# Oracle® Database

Release Notes

11*g* Release 2 (11.2) for Linux

**E16778-05**

October 2010

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*.

This document 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/technetwork/indexes/documentation/index.html`

This document contains the following topics:

- Certification Information
- Latest Upgrade Information
- Unsupported Products
- Content Specific to Oracle Database 11g Release 2 (11.2.0.1)
- Content Specific to Oracle Database 11g Release 2 (11.2.0.2)
- Documentation Corrections and Additions
- Documentation Accessibility

## 1 Certification Information

The latest certification information for Oracle Database 11*g* Release 2 (11.2) is available on My Oracle Support (formerly Oracle*MetaLink*) at:

`https://support.oracle.com`

## 2 Latest Upgrade Information

For late-breaking updates and best practices about preupgrade, postupgrade, compatibility, and interoperability discussions, refer to Note 785351.1 on My Oracle Support (formerly Oracle*MetaLink*) that links to the "Oracle 11gR2 Upgrade Companion" page.

`https://support.oracle.com`

## 3 Unsupported Products

A list of unavailable features and products is available in Section 2, "Features Not Available or Restricted in This Release," in *Oracle Database Readme*.

#### Database Smart Flash Cache Support

Database Smart Flash Cache is supported on Solaris and Oracle Linux only. For release 11.2.0.1 on Oracle Linux, you must install the 8974084 patch.

#### Oracle Automatic Storage Management Dynamic Volume Manager Support

Oracle Automatic Storage Management Cluster File System and Oracle Automatic Storage Management Dynamic Volume Manager are supported only on Oracle Linux 5 and Red Hat Enterprise Linux 5 on Linux x86 and Linux x86-64.

Although Oracle ADVM supports raw disks in Oracle Automatic Storage Management disk groups, Oracle ADVM device special files created through raw(8) are not supported; Oracle ADVM only supports block device special files.

#### Linking Applications With Oracle Client Libraries

The use of the client static library is not supported.

# 4 Content Specific to Oracle Database 11*g* Release 2 (11.2.0.1)

The following content is specific to release 11.2.0.1:

- Preinstallation Requirements for Release 11.2.0.1
- Installation, Configuration, and Upgrade Issues for Release 11.2.0.1
- Other Known Issues for Release 11.2.0.1

## 4.1 Preinstallation Requirements for Release 11.2.0.1

Refer to the installation guides for the preinstallation requirements. Additional preinstallation requirement include the following.

- Operating System Requirements
- Swap Space Error Message
- ODBC Support for SUSE Linux Enterprise Server 11 on Linux x86
- ODBC Support for SUSE Linux Enterprise Server 11 on Linux x86-64
- Back Up grub.conf Before Installing Oracle Grid Infrastructure for a Cluster on Oracle VM

### 4.1.1 Operating System Requirements

Red Hat Enterprise Linux 5 and Oracle Linux 5 on Linux x86 and Linux x86-64 require Update 2.

The documents that shipped with the media have the incorrect operating system requirements. The documents have been updated on OTN.

`http://www.oracle.com/technetwork/indexes/documentation/index.html`

### 4.1.2 Swap Space Error Message

If you encounter an Oracle Universal Installer error indicating inadequate swap space size, but your swap space meets the requirements listed in the *Oracle Database Installation Guide*, then you can ignore this error.

This issue is tracked with Oracle bug 7700929.

### 4.1.3 ODBC Support for SUSE Linux Enterprise Server 11 on Linux x86

You must install the following 32-bit ODBC RPMs on Linux x86 to use ODBC on SUSE 11:

```
unixODBC-32bit-2.2.12 (32-bit) or later
unixODBC-devel-32bit-2.2.12 (32-bit) or later
```

### 4.1.4 ODBC Support for SUSE Linux Enterprise Server 11 on Linux x86-64

You must install the following 32-bit ODBC RPMs on Linux x86-64 to use ODBC on SUSE 11:

```
unixODBC-2.2.12 or later
unixODBC-devel-2.2.12 or later
unixODBC-32bit-2.2.12 (32-bit) or later
```

### 4.1.5 Back Up grub.conf Before Installing Oracle Grid Infrastructure for a Cluster on Oracle VM

During Oracle Grid Infrastructure installation for a cluster, when `rootcrs.pl` installs Oracle ACFS in an unprivileged domain running a Xen or Oracle VM kernel, the base Linux driver installation routines may overwrite `grub.conf` with an incorrect version. Contact Oracle Support if you see the following error message:

```
# xm create vm.cfg
Using config file "./vm.cfg".
Error: Boot loader didn't return any data!
```

**Workaround:**

To prevent this error, follow these steps to copy `/boot/grub/grub.conf` to a backup, and then restore it after the Oracle ACFS installation.

1. Check for Xen kernel in a domU:

   ```
   # uname -r
   ```

2. Copy `grub.conf` to `backup`:

   ```
   # cp -a /boot/grub/grub.conf /boot/grub/grub.conf.bak
   ```

3. Install Oracle ACFS using the `root` script:

   ```
   # rootcrs.pl
   ```

4. Restore original `grub.conf`:

   ```
   cp -a /boot/grub/grub.conf.bak /boot/grub/grub.conf
   ```

This issue is tracked with Oracle bug 9268593.

## 4.2 Installation, Configuration, and Upgrade Issues for Release 11.2.0.1

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

- Connection Load Balancing Issue
- Oracle Real Application Clusters Upgrade Error When Upgrading from Release 10.1.0.5 to 11.2

- Error When Installing Oracle Grid Infrastructure with the Grid Naming Service (GNS) and the OCR and Voting Disks Stored on Oracle ASM
- Cluster Verification Utility Issue During Oracle Clusterware Upgrade
- RPM Errors with Oracle VM
- C++ XDK Demos and Pro*C++ Static Demos Linking Error
- Oracle RAC Database Installation Error on SUSE Linux Enterprise Server 11
- Error When Installing Oracle RAC Database on Oracle Linux 5.0 Update 3
- Oracle Grid Infrastructure for a Standalone Server Installation Error on SUSE Linux Enterprise Server 10
- Oracle Database Reupgrade Issue on Linux x86-64

### 4.2.1 Connection Load Balancing Issue

A single Oracle Database Client can request only a specific SCAN listener to connect to a database using SCAN and easy connect method. As a result, load balancing by the DNS round-robin is not available.

**Workaround:**

Connect to a database using the following configuration, specifying `LOAD_BALANCE=on`, in the `tnsnames.ora` file:

```
ORCL =
  (DESCRIPTION =
    (LOAD_BALANCE=on)
    (ADDRESS = (PROTOCOL = TCP)(HOST = stscan1)(PORT = 1521))
    (CONNECT_DATA =
     (SERVER = DEDICATED)
      (SERVICE_NAME = srv.world)
     )
  )
```

This issue is tracked with Oracle bug 8256753.

### 4.2.2 Oracle Real Application Clusters Upgrade Error When Upgrading from Release 10.1.0.5 to 11.2

When upgrading from Oracle Database release 10.1.0.5 on Linux x86-64, the following errors may occur in the Database Upgrade Assistant:

ERROR at line 1:

- ORA-00604: error occurred at recursive SQL level 3
- ORA-00060: deadlock detected while waiting for resource

**Workaround**: Complete the following steps before upgrading to avoid the errors:

1. Before starting the release 11.2 upgrade, purge the `dba_recyclebin` through SQL*Plus using the following command:

   ```
   SQL> purge dba_recyclebin;
   ```

2. Disable the recycle bin using the following command:

   ```
   ALTER SYSTEM set "_recyclebin"=FALSE;
   ```

3. Perform the upgrade.

4. Enable recycle bin after the release 11.2 upgrade using the following command:

```
ALTER SESSION SET recyclebin=ON;
```

This issue is tracked with Oracle bug 8475185.

### 4.2.3 Error When Installing Oracle Grid Infrastructure with the Grid Naming Service (GNS) and the OCR and Voting Disks Stored on Oracle ASM

When installing Oracle Grid Infrastructure for Oracle Database 11*g* Release 2 with GNS and the OCR and voting disks on Oracle ASM on Linux x86-64, `root.sh` may fail with error:

```
PROT-1: Failed to initialize ocrconfig
```

The failing command is `ocrconfig -upgrade` *`user group`*, and TNS-12560 can be found in sqlnet log file.

**Workaround:**

Check the `/etc/`*`group`* entry for the group being used by OCR, temporarily reduce the number of users listed for this group, and restart the installation.

This issue is tracked with Oracle bug 8979500.

### 4.2.4 Cluster Verification Utility Issue During Oracle Clusterware Upgrade

While upgrading Oracle Clusterware of a previous release to Oracle Grid Infrastructure 11*g* Release 2 (11.2.0.1.0), Cluster Verification Utility (CVU) may fail if the permission and ownership on the raw devices configured with Oracle Cluster Registry and Voting Disks are incorrect.

**Workaround:**

Check CVU's output in the installation log file and fix the permissions and ownership on the raw devices. Then, click Retry to run CVU again.

This issue is tracked with Oracle bug 8737732.

### 4.2.5 RPM Errors with Oracle VM

When Oracle Database is installed on a Linux environment configured with Oracle VM, Oracle Universal Installer may show package check failures, and the RPM command returns the following error:

```
# rpm
Floating point exception
```

**Workaround:**

Upgrade the RPM package to 4.4.2.3 or later.

This issue is tracked with Oracle bug 8626425.

### 4.2.6 C++ XDK Demos and Pro*C++ Static Demos Linking Error

The C++ XDK demos and Pro*C++ Static demos fail to link with the `-lstdc++` library giving the following error on Linux x86-64 with SUSE Linux Enterprise Server 10, SUSE Linux Enterprise Server 11, and Red Hat Enterprise Linux 5:

```
/usr/lib64/gcc/x86_64-suse-linux/4.1.0/../../../..
/x86_64-suse-linux/bin/ld: cannot find -lstdc++_nonshared
```

**Workaround:**

Contact your operating system vendor.

This issue is tracked with Oracle bug 8396301.

### 4.2.7 Oracle RAC Database Installation Error on SUSE Linux Enterprise Server 11

The following error occurs while performing an Oracle RAC database installation on SUSE Linux Enterprise Server 11:

```
Error securing Database Control, Database Control has not been brought up on nodes
remote_node(s). Please execute the following command(s) on nodes: remote_node(s).

1) Set the environment variable ORACLE_UNQNAME to Database unique name
2) /u01/app/aime/product/11.2.0/racdb/bin/emctl config emkey -repos
-sysman_pwd Password_for_SYSMAN_user -host node
-sid Database_unique_name
3) /u01/app/aime/product/11.2.0/racdb/bin/emctl secure dbconsole -sysman_pwd
Password_for_SYSMAN_user -host node
-sid Database_unique_name
4) /u01/app/aime/product/11.2.0/racdb/bin/emctl start dbconsole

To secure Em Key, run /u01/app/aime/product/11.2.0/racdb/bin/emctl config
emkey -remove_from_repos -sysman_pwd
Password_for_SYSMAN_user
```

**Workaround:**

Follow the instructions shown in the error message.

This issue is tracked with Oracle bug 6485149.

### 4.2.8 Error When Installing Oracle RAC Database on Oracle Linux 5.0 Update 3

When installing Oracle RAC database on Oracle Linux 5 Update 3, the Perform Prerequisite Checks screen reports Node Connectivity failure.

**Workaround:**

Check **Ignore All** to ignore this error and proceed with the installation.

This issue is tracked with Oracle bug 8753154.

### 4.2.9 Oracle Grid Infrastructure for a Standalone Server Installation Error on SUSE Linux Enterprise Server 10

The root.sh script displays the following error when installing Oracle Grid Infrastructure for a standalone server on SUSE Linux Enterprise Server 10:

```
/bin/env: Command not found
```

**Workaround:**

Ignore this error and proceed with the installation.

This issue is tracked with Oracle bug 8732857.

### 4.2.10 Oracle Database Reupgrade Issue on Linux x86-64

When you reupgrade Oracle Database release 10.2 to release 11.2, after an initial upgrade to release 11.2 and a subsequent downgrade to release 10.2, the upgrade process hangs at 80% with Database Configuration Assistant. For manual upgrades,

the hang may be seen in the spooled log while the `c1101000.sql` upgrade script is running.

This issue is tracked with Oracle bug 8742500.

## 4.3 Other Known Issues for Release 11.2.0.1

The following sections contain information about issues related to Oracle Database 11*g* and associated products:

- Error While Loading Shared Library When SELinux is Enforcing on Oracle Linux 5.x and Red Hat Enterprise Linux 5.x
- Insufficient Memory Target Errors
- Help Files Translation Issue for Spanish and French
- Incorrect Reverse Ping Command from Oracle Management Service

### 4.3.1 Error While Loading Shared Library When SELinux is Enforcing on Oracle Linux 5.x and Red Hat Enterprise Linux 5.x

SQL*Plus and Oracle Call Interface (OCI) program calls fail with `SELinux` in the `Enforcing` mode on Oracle Linux 5.x and Red Hat Enterprise Linux 5.x.

**Workaround:** Shift `SELinux` to `Permissive` mode on the system.

This issue is tracked with Oracle bug 9817031.

### 4.3.2 Insufficient Memory Target Errors

On Linux systems, if the operating system `/dev/shm` mount size is too small for the Oracle system global area (SGA) and program global area (PGA), then you encounter the following error:

```
ORA-00845: MEMORY_TARGET not supported on this system.
```

The cause of this error is an insufficient `/dev/shm` allocation. The total memory size of the SGA and PGA, which sets the initialization parameter `MEMORY_TARGET` or `MEMORY_MAX_TARGET`, cannot be greater than the shared memory file system (`/dev/shm`) on your operating system.

**Background**

Automatic Memory Management (AMM) has been updated in Oracle ASM 11*g* Release 2. It manages both the SGA and PGA together. It is managed by the Memory Manager Process (MMAN). In this release, note the following changes to AMM:

- It uses `MEMORY_TARGET` instead of `SGA_TARGET`
- It uses `MEMORY_MAX_TARGET` instead of `SGA_MAX_SIZE` (defaults to `MEMORY_TARGET`)
- It uses memory allocated by `/dev/shm`

If the value of `max_target` is set to a value greater than the allocation for the `/dev/shm` size, then you may encounter the error ORA-00845: MEMORY_TARGET not supported on this system.

**Note:** An ORA-00845 error can also occur if `/dev/shm` is not properly mounted. To rule out this possibility, run the command `df -k` to ensure that `/dev/shm` is mounted. For example:

```
$ df -k

Filesystem 1K-blocks Used Available Use% Mounted on
shmfs 6291456 832356 5459100 14% /dev/shm
```

**Solution**

Increase the `/dev/shm` mountpoint size.

For example:

```
# mount -t tmpfs shmfs -o size=7g /dev/shm
```

To make this change persistent across system restarts, add an entry in `/etc/fstab` similar to the following:

```
shmfs /dev/shm tmpfs size=7g 0
```

### 4.3.3 Help Files Translation Issue for Spanish and French

Oracle Universal Installer does not copy the translated help files to Oracle home directory when you select the Spanish or French language.

**Workaround:**

On the Select Product Languages page, select both the Latin American Spanish and Spanish to get the help files translated in Spanish; and select both the Canadian French and French for the translated help files in French.

This issue is tracked with Oracle bug 9147106.

### 4.3.4 Incorrect Reverse Ping Command from Oracle Management Service

Oracle Management Service provides incorrect reverse ping command with Oracle Enterprise Manager Database Control. The `emoms.properties` file shows:

```
emdrep.ping.pingCommand=/usr/sbin/ping6 <hostname>
```

**Workaround:**

Change the property in the `emoms.properties` file to:

```
emdrep.ping.pingCommand=/bin/ping -c 3 -w 30 <hostname>
```

**Note:** On all the computers using IPv6, you must specify `ping6` command (or an equivalent IPv6 command) instead of `ping` command.

This issue is tracked with Oracle bug 9211800.

# 5 Content Specific to Oracle Database 11*g* Release 2 (11.2.0.2)

The following content is specific to release 11.2.0.2:

- Preinstallation Requirements for Release 11.2.0.2
- Installation, Configuration, and Upgrade Issues for Release 11.2.0.2
- Other Known Issues for Release 11.2.0.2

## 5.1 Preinstallation Requirements for Release 11.2.0.2

Refer to the installation guides for the preinstallation requirements.

## 5.2 Installation, Configuration, and Upgrade Issues for Release 11.2.0.2

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

- JDBC Connection Timeout Errors
- Oracle Universal Installer Hangs During Oracle Grid Infrastructure Installation on SUSE 10
- Oracle9i Real Application Clusters Upgrade Issue
- Missing Events After an Oracle Clusterware Upgrade
- Installing Predownloaded Software Updates
- Square Boxes Appear When Installing on Korean Locale on Red Hat Enterprise Linux 5

### 5.2.1 JDBC Connection Timeout Errors

On some servers, applications can encounter JDBC connection timeouts, due to errors with JVM attempting to access `/tmp` and reading the `/dev/random` device. This error may have multiple causes relating to hardware or operating system issues.

**Workaround:**

Contact an Oracle Support Engineer for further information. Refer to My Oracle Support Note 555036.1.

This issue is tracked with Oracle bug 6485149.

### 5.2.2 Oracle Universal Installer Hangs During Oracle Grid Infrastructure Installation on SUSE 10

Due to an issue with the SUSE Enterprise Linux 10 operating system, Oracle Universal Installer may experience intermittent hangs of five to six minutes during Oracle Grid Infrastructure for a Cluster installation.

**Workaround:**

None. Wait for the hang to resolve, and proceed with the installation.

This issue is tracked with bug 9949520.

### 5.2.3 Oracle9*i* Real Application Clusters Upgrade Issue

When using Database Upgrade Assistant to upgrade an Oracle9*i* Real Application Clusters database to Oracle Database 11*g* Release 2, the upgrade fails if the Oracle Grid

Infrastructure home is non-shared and was configured using the Oracle Grid Infrastructure Configuration Wizard.

**Workaround:**

1. As a user with `root` privileges, use the following commands to copy the `libcmdll.so` and `libwddapi.so` files to the remote nodes:

   ```
   scp grid_user@node1:/etc/ORCLcluster/oracm/lib/libcmdll.so
    /etc/ORCLcluster/oracm/lib
   scp grid_user@node1:etc/ORCLcluster/oracm/lib/libwddapi.so
    /etc/ORCLcluster/oracm/lib
   ```

   Enter the *`grid_user`* password when prompted.

2. Use Database Upgrade Assistant to upgrade Oracle RAC.

This issue is tracked with Oracle bug 10029705.

### 5.2.4 Missing Events After an Oracle Clusterware Upgrade

If you upgrade Oracle Clusterware or Oracle Grid Infrastructure for a cluster to 11*g* Release 2 (11.2.0.2), using a rolling upgrade, then Oracle Clusterware may not publish fast application notification (FAN) events and Oracle Enterprise Manager cluster management events on the upgraded clusters.

**Workaround:**

Perform a rolling restart of the Oracle Clusterware software by running the `crsctl stop crs` and `crsctl start crs` commands on each cluster member node in sequence.

This issue is tracked with Oracle bug 10015238.

### 5.2.5 Installing Predownloaded Software Updates

By default, software updates are download to the `/tmp` directory. This directory is deleted at the end of an installation. If you do not download and install the software updates during the same installation session, then the software updates are not available.

**Workaround:**

Specify a new download location for the software updates on the Download Software Updates screen.

This issue is tracked with Oracle bug 9975999.

### 5.2.6 Square Boxes Appear When Installing on Korean Locale on Red Hat Enterprise Linux 5

When installing on a Korean locale (`ko_KR.utf8` or `ko_KR.euckr`), the characters on the Oracle Universal Installer screens are shown as square boxes.

**Workaround:**

Create the following symbolic link:

```
# cd /usr/share/fonts
# ln -s korean ko
```

This issue is tracked with Oracle bug 9746773.

## 5.3 Other Known Issues for Release 11.2.0.2

The following section contain information about issues related to Oracle Database 11*g* and associated products:

- Oracle Notification Service Issue Associated With Physical Memory

### 5.3.1 Oracle Notification Service Issue Associated With Physical Memory

The Oracle Notification Service server may occasionally crash on Linux x86-64 systems with 32 GB of physical memory. The Oracle Notification Service server is immediately restarted, and no action is required of an administrator.

This issue is tracked with Oracle bug 9203989.

# 6 Documentation Corrections and Additions

The following section contains corrections related to Oracle Database 11*g* and associated products:

- Oracle Grid Infrastructure Support for Linux x86

## 6.1 Oracle Grid Infrastructure Support for Linux x86

The system requirements for Linux x86 kernels are missing from the Oracle Grid Infrastructure Installation Guide that is available with the installation media. Refer to the online documentation on Oracle Technology Network (OTN) for the kernel requirements:

`http://www.oracle.com/technetwork/indexes/documentation/index.html`

The latest documentation updates are always available on OTN.

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Oracle Database Release Notes, 11*g* Release 2 (11.2) for Linux
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