

# Oracle® Database

Release Notes

10g Release 2 (10.2) for Linux Itanium

**B15673-08**

September 2008

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This document contains important information that was not included in the platform-specific or product-specific documentation for this release. This document supplements *Oracle Database Readme* and may be updated after it is released.

To check for updates to this document and to view other Oracle documentation, refer to the Documentation section on the Oracle Technology Network (OTN) Web site:

<http://www.oracle.com/technology/documentation/>

For additional information about this release, refer to the readme files located in the \$ORACLE\_HOME/relnotes directory.

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**Note:** The Database Quick Installation Guides are no longer available in printed format. These documents are available with the media in the same location as the software and on Oracle Technology Network.

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This document contains the following topics:

- [Certification Information](#)
- [Unsupported Products](#)
- [Preinstallation Requirements](#)
- [Installation, Configuration, and Upgrade Issues](#)
- [Other Known Issues](#)
- [Documentation Corrections and Additions](#)
- [Documentation Accessibility](#)

## 1 Certification Information

The latest certification information for Oracle Database 10g release 2 (10.2) is available on *OracleMetaLink* at:

<http://metalink.oracle.com>

### Pro\*Cobol Certification

Pro\*Cobol with Micro Focus Server Express 4.0 SP2 is supported on Red Hat Linux 4.0. However, to work with Pro\*Cobol, install the 5037378 patch.

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### Linux Certification

Starting with Oracle Database 10g release 2 (10.2.0.4), the following operating systems are supported in addition to the list documented in *Oracle Database Installation Guide for Linux Itanium*:

- Red Hat Enterprise Linux 5
- SUSE Linux Enterprise Server 10

Refer to "[Documentation Corrections and Additions](#)" section for the list of packages for Oracle Database 10g release 2 (10.2.0.4).

### ODBC Certification

Starting with Oracle Database 10g release 2 (10.2.0.4), Generic Connectivity Using ODBC (64-bit) is supported on Linux Itanium.

## 2 Unsupported Products

The following products are not supported with Oracle Database 10g release 2 (10.2):

- Grid Control Support  
Oracle Database 10g release 2 (10.2) can be managed as a target by Grid Control 10.1.0.4. However, Oracle Database 10g release 2 is not supported by Grid Control 10.1.0.4 as a repository.

## 3 Preinstallation Requirements

You must review the following sections before installing Oracle Database 10g release 2:

- [libaio Before Installing or Upgrading](#)
- [oracleasm-support to use ASMLib](#)
- [Oracle HTTP Server on Red Hat Enterprise Linux 4.0](#)

### 3.1 libaio Before Installing or Upgrading

Before upgrading to or installing Oracle Database 10g release 2, install the `libaio` package.

### 3.2 oracleasm-support to use ASMLib

Install `oracleasm-support` package version 2.0.0.1 or higher to use ASMLib on Red Hat Enterprise Linux 4.0 Advanced Server or SUSE Linux Enterprise Server 9.

### 3.3 Oracle HTTP Server on Red Hat Enterprise Linux 4.0

If you intend to use Oracle HTTP server, which is included in Companion CD of Oracle Database 10g Release 2 (10.2) Media pack, refer to the *MetaLink* note 317085.1 for more information on using Oracle HTTP server on Red Hat Enterprise Linux 4.0.

## 4 Installation, Configuration, and Upgrade Issues

Review the following sections for information about issues that affect Oracle Database installation, configuration, and upgrade:

- [Latest Upgrade Information](#)
- [Upgrading Oracle Real Application Clusters Release 9.2](#)
- [Adding a Node to a Shared Oracle Clusterware Configuration](#)
- [Installing Enterprise Security Manager](#)
- [Upgrading Oracle Clusterware 10.1.x to Oracle Clusterware 10.2](#)
- [extjob Executable Required Directory Permissions](#)
- [Modifying a Virtual IP Address Node Application](#)
- [Raw Devices on Red Hat Enterprise Linux 4.0](#)
- [Oracle Clusterware Daemon fails on Computer Restart](#)
- [Configuring Storage Devices for Oracle Clusterware on 2.6 Kernel Distributions](#)
- [Installing Oracle Database Client into an Existing Oracle Home](#)
- [Database Installation Types](#)

### 4.1 Latest Upgrade Information

For late-breaking updates and best practices about preupgrades, postupgrades, compatibility, and interoperability discussions refer to note 466181.1 on *OracleMetaLink* (<https://metalink.oracle.com/>) that links to "10g Upgrade Companion" Page.

### 4.2 Upgrading Oracle Real Application Clusters Release 9.2

If you are upgrading a 9.2 RAC environment to Oracle Database 10g release 2 on Red Hat Linux 3.0, then you must apply a patch to GLIBC before proceeding with the Oracle Clusterware installation. Follow the instructions documented in *OracleMetaLink* note 284535.1.

This issue is tracked with Oracle bug 3006854.

### 4.3 Adding a Node to a Shared Oracle Clusterware Configuration

Before running `root.sh` in the first node of a shared Oracle Clusterware home, add the following line in the `$ORA_CRS_HOME/opmn/conf/ons.config` file:

```
usesharedinstall=true
```

This issue is tracked with Oracle bug 4454562.

### 4.4 Installing Enterprise Security Manager

To install Oracle Security Manager, install Oracle Client and then select the Administrator installation type.

## 4.5 Upgrading Oracle Clusterware 10.1.x to Oracle Clusterware 10.2

When upgrading from 10.1.x to 10.2, if the host name directory under the `/etc/oracle/scls_scr` directory includes the domain name, then the following error message is displayed when you run the `rootupgrade.sh` script and the Oracle Clusterware stack does not start:

```
A file or directory in the path name does not exist.  
/etc/init.cssd[509]: /etc/oracle/scls_scr/host_name/root/cssrun: 0403-005  
Cannot create the specified file.
```

**Workaround:** Move the `/etc/oracle/scls_scr/hostname.domain_name` directory to `/etc/oracle/scls_scr/hostname` and rerun the `rootupgrade.sh` script.

This issue is tracked with Oracle bug 4472284.

## 4.6 extjob Executable Required Directory Permissions

To enable the `extjob` executable to locate required libraries, the `$ORACLE_HOME/lib` directory and all of its parent directories must have execute permissions for `group` and `other`.

## 4.7 Modifying a Virtual IP Address Node Application

When modifying the name, IP address, or netmask of an existing virtual IP address (VIP) resource, use the following command:

```
srvctl modify nodeapps
```

and include the existing interfaces for the VIP in the `-A` argument. For example:

```
srvctl modify nodeapps -n mynode1 -A 100.200.300.40/255.255.255.0/eth0
```

This issue is tracked with Oracle bug 4500688.

## 4.8 Raw Devices on Red Hat Enterprise Linux 4.0

When you restart a Red Hat Enterprise Linux 4.0 system, raw devices revert to their original owners and permissions by default. If you are using raw devices with this operating system for your Oracle files, for example, for ASM storage or Oracle Clusterware files, you need to override this default behavior. To do this, add an entry to the `/etc/rc.d/rc.local` file for each raw device containing the `chmod` and `chown` commands required to reset them to the required values.

As an example, here are sample entries in a `/etc/rc.d/rc.local` file that control the restart behavior of raw devices for two ASM disk files (`/dev/raw/raw6` and `/dev/raw/raw7`), two Oracle Cluster Registry files (`/dev/raw/raw1` and `/dev/raw/raw2`), and three Oracle Clusterware voting disks (`/dev/raw/raw3`, `/dev/raw/raw4`, and `/dev/raw/raw5`):

```
# ASM  
chown oracle:dba /dev/raw/raw6  
chown oracle:dba /dev/raw/raw7  
chmod 660 /dev/raw/raw6  
chmod 660 /dev/raw/raw7  
# OCR  
chown root:oinstall /dev/raw/raw1  
chown root:oinstall /dev/raw/raw2
```

```
chmod 660 /dev/raw/raw1
chmod 660 /dev/raw/raw2
# Voting Disks
chown oracle:oinstall /dev/raw/raw3
chown oracle:oinstall /dev/raw/raw4
chown oracle:oinstall /dev/raw/raw5
chmod 644 /dev/raw/raw3
chmod 644 /dev/raw/raw4
chmod 644 /dev/raw/raw5
```

## 4.9 Oracle Clusterware Daemon fails on Computer Restart

If different user IDs are used for installing Oracle Database 10g and Oracle Clusterware, then restarting the system results in OCR errors. Refer to the *OracleMetaLink* note 551478.1 for more information.

**Workaround:** Oracle recommends that you apply patch set 10.2.0.3 or higher to Oracle Clusterware install before patching Oracle Database.

This issue is tracked with the Oracle bug 4748946.

## 4.10 Configuring Storage Devices for Oracle Clusterware on 2.6 Kernel Distributions

This section is for database and system administrators who intend to install or migrate to Oracle10g Release 2 (10.2.0) RAC on Red Hat Enterprise Linux 5 (RHEL5) or Oracle Enterprise Linux 5 (OEL5), and who need to configure raw devices for Oracle RAC and Oracle Clusterware. The Linux 2.6 kernel with these distributions requires additional configuration steps. The section contains the following topics:

- [Overview of Device Naming Persistence Changes](#)
- [Configuring Raw Devices for Clusterware on Red Hat and Oracle Enterprise Linux 5](#)
- [Relocate Oracle Clusterware Files from Raw to Block Devices](#)

### 4.10.1 Overview of Device Naming Persistence Changes

With the Linux 2.6 kernel, support for raw devices is deprecated. The preferred storage access is direct input/output to block devices using `O_DIRECT`. As a result of this change, the RHEL4 and OEL4 file `/etc/sysconfig/rawdevice` and the RHEL5 and OEL5 file `/etc/udev/rules.d/60-raw.rules` are deprecated. For details, refer to the Linux documentation for your 2.6 kernel.

The 2.4 kernel device file naming scheme `devlabel` maintained persistent device file names between server restarts. By default, the 2.6 kernel device file naming scheme `udev` dynamically creates device file names when the server is started, and assigns ownership of them to `root`. If `udev` applies default settings, then it changes device file names and owners for voting disks or Oracle Cluster Registry partitions, corrupting them when the server is restarted. For example, a voting disk on a device named `/dev/sdd` owned by the user `crs` may be on a device named `/dev/sdf` owned by `root` after restarting the server.

To prevent corruption, you need to create a custom rules file. When `udev` is started, it sequentially carries out rules (configuration directives) defined in rule files. These files are in the path `/etc/udev/rules.d/`. Rules files are read in lexical order. For example, rules in file `10-wacom.rules` are parsed and carried

out before rules in rule file `90-ib.rules`. Where rules files describe the same devices, on Asianux, Red Hat, and Oracle Enterprise Linux, the **last** file read is the one that is applied. (On SUSE 2.6 kernels, it is the first file read).

#### 4.10.2 Configuring Raw Devices for Clusterware on Red Hat and Oracle Enterprise Linux 5

This section contains the following topics:

- [Configure SCSI\\_ID to Return Unique Device Identifiers](#)
- [Configure Udev for Persistent Naming of Oracle Clusterware Devices](#)
- [Bind Raw Devices Using Udev](#)
- [Verify Persistent Oracle Clusterware Storage Devices](#)

##### Configure SCSI\_ID to Return Unique Device Identifiers

Before you can configure `udev` to name devices, you must first configure `scsi_id` to return device identifiers, and then ensure that these devices are visible and accessible on all cluster nodes. To do this, complete the following task:

1. Modify the `/etc/scsi_id.config` file by adding or replacing the 'option=-b' parameter/value pair (if it exists) with 'option=-g'. For example:

```
# cd /etc
# cp scsi_id.config scsi_id.config.orig
# grep -v ^# /etc/scsi_id.config
vendor="ATA",options=-p 0x80
options=-g
```

2. Run the command `fdisk (/sbin/fdisk)` to ensure that Clusterware devices are visible. For example:

```
# /sbin/fdisk -l /dev/sdb1 /dev/sde1

Disk /dev/sdb1: 261 MB, 261890048 bytes
9 heads, 56 sectors/track, 1014 cylinders
Units = cylinders of 504 * 512 = 258048 bytes

Disk /dev/sdb1 doesn't contain a valid partition table

Disk /dev/sde1: 52 MB, 52403200 bytes
2 heads, 50 sectors/track, 1023 cylinders
Units = cylinders of 100 * 512 = 51200 bytes

Disk /dev/sde1 doesn't contain a valid partition table
```

In some cases, to see newly provisioned or modified) devices on shared storage, you may need to update cluster node operating systems. Do this either by restarting the nodes, or by using commands such as `/sbin/partprobe device`, or `sfdisk -r device`. Resolve any issues preventing cluster nodes from correctly seeing or accessing storage devices you intend to use for Clusterware files before proceeding.

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**Note:** At this point, cluster nodes may refer to the devices using different device file names. This is expected.

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3. Run the command `scsi_id (/sbin/scsi_id)` on storage devices from one cluster node to obtain their unique device identifiers. When running the `scsi_id` command with the `-s` argument, the device path and name passed should be that relative to the `sysfs` directory `/sys` (for example, `/block/device`) when referring to `/sys/block/device`. For example:

```
# /sbin/scsi_id -g -s /block/sdb/sdb1
360a98000686f6959684a453333524174
```

```
# /sbin/scsi_id -g -s /block/sde/sde1
360a98000686f6959684a453333524179
```

Record the unique SCSI identifiers of Clusterware devices, so you can provide them when required in the following section, [Configure Udev for Persistent Naming of Oracle Clusterware Devices](#).

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**Note:** The command `scsi_id` should return the same device identifier value for a given device, regardless of which node the command is run from.

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### Configure Udev for Persistent Naming of Oracle Clusterware Devices

Configure persistent user-defined naming of Oracle Clusterware device file names in a udev rules file. This step is optional, but recommended.

The default rule files affecting storage devices are rule files 50 and 51. So create a custom rules file using the format `[number]-[name][.rules]` with a number value greater than 51 to ensure that the device settings you provide are the ones applied. For example:

```
55-oracle-naming.rules
```

To do this, complete the following tasks:

1. Create a custom udev device naming rule file. For example:

```
# touch /etc/udev/rules.d/55-oracle-naming.rules
```

2. Using the a text editor such as `vi`, add to the custom device naming rule file the device-matching rules for the storage devices you intend to use with Oracle Clusterware, matching them to the unique SCSI identifiers you determined in the preceding section. For example:

```
# Configure persistent, user-defined Oracle Clusterware device file names
KERNEL=="sd*", BUS=="scsi", PROGRAM==" /sbin/scsi_id",
RESULT=="360a98000686f6959684a453333524174", NAME="ocr1", OWNER="root",
GROUP="oinstall", MODE="0640"
KERNEL=="sd*", BUS=="scsi", PROGRAM==" /sbin/scsi_id",
RESULT=="360a98000686f6959684a453333524179", NAME="vote1",
OWNER="oracle", GROUP="oinstall", MODE="0640"
```

For each rule, if all specified keys (KERNEL, BUS, PROGRAM, RESULT) are matched, then the rule is applied and the specified assignments (NAME, OWNER, GROUP, MODE) are assigned to the device file name. However, if one or more keys are unmatched, then the rule is completely ignored and the default (arbitrary) kernel-assigned device file names are assigned to devices.

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**Note:** In the example rules files shown, Oracle Clusterware devices are created with `oraInventory group (oinstall)`. Oracle recommends that you do this to ensure that you can run Cluster Verification Utility during installation.

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3. Run the command `udevtest (/sbin/udevtest)` to test the udev rules configuration you have created. The output should indicate that the block devices are available and the rules are applied as expected. For example:

```
# udevtest /block/sdb/sdb1
main: looking at device '/block/sdb/sdb1' from subsystem 'block'
udev_rules_get_name: add symlink
'disk/by-id/scsi-360a98000686f6959684a453333524174-part1'
udev_rules_get_name: add symlink
'disk/by-path/ip-192.168.1.1:3260-iscsi-iqn.1992-08.com.netapp:sn.887085-
part1'
udev_node_mknod: preserve file '/dev/.tmp-8-17', because it has correct
dev_t
run_program: '/lib/udev/vol_id --export /dev/.tmp-8-17'
run_program: '/lib/udev/vol_id' returned with status 4
run_program: '/sbin/scsi_id'
run_program: '/sbin/scsi_id' (stdout) '360a98000686f6959684a453333524174'
run_program: '/sbin/scsi_id' returned with status 0
udev_rules_get_name: rule applied, 'sdb1' becomes 'ocr1'
udev_device_event: device '/block/sdb/sdb1' validate currently present
symlinks
udev_node_add: creating device node '/dev/ocr1', major = '8', minor =
'17',
mode = '0640', uid = '0', gid = '500'
udev_node_add: creating symlink
'/dev/disk/by-id/scsi-360a98000686f6959684a453333524174-part1' to
'../../ocr1'
udev_node_add: creating symlink
'/dev/disk/by-path/ip-192.168.1.1:3260-iscsi-iqn.1992-08.com.netapp:sn.84
187085
-part1' to ' ../../ocr1'
main: run: 'socket:/org/kernel/udev/monitor'
main: run: '/lib/udev/udev_run_devd'
main: run: 'socket:/org/freedesktop/hal/udev_event'
main: run: '/sbin/pam_console_apply /dev/ocr1
/dev/disk/by-id/scsi-360a98000686f6959684a453333524174-part1
/dev/disk/by-path/ip-192.168.1.1:3260-iscsi-iqn.1992-08.com.netapp:sn.841
87085-
part1'
```

In the example output, note that applying the rules renames OCR device `/dev/sdb1` to `/dev/ocr1`.

4. Restart the udev service by running the command `start_udev (/sbin/start_udev)`. Restarting udev applies the udev rules to the devices, including the device file rules you have created. Use the command `ls -l` command to ensure that the rules file has applied the new device names the rules file has applied. For example:

```
# start_udev

# ls -l /dev | grep -e 'ocr1\|votel'
```

```
brw-r----- 1 root    oinstall 8, 17 Oct 29 15:31 ocr1
brw-rw----  1 oracle  oinstall 8, 65 Oct 29 15:31 vote1
```

## Bind Raw Devices Using Udev

1. If the file `/etc/udev/rules.d/60-raw.rules` does not exist, then create it. If it does exist, then create a rules file for raw devices used with Oracle installations. For example:

```
# touch /etc/udev/rules.d/60-raw.rules
```

or

```
# touch /etc/udev/rules.d/61-oracleraw.rules
```

2. Add the udev raw binding rules to the raw devices rules file you created. For example:

```
vi /etc/udev/rules.d/61-oracleraw.rules
# Raw bind to Oracle Clusterware devices
ACTION=="add", KERNEL=="sd*", PROGRAM=="/sbin/scsi_id",
  RESULT=="360a98000686f6959684a453333524174", RUN+="/bin/raw
/dev/raw/raw1 %N"
ACTION=="add", KERNEL=="sd*", PROGRAM=="/sbin/scsi_id",
  RESULT=="360a98000686f6959684a453333524179", RUN+="/bin/raw
/dev/raw/raw2 %N"
t 29 15:31 vote1
```

3. Create a udev raw permissions file  
`/etc/udev/rules.d/65-raw-permissions.rules`. For example:

```
# touch /etc/udev/rules.d/65-raw-permissions.rules
```

4. Using a text editor, add the udev raw permission rules to the file  
`/etc/udev/rules.d/65-raw-permissions.rules`. For example:

```
# Set permissions of raw bindings to Oracle Clusterware devices
KERNEL=="raw1", OWNER="root", GROUP="oinstall", MODE="640"
KERNEL=="raw2", OWNER="oracle", GROUP="oinstall", MODE="640"
```

5. Test the udev rules by running the `udevtest` command (`/sbin/udevtest`) again to ensure that the rules are applied, and that they create proper permissions for Oracle Clusterware devices. For example:

```
# udevtest /block/sdb/sdb1
main: looking at device '/block/sdb/sdb1' from subsystem 'block'
udev_rules_get_name: add symlink 'disk/by-id/scsi-360a98000686f69
59684a453333524174-part1'
udev_rules_get_name: add symlink 'disk/by-path/ip-192.168.1.1:3260
-iscsi-ign.1992-08.com.netapp:sn.84187085-part1'
udev_node_mknod: preserve file '/dev/.tmp-8-17', because it has
correct dev_t
run_program: '/lib/udev/vol_id --export /dev/.tmp-8-17'
run_program: '/lib/udev/vol_id' returned with status 4
run_program: '/sbin/scsi_id'
run_program: '/sbin/scsi_id' (stdout) '360a98000686f6959684a45333
3524174'
run_program: '/sbin/scsi_id' returned with status 0
udev_rules_get_name: rule applied, 'sdb1' becomes 'ocr1'
udev_device_event: device '/block/sdb/sdb1' validate currently
present symlinks
udev_node_add: creating device node '/dev/ocr1', major = '8',
```

```

minor = '17', mode = '0640', uid = '0', gid = '500'
udev_node_add: creating symlink '/dev/disk/by-id/scsi-360a98000686f6959684a453333524174-part1' to '.././ocr1'
udev_node_add: creating symlink '/dev/disk/by-path/ip-192.168.1.1:3260-iscsi-iqn.1992-08.com.netapp:sn.84187085-part1' to '.././ocr1'
main: run: 'socket:/org/kernel/udev/monitor'
main: run: '/lib/udev/udev_run_devd'
main: run: 'socket:/org/freedesktop/hal/udev_event'
main: run: '/sbin/pam_console_apply /dev/ocr1 /dev/disk/by-id/scsi-360a98000686f6959684a453333524174-part1 /dev/disk/by-path/ip-192.168.1.1:3260-iscsi-iqn.1992-08.com.netapp:sn.84187085-part1'
main: run: '/bin/raw /dev/raw/raw1 /dev/.tmp-8-17'

```

- Restart udev to implement the rules you have created and tested. For example:

```
# start_udev
```

## Verify Persistent Oracle Clusterware Storage Devices

- Use the `fdisk` command to check device naming. For example:

```

# fdisk -l /dev/ocr1 /dev/vote1

Disk /dev/ocr1: 261 MB, 261890048 bytes
9 heads, 56 sectors/track, 1014 cylinders
Units = cylinders of 504 * 512 = 258048 bytes

Disk /dev/ocr1 doesn't contain a valid partition table

Disk /dev/vote1: 52 MB, 52403200 bytes
2 heads, 50 sectors/track, 1023 cylinders
Units = cylinders of 100 * 512 = 51200 bytes

Disk /dev/vote1 doesn't contain a valid partition table

```

- Use the `ls` command to check device ownership. For example:

```

# ls -l /dev | grep -ie 'ocr\|vote'
brw-r----- 1 root dba 8, 17 Oct 29 15:31 ocr1
brw-rw---- 1 oracle dba 8, 65 Oct 29 15:31 vote1

```

- Use the `udevinfo` command to confirm unique SCSI device identifier mappings. For example:

```

# udevinfo -q all -n /dev/ocr1
P: /block/sdb/sdb1
N: ocr1
S: disk/by-id/scsi-360a98000686f6959684a453333524174-part1
S:
disk/by-path/ip-192.168.1.1:3260-iscsi-iqn.1992-08.com.netapp:sn.87085-part1
E: ID_VENDOR=NETAPP
E: ID_MODEL=LUN
E: ID_REVISION=0.2
E: ID_SERIAL=360a98000686f6959684a453333524174
E: ID_TYPE=disk
E: ID_BUS=scsi
E: ID_PATH=ip-192.168.1.1:3260-iscsi-iqn.1992-08.com.netapp:sn.84187085

```

4. Use the `raw` and `ls` commands to confirm raw devices are bound. For example:

```
# raw -qa
/dev/raw/raw1: bound to major 8, minor 17
/dev/raw/raw2: bound to major 8, minor 65

# ls -l /dev/raw/raw*
crw-r----- 1 root    oinstall 162, 11 Oct 30 12:54 /dev/raw/raw1
crw-r----- 1 oracle oinstall 162, 21 Oct 30 14:26 /dev/raw/raw2
```

After you have completed configuring and checking raw storage devices, you can proceed to install Oracle Clusterware and Oracle Real Application Clusters.

#### 4.10.3 Relocate Oracle Clusterware Files from Raw to Block Devices

Oracle recommends that you move Oracle Clusterware files from raw devices to block devices.

**Tip:** *Oracle Database 2 Day + Real Application Clusters Guide* for more information about relocating voting disks and Oracle Cluster Registry files.

#### 4.11 Installing Oracle Database Client into an Existing Oracle Home

Oracle Database Client can be installed in the same Oracle Database home if both products are at the same release level. For example, you can install Oracle Database Client 10g Release 2 (10.2) into an existing Oracle Database 10g Release 2 (10.2) home. If you apply a patch set before installing the client, then you must apply the patch set again.

#### 4.12 Database Installation Types

If you perform a Custom installation, then ensure that you install only the components covered by your license. You can not install Standard Edition using Custom installation.

### 5 Other Known Issues

The following sections contain information about issues related to Oracle Database 10g and associated products:

- [Building Pro\\*C Applications if PostgreSQL is Installed](#)
- [Encoding Information Not Present in Translated Help Files](#)
- [Oracle Clusterware Files Issues](#)
- [Cluster Verification Utility](#)
- [VLM Window Size on Red Hat Enterprise Linux 4.0](#)
- [Oracle C++ Call Interface Compiler Support](#)
- [Oracle XML Developer's Kit Compiler Support](#)
- [Link Error During genorasdksh on Red Hat Enterprise Linux 4.0](#)
- [Removing Metrics for Wait Classes Removes Them Permanently](#)
- [cvuqdisk-1.0.1-1.rpm \(i386 rpm\) Does not Work as Expected](#)

- [JDK Restriction](#)
- [ONS Needs to be Started from Database Oracle Home Before Apache Standalone Installation](#)
- [Database Control Does not Display the Listener Details](#)

## 5.1 Building Pro\*C Applications if PostgreSQL is Installed

If the `postgresql-devel` package is installed on the system, then you must add the following directory to the beginning of the `sys_include` parameter in the `$ORACLE_HOME/precomp/admin/pcscfg.cfg` file before building Pro\*C applications:

```
$ORACLE_HOME/precomp/public
```

If you do not make this change, then you may encounter errors similar to the following when linking the applications:

```
/tmp/ccbXd7v6.o(.text+0xc0): In function `drop_tables':
: undefined reference to `sqlca'
```

This issue is tracked with Oracle bug 3933309.

## 5.2 Encoding Information Not Present in Translated Help Files

If the system uses a European language, you might see corrupted characters in Table of Contents of database tools, such as Database Configuration Assistant.

This issue is tracked with Oracle bug 3957096.

**Workaround:** If the system uses a European language, do not use the `.UTF-8` locale. For example, if the system uses German, set the `LANG` and `LC_ALL` environment variables to `de_DE` instead of `de_DE.UTF-8`.

## 5.3 Oracle Clusterware Files Issues

The following note applies if you are using Red Hat Enterprise Linux 4.0 and using raw devices to store the Oracle Cluster Registry (OCR) and the voting disk for Oracle Clusterware, or using raw devices for Automatic Storage Management (ASM) database files. For each raw device used for the purposes listed, you must add two entries in the `/etc/rc.d/rc.local` file after running the `root.sh` script following the installation of Oracle Clusterware.

For each OCR file, the entries should look as follows, where `oinstall` is the Oracle install group and `/dev/raw/rawn` is an individual device file:

```
chown root:oinstall /dev/raw/rawn
chmod 640 /dev/raw/rawnmar
```

For each voting disk file, the entries should look as follows, where `oracle` is the Oracle user, `oinstall` is the Oracle install group, and `/dev/raw/rawn` is an individual device file:

```
chown oracle:oinstall /dev/raw/rawn
chmod 644 /dev/raw/rawnmar
```

For each ASM file, the entries should look as follows, where `oracle` is the Oracle user, `oinstall` is the Oracle install group, and `/dev/raw/rawn` is an individual device file:

```
chown oracle:oinstall /dev/raw/rawn
chmod 660 /dev/raw/rawnmar
```

## 5.4 Cluster Verification Utility

This section lists the issues with Cluster Verification Utility on Red Hat Enterprise Linux 4.0 and SUSE Linux Enterprise Server 9:

- Cluster Verification Utility (CVU) does not support shared checks for raw disks used for Oracle Cluster File System version 2 on Red Hat Enterprise Linux 4.0 and SUSE Linux Enterprise Server 9.
- The preinstallation stage verification checks for Oracle Clusterware and Oracle Real Applications Clusters and reports missing packages. Ignore the following missing packages and continue with the installation:

```
compat-gcc-7.3-2.96.128
compat-gcc-c++-7.3-2.96.128
compat-libstdc++-7.3-2.96.128
compat-libstdc++-devel-7.3-2.96.128
```

## 5.5 VLM Window Size on Red Hat Enterprise Linux 4.0

To use `hugepages` or to accommodate the VLM window size on Red Hat Enterprise Linux 4.0, you must increase the default maximum size of the per-process locked memory. To increase the per-process max locked memory limit, add the following lines to the `/etc/security/limits.conf` file, where `oracle` is the user that administers the database:

```
oracle soft memlock 3145728
oracle hard memlock 3145728
```

## 5.6 Oracle C++ Call Interface Compiler Support

On Red Hat Enterprise Linux 4.0, Oracle C++ Call Interface (OCCI) does not yet support GCC 3.4.3. The current GNU C++ compiler version that OCCI supports with Red Hat Enterprise Linux 4.0 is GCC 3.2.3.

**Workaround:** Install Red Hat Enterprise Linux 4 with GCC 3.2.3.

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**Note:** For updates on GCC support, refer to the OCCI home page on OTN:

<http://www.oracle.com/technology/tech/oci/occi/index.html>

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## 5.7 Oracle XML Developer's Kit Compiler Support

On Red Hat Enterprise Linux 4.0, Oracle XML Developer's Kit (XDK) is not supported with GCC. XDK is supported with Intel C++ compiler (ICC).

## 5.8 Link Error During genorasdksh on Red Hat Enterprise Linux 4.0

Installing Oracle Database 10g release 2 (10.2.0.1) on Red Hat Enterprise Linux 4.0 Update 1 (2.6.9-11.ELsmp) produces a link error during creation of `liborasdkbase.so.10.2`. The following error message is thrown:

```
INFO: gcc:
INFO: /usr/lib/libstdc++.so.5: No such file or directory
INFO:
INFO: $OH/bin/genorasdksh: Failed to link liborasdkbase.so.10.2
```

This is because Oracle Database 10g release 2 (10.2) requires Red Hat Enterprise Linux 3.0 libraries (`/usr/lib/libstdc++.so.5`).

**Workaround:** Install the compatible libraries as follows:

```
rpm -qI compat-libstdc++-33-3.2.3-47.3
```

This issue is tracked with Oracle bug 4605635.

## 5.9 Removing Metrics for Wait Classes Removes Them Permanently

Do not remove the key values for the wait class metrics. Doing so removes them permanently and currently there is no easy way to recover them.

This issue is tracked with Oracle bug 4602952.

## 5.10 cvuqdisk-1.0.1-1.rpm (i386 rpm) Does not Work as Expected

`cvuqdisk-1.0.1-1.rpm` (i386 rpm) does not work as expected in Linux Itanium. You need to install `cvuqdisk-1.0.1-1.ia64.rpm` for cluster verification utility to verify the sharedness check of raw disks for 10.2 Linux Itanium.

## 5.11 JDK Restriction

When you use Oracle Universal Installer or Database Configuration Assistant in Japanese environment, you must set the `LANG` environment variable to `C`.

This issue is tracked with Oracle bug 4764895.

## 5.12 ONS Needs to be Started from Database Oracle Home Before Apache Standalone Installation

If you plan to install Oracle HTML DB with Oracle HTTP Server from companion CD on the system where Oracle Database 10g has already been installed, you need to start ONS before you start the companion CD installation. This is required to prevent the companion CD installation from allocating the ports already allocated to ONS Server in the Database installation.

This issue is tracked with Oracle bug 4701821.

## 5.13 Database Control Does not Display the Listener Details

When you connect to the database using Database Control, the page does not display the listener details.

**Workaround:** After installing Oracle Database 10g release 2, you must shutdown the Database Control with the command `emctl stop dbconsole`. Modify the `targets.xml` file located in `$ORACLE_HOME/hostname_SID/sysman/emd` directory so that the value of the `machinename` field is the same for listener and database. Restart Database Control with the command `emctl start dbconsole` to display the listener details.

This issue is tracked with Oracle bug 6743916.

## 6 Documentation Corrections and Additions

This section lists the following corrections to installation guides for Linux Itanium.

- In the "Software Requirements" section of quick installation guides and Chapter 2 of installation guides, the following should be the list of packages for Red Hat Enterprise Linux 4.0:

```
binutils-2.15.92.0.2-10.EL4
compat-db-4.1.25-9
control-center-2.8.0-12
gcc-3.2.3-47
gcc-c++-3.2.3-47
glibc-2.3.4-2
glibc-common-2.3.4-2
gnome-libs-1.4.1.2.90-44.1
libstdc++-3.4.3-9.EL4
libstdc++-devel-3.4.3-9.EL4
libaio-0.3.96-3
make-3.80-5
pdksh-5.2.14-30
sysstat-5.0.5-1
```

- In the "Software Requirements" section of quick installation guides and Chapter 2 of installation guides, the following should be the list of packages for Red Hat Enterprise Linux 5.0:

```
binutils-2.17.50.0.6-2.e15
compat-libstdc++-33-3.2.3-61
elfutils-libelf-0.125-3.e15
elfutils-libelf-devel-0.125-3.e15
gcc-4.1.1-52.e15
gcc-c++-4.1.1-52.e15
glibc-2.5-12
glibc-common-2.5-12
glibc-devel-2.5-12
glibc-headers-2.5-12
libaio-0.3.106-3.2
libaio-devel-0.3.106-3.2
libgcc-4.1.1-52.e15
libstdc++4.1.1-52.e15
libstdc++-devel-4.1.1-52.e15
make-3.81-1.1
sysstat-7.0.0-3.e15
unixODBC-2.2.11-7.1
unixODBC-devel-2.2.11-7.1
```

- In the "Software Requirements" section of quick installation guides and Chapter 2 of installation guides, the following should be the list of packages for SUSE Linux Enterprise Server 10:

```
binutils-2.16.91.0.5
compat-libstdc++-5.0.7-22.2
gcc-4.1.0
glibc-2.4-31.2
glibc-devel-2.4-31.2
ksh-93r-12.9
libaio-0.3.104-14.2
libaio-devel-0.3.104-14.2
libelf-0.8.5-47.2
libgcc-4.1.0-28.4
libstdc++-4.1.0-28.4
libstdc++-devel-4.1.0-28.4
make-3.80-202.2
sysstat-6.0.2-16.4
unixODBC-2.2.11-21.4
unixODBC-devel-2.2.11-21.4
```

- In *Oracle Database Oracle Clusterware and Oracle Real Application Clusters Installation Guide*, Chapter 2, "Preinstallation," in the section "Oracle Clusterware Home Directory," it incorrectly lists the path `/u01/app/oracle/product/crs` as a possible Oracle Clusterware home (or CRS home) path. This is incorrect. A default Oracle base path is `/u01/app/oracle`, and the Oracle Clusterware home must never be a subdirectory of the Oracle base directory.

A possible CRS home directory is in a path outside of the Oracle base directory. For example, if the Oracle base directory is `u01/app/oracle`, then the CRS home can be an option similar to one of the following:

```
u01/crs/
/u01/crs/oracle/product/10/crs
/crs/home
```

This issue is tracked with Oracle bug 5843155.

- The following text of the section 2.6.1, "IP Address Requirements," in Chapter 2, "Pre-Installation Tasks," of *Oracle Database Oracle Clusterware and Oracle Real Application Clusters Installation Guide* states that the virtual IP address (VIP) should respond to a `ping` command:

During installation, OUI uses the `ping` command to ensure that the VIP is reachable.

The preceding statement is incorrect. Before installation, the VIP address should be configured in DHCP or `/etc/hosts`, or both, but it must not be assigned to a server that can respond to a `ping` command.

This issue is tracked with Oracle bug 6017001.

- Appendix H, "Database Limits" of *Oracle Database Administrator's Reference for UNIX-Based Operating Systems* states the incorrect maximum value (63) for the `MAXINSTANCES` variable. The correct maximum limit for the variable is 1055.

- In Oracle documentation, Oracle inventory group is represented as `oinstall`. However, it is not mandatory to use the same name, you can enter a different name for the group.

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