    2. Default ORACLE_SID set by orarun install is "mydb". 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 problem.

6. 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.

7. Exit from current root user session and login as new "**oracle**" user. Following is snap-shot verifying current user.

```
oracle@sl10:~> id
uid=59(oracle) gid=54(oinstall) groups=6(disk),54(oinstall),55(dba)
oracle@sl10:~>
```

3. Oracle 10g R2 (10.2.0.1) Installation

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

   Get Oracle 10g R2 (10.2.0.1) Software from oracle OTN web.
   1. #unzip 10201_database_linux32.zip
   2. modify "database/install/oraparam.ini" file to add support for SUSE Linux 10.0. 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
      ```

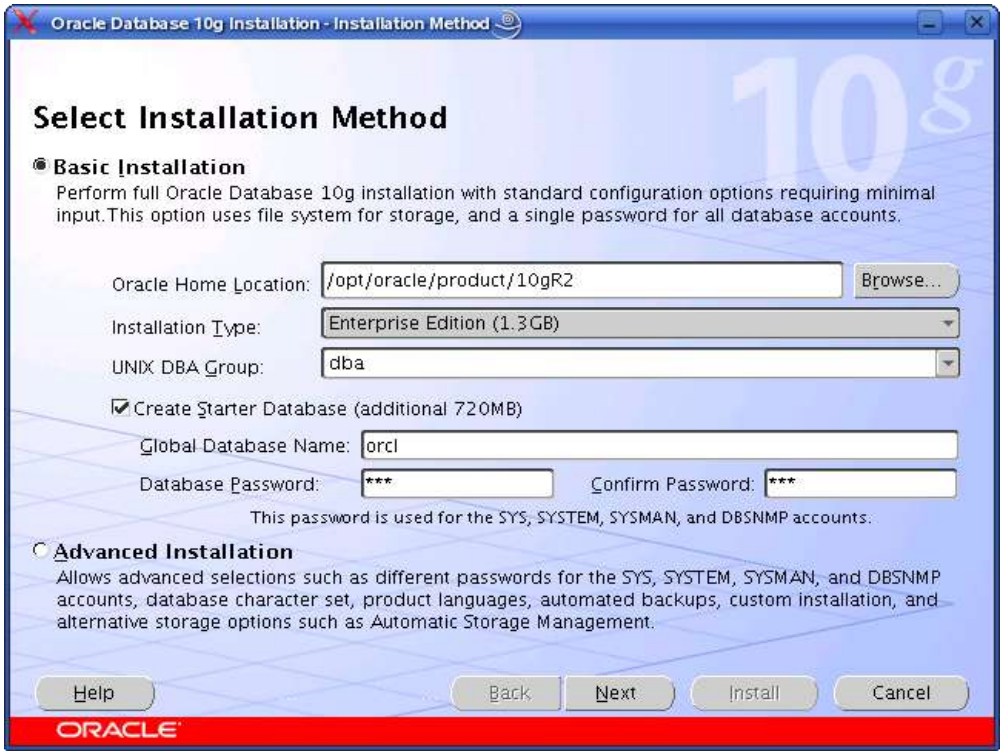
   3. You can avoid step #2 by passing "-ignoresysprereqs" to runInstaller.

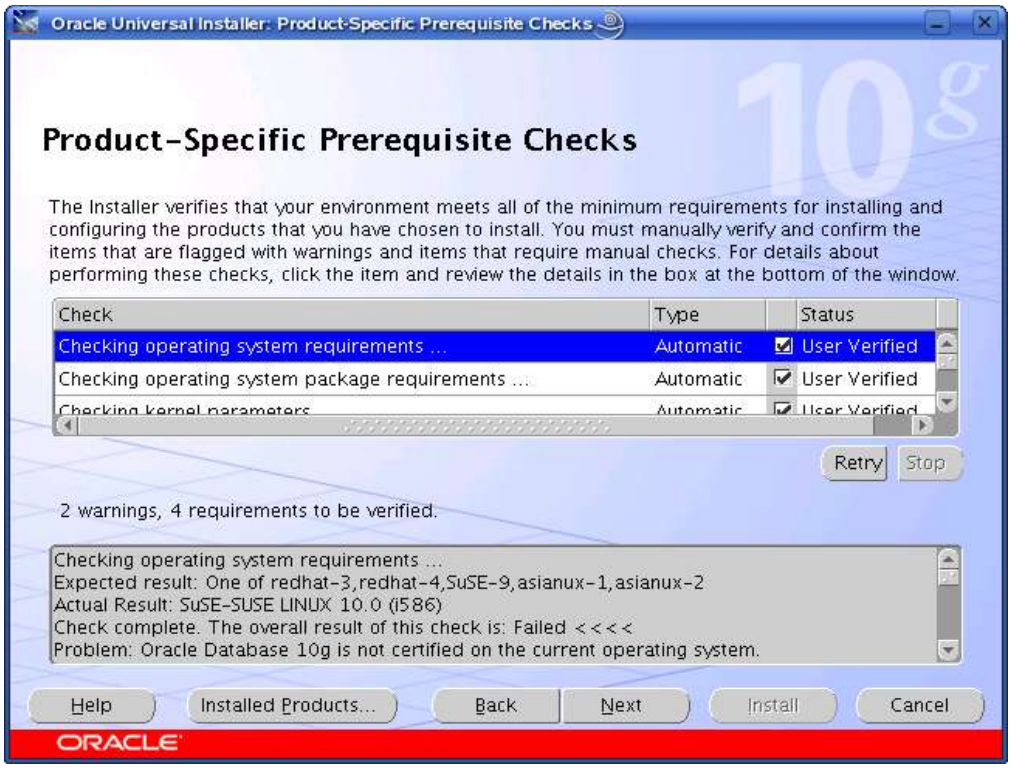
4. Run Oracle Universal installer : ./runInstaller

   If you are installing from CD mounted as /media/cdrom then "cd /tmp && /media/cdrom/database/runInstaller" will be helpful.

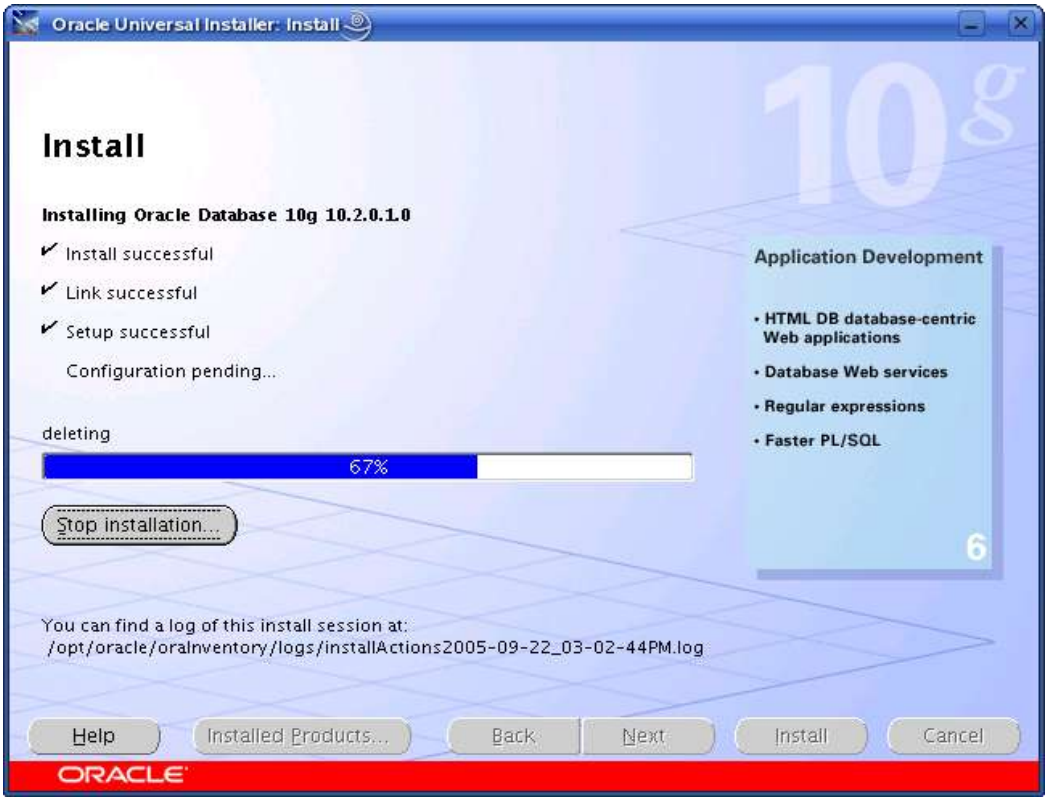
   Note: Installer will not detect SUSE Linux 10.0. Do manual check in "Product-Specific Prerequisites Checks" for OS.

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

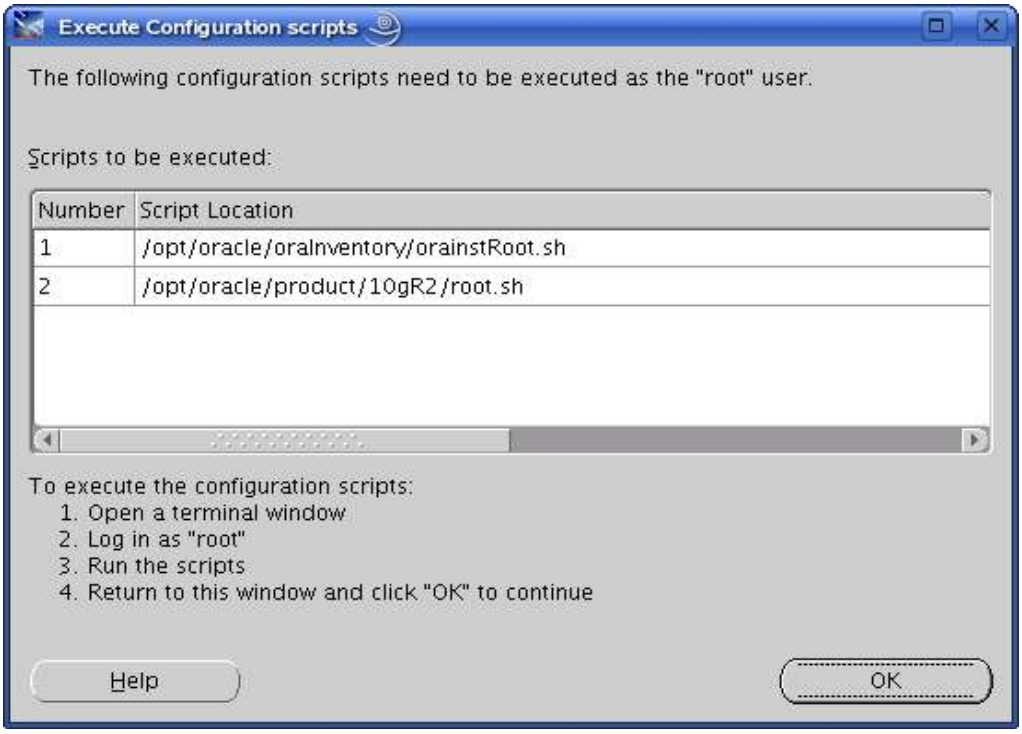


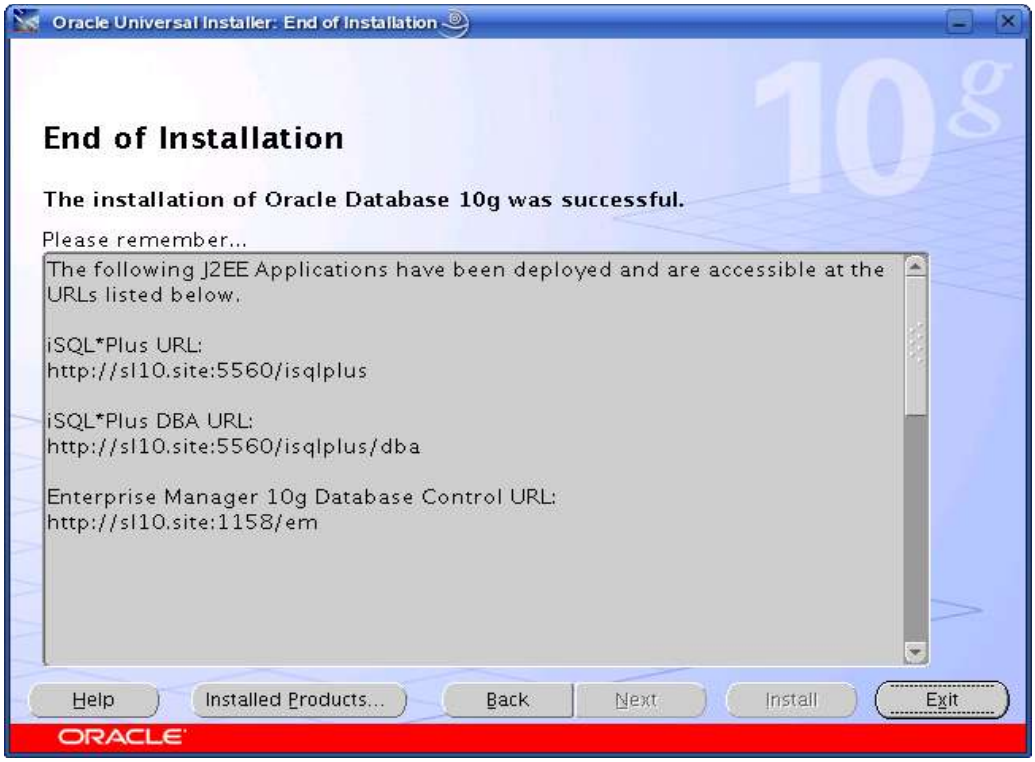

Oracle Universal Installer: Product-Specific Prerequisite Checks
Product-Specific Prerequisite Checks
The Installer verifies that your environment meets all of the minimum requirements for installing and configuring the products that you have chosen to install. You must manually verify and confirm the items that are flagged with warnings and items that require manual checks. For details about performing these checks, click the item and review the details in the box at the bottom of the window.
Check
Type
Status
Checking operating system requirements ...
Automatic
User Verified
Checking operating system package requirements ...
Automatic
User Verified
Retry
Stop
2 warnings, 4 requirements to be verified.
Checking operating system requirements ...
Expected result: One of redhat-3,redhat-4,SuSE-9,asianux-1,asianux-2
Actual Result: SuSE-SUSE LINUX 10.0 (i586)
Check complete. The overall result of this check is: Failed <<<<
Problem: Oracle Database 10g is not certified on the current operating system.
Help
Installed Products...
Back
Next
Install
Cancel
ORACLE

Oracle Universal Installer: Summary
Summary
Oracle Database 10g 10.2.0.1.0
Global Settings
Source: /sl10_10gr2/10gR2_SW/database/install/../stage/products.xml
Oracle Home: /opt/oracle/product/10gR2 (OraDb10g_home1)
Installation Type: Enterprise Edition
Product Languages
English
Space Requirements
/ Required 1.36GB (includes 108MB temporary) : Available 2.25GB
New Installations (107 products)
Agent Required Support Files 10.2.0.1.0
Assistant Common Files 10.2.0.1.0
Bali Share 1.1.18.0.0
Buildtools Common Files 10.2.0.1.0
Character Set Migration Utility 10.2.0.1.0
Help
Installed Products...
Back
Next
Install
Cancel
ORACLE


Oracle Universal Installer: Install
Install
Installing Oracle Database 10g 10.2.0.1.0
Install successful
Link successful
Setup successful
Configuration pending...
deleting
67%
Stop installation...
Application Development
• HTML DB database-centric Web applications
• Database Web services
• Regular expressions
• Faster PL/SQL
6
You can find a log of this install session at:
/opt/oracle/oraInventory/logs/installActions2005-09-22_03-02-44PM.log
Help
Installed Products...
Back
Next
Install
Cancel
ORACLE

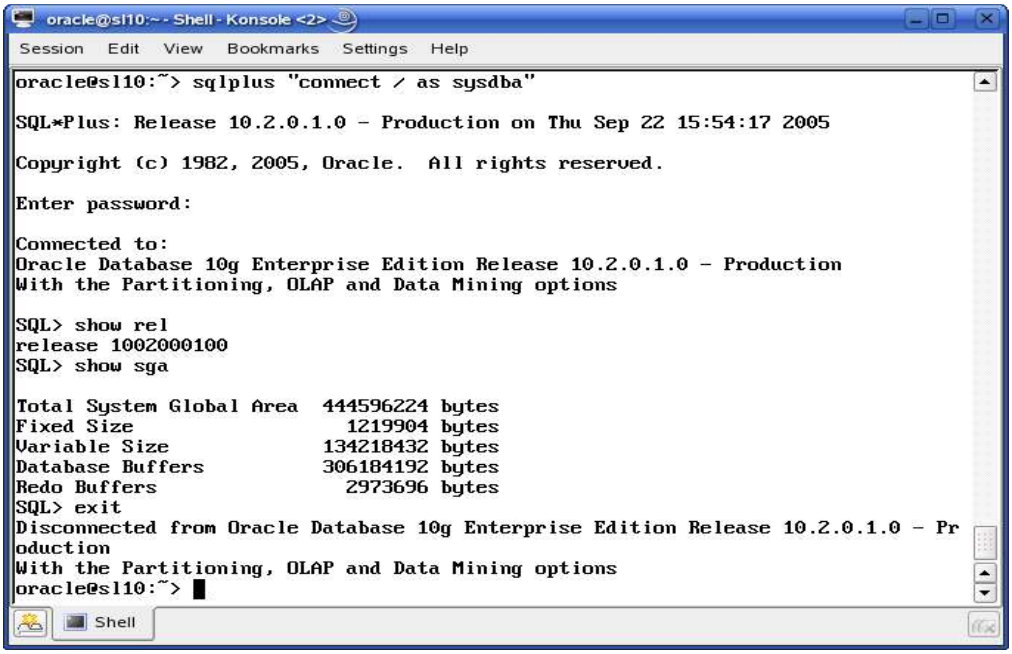
Oracle Universal Installer: Configuration Assistants
Configuration Assistants
The following configuration assistants will configure and start the components you selected earlier.
Tool Name
Status
Type
Oracle Database 10g
Oracle Net Configuration Assistant
Succeeded
Recommended
Oracle Database Configuration Assistant
Succeeded
Recommended
iSQL*Plus Configuration Assistant
Succeeded
Optional
Retry
Stop
Details (see full log at /opt/oracle/oraInventory/logs/installActions2005-09-22_03-02-44PM.log):
The "/opt/oracle/product/10gR2/cfgtoollogs/configToolAllCommands" script contains all commands to be executed by the configuration assistants. This file may be used to run the configuration assistants outside of OUI. Note that you may have to update this script with passwords (if any) before executing the same.
Help
Installed Products...
Back
Next
Install
Cancel
ORACLE


Execute Configuration scripts
The following configuration scripts need to be executed as the "root" user.
Scripts to be executed:
Number
Script Location
1
/opt/oracle/oraInventory/orainstRoot.sh
2
/opt/oracle/product/10gR2/root.sh
To execute the configuration scripts:
1. Open a terminal window
2. Log in as "root"
3. Run the scripts
4. Return to this window and click "OK" to continue
Help
OK


Oracle Universal Installer: End of Installation
End of Installation
The installation of Oracle Database 10g was successful.
Please remember...
The following J2EE Applications have been deployed and are accessible at the URLs listed below.
iSQL*Plus URL:
http://sl10.site:5560/isqlplus
iSQL*Plus DBA URL:
http://sl10.site:5560/isqlplus/dba
Enterprise Manager 10g Database Control URL:
http://sl10.site:1158/em
Help
Installed Products...
Back
Next
Install
Exit
ORACLE

4. sqlplus: Startup and Shutdown of the Oracle10g 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:
   sl10$ sqlplus /nolog
   SQL> connect / as sysdba
   SQL> startup

2. To shutdown the database:
   sl10$ sqlplus /nolog
   SQL> connect / as sysdba
   SQL> shutdown

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

5. Un-Installing incomplete Installation : Clean-up

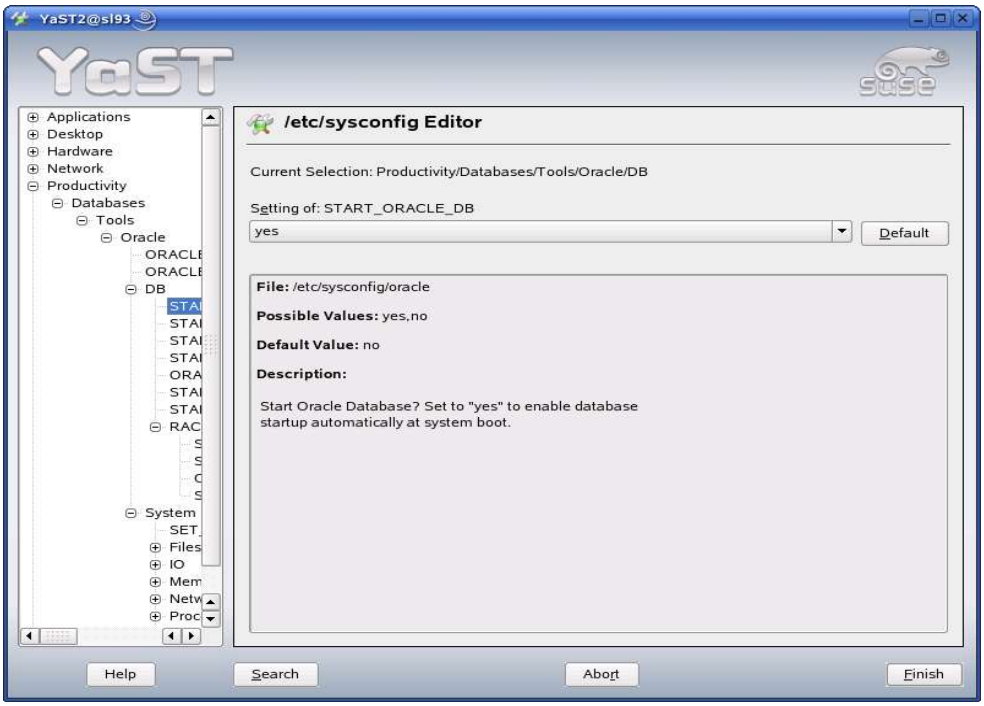
Oracle Installer will give you an option to remove installed product but sometimes your installation is not complete and you would like to restart the clean installation. Here are some quick and dirty steps to clean-up your system:

1. Remove /usr/local/bin/{coraenv, dbhome, oraenv}
2. Remove /etc/oratab, /etc/oraInst.loc, and /etc/oracle directory
3. Remove all files created by Oracle installer in /opt/oracle (Install Directory) i.e. Directory /opt/oracle/{product, admin, oradata, oraInventory}

6. **Oracle Database Start at boot time**

    1. Set parameter START_ORACLE_DB="yes" in “/etc/sysconfig/oracle” file. Edit “/etc/sysconfig/oracle” manually or use YaST :

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



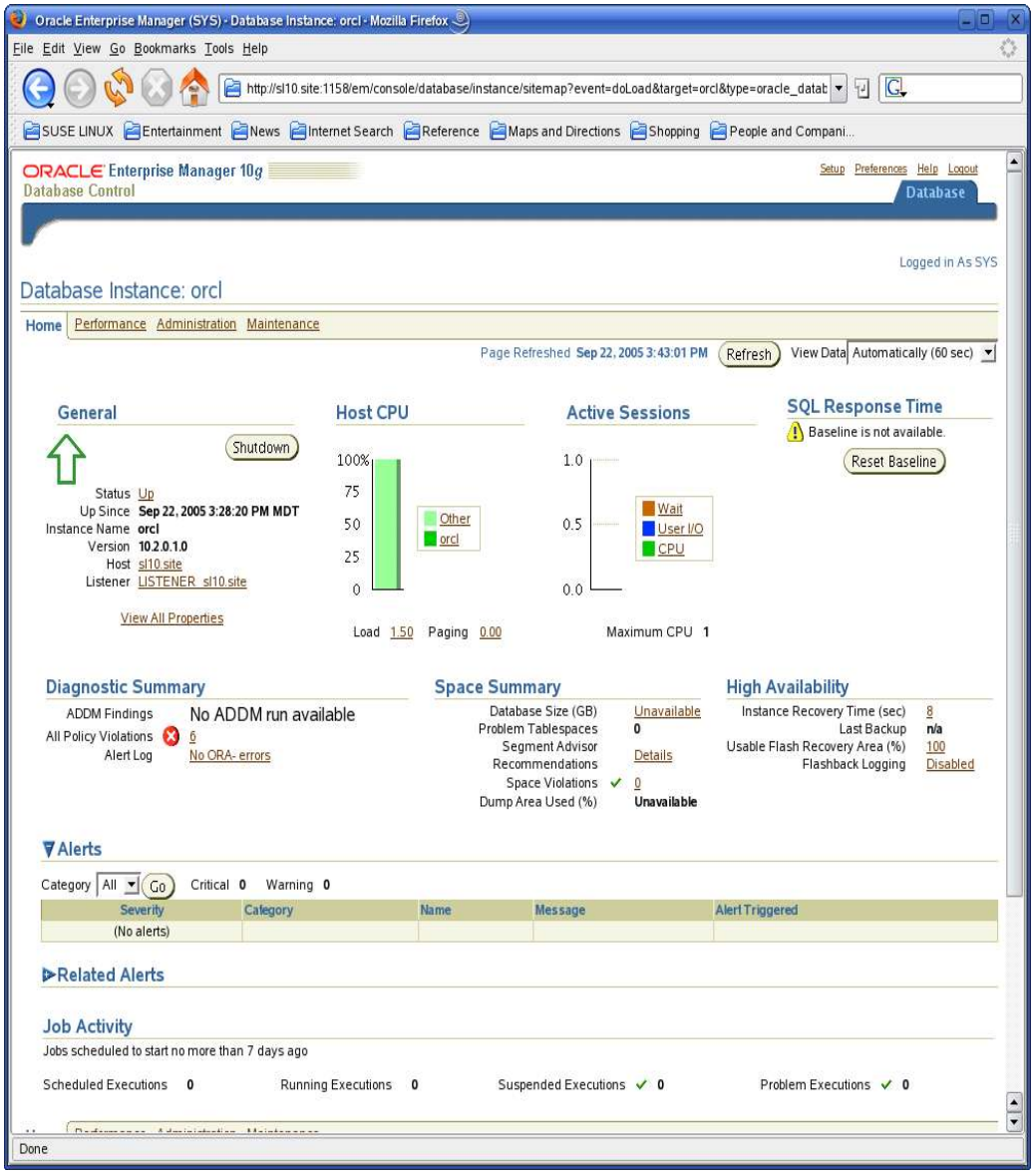
    2. Edit /etc/oratab entry corresponding to your database to “Y”.
        i.e. mydb:/opt/oracle/product/10gR2:Y

7. **Oracle Enterprise Manager**

    1. Start Oracle listener, If it is not already started by “lsnrctl start”.

    2. If Enterprise manager services is not started, then start it manually by entering following command “emctl start dbconsole”.

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


Oracle Enterprise Manager (SYS) - Database Instance: orcl - Mozilla Firefox
File Edit View Go Bookmarks Tools Help
http://sl10.site:1158/em/console/database/instance/sitemap?event=doLoad&target=orcl&type=oracle_datab
SUSE LINUX Entertainment News Internet Search Reference Maps and Directions Shopping People and Compani...
ORACLE Enterprise Manager 10g
Database Control
Setup Preferences Help Logout
Database
Logged in As SYS
Database Instance: orcl
Home Performance Administration Maintenance
Page Refreshed Sep 22, 2005 3:43:01 PM
Refresh
View Data Automatically (60 sec)
General
Shutdown
Status Up
Up Since Sep 22, 2005 3:28:20 PM MDT
Instance Name orcl
Version 10.2.0.1.0
Host sl10.site
Listener LISTENER_sl10.site
View All Properties
Host CPU
100%
75
50
25
0
Other
orcl
Load 1.50 Paging 0.00
Active Sessions
1.0
0.5
0.0
Wait
User I/O
CPU
Maximum CPU 1
SQL Response Time
Baseline is not available.
Reset Baseline
Diagnostic Summary
ADDM Findings No ADDM run available
All Policy Violations 6
Alert Log No ORA- errors
Space Summary
Database Size (GB) Unavailable
Problem Tablespaces 0
Segment Advisor Recommendations Details
Space Violations 0
Dump Area Used (%) Unavailable
High Availability
Instance Recovery Time (sec) 8
Last Backup n/a
Usable Flash Recovery Area (%) 100
Flashback Logging Disabled
Alerts
Category All Go Critical 0 Warning 0
Severity Category Name Message Alert Triggered
(No alerts)
Related Alerts
Job Activity
Jobs scheduled to start no more than 7 days ago
Scheduled Executions 0 Running Executions 0 Suspended Executions 0 Problem Executions 0
Done

Enjoy!