

# Oracle® Database

Release Notes

10g Release 2 (10.2) for IBM zSeries Based Linux

**B25399-07**

May 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.

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>

### 1.1 Products and Components Not Certified at the Time of This Publication

At the time of this publication, Oracle Cluster File System version 2 is not certified on Red Hat Enterprise Linux 4.0 and SUSE Linux Enterprise Server 9.

### 1.2 Supported Operating Systems

Oracle Database 10g release 2 is supported on the following operating systems:

- Red Hat Enterprise Linux 4
- SUSE Linux Enterprise Server 9
- SUSE Linux Enterprise Server 10

## 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.
- Messaging Gateways with MQseries 5.3  
Oracle Database 10g release 2 (10.2) does not support Messaging Gateways with MQseries 5.3.  
This issue is tracked with Oracle bug 5259608.

## 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](#)
- [Oracle Universal Installer Operating System Prerequisite Checks](#)
- [Upgrading Oracle Real Application Clusters Release 9.2](#)
- [Adding a Node to a Shared Oracle Clusterware Configuration](#)
- [Oracle Enterprise Manager Buffer Activity Link Errors](#)
- [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](#)
- [Manual Configuration of HTML DB](#)

## 4.1 Latest Upgrade Information

For late-breaking updates and best practices about preupgrade, post-upgrade, compatibility, and interoperability discussions, refer to Note 466181.1 on *OracleMetalink* (<https://metalink.oracle.com/>) that links to "The Upgrade Companion" Web site.

## 4.2 Oracle Universal Installer Operating System Prerequisite Checks

If you are installing Oracle Database 10g on SUSE Linux Enterprise Server 10, then the current version of Oracle Universal Installer does not recognize these operating systems as supported operating systems and does not perform the installation.

**Workaround #1 (recommended):** Run the Oracle Universal Installer using the `ignoreSysPrereqs` flag which causes the installer to skip the operating system check and continue with the installation:

```
./runinstaller -ignoreSysPrereqs
```

As a side effect, the installer also skips other checks during the installation.

**Workaround #2:** On SUSE Linux Enterprise Server 10, the installation will pass the operating system prerequisite checks if you change each 10 to 9 in the `/etc/SuSE-release` file. Ensure that you replace the original values in the `/etc/SuSE-release` file after the Oracle installation is complete.

Original Value	Changed Value
SUSE Linux Enterprise Server 10 (x86_64)	SUSE Linux Enterprise Server 9 (x86_64)
VERSION = 10	VERSION = 9

This workaround causes the installer to consider the system to be running earlier version of the operating system and the operating system check passes. The changes to the release file should be reverted after the installation of all Oracle software is complete. The changes to the release file could impact the ability of other tools to be properly installed on the operating system.

### 4.3 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.

### 4.4 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.

### 4.5 Oracle Enterprise Manager Buffer Activity Link Errors

If you see the Unable to obtain data for metric Buffer Activity error, then enter the following command as the root user:

```
# ln -s /usr/lib64/sa /usr/lib/sa
```

This issue is tracked with Oracle bug 3939313.

### 4.6 Installing Enterprise Security Manager

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

### 4.7 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.

### 4.8 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`.

## 4.9 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.

## 4.10 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
```

## 4.11 Manual Configuration of HTML DB

`opmnctl` is not supported on this release. Therefore, manual configuration of HTML DB is required on this release. To configure HTML DB, complete the following procedure after installing it:

1. Change the working directory to `htmldb`.
2. Connect to SQL\*Plus as `SYS` user as `SYSDBA`.
3. Use the following command to run the `htmldbins.sql` script with the required parameters:

```
SQL> @htmldbins password tablespace_htmldb tablespace_files
```

*tablespace\_temp images connect*

Where:

- *password* is the password for the Oracle HTML DB administrator account, HTML DB schema owner, and the HTML DB files schema owner.

The HTML DB schema owner is the user or schema into which Oracle HTML DB database objects are to be installed. The HTML DB files schema owner is the user or schema where uploaded files are maintained in Oracle HTML DB.

- *tablespace\_html* is the name of the tablespace for Oracle HTML DB application user.
- *tablespace\_files* is the name of the tablespace for Oracle HTML DB files user.
- *tablespace\_temp* is the name of the temporary tablespace.
- *images* is the virtual directory for Oracle HTML DB images. To support future Oracle HTML DB upgrades, define the virtual image directory as */i/*.
- *connect* is the Oracle Net connect string to the database. If this is a local install, then use *none* or *NONE*.

The following are the examples of running the *htmlbins.sql* script and passing the parameters when the target database is Oracle Database 10g release 2 (10.2).

Local installation

```
$ sqlplus "sys/syspass as sysdba" @htmlbins password SYSAUX SYSAUX TEMP /i/  
none
```

Using the connect string:

```
$ sqlplus "sys/syspass@10g as sysdba" @htmlbins password SYSAUX SYSAUX TEMP  
/i/ 10g
```

## 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](#)
- [cluvfy Utility Fails](#)

- [Ultrasearch Login Page Fails to Start on SLES 9](#)
- [Automatic Storage Management Instance Creation Fails on Japanese Locale](#)

## 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 Assitant.

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 -q1 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 cluvfy Utility Fails

The `cluvfy comp ssa` command, used to check shared storage, fails on IBM zSeries Based Linux. This command is not supported for this release.

## 5.11 Ultrasearch Login Page Fails to Start on SLES 9

Ultrasearch login page fails to start on SUSE Linux Enterprise Server 9 machine with 32-bit IBM JDK 1.4.2. This is due to the failure of JDK to compile JSP files. This problem does not occur with 64-bit IBM JDK 1.4.2 (Standard Edition (build 1.4.2) and Classic VM (1.4.2 build and J2RE 1.4.2 IBM build cxz64142-20060421 (SR5) (JIT @ enabled: jitc))).

## 5.12 Automatic Storage Management Instance Creation Fails on Japanese Locale

Database Configuration Assistant fails to create an Automatic Storage management instance on Japanese locale.

**Workaround:** Use the following command before starting Database Configuration Assistant:

```
$ export IBM_JAVA_OPTIONS=-Dibm.stream.nio=TRUE
```

This issue is tracked with Oracle bug 6038975.

# 6 Documentation Corrections and Additions

This section lists the following corrections to the installation guides for IBM zSeries Based Linux:

- 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.
- A note in the section 2.12.1, "Using Raw Logical Volumes" of Chapter 2, "Preinstallation Tasks" in *Oracle Database Installation Guide for IBM zSeries Based Linux* incorrectly states that the use of logical volumes for raw devices is supported only for single-instance databases. This platform supports logical volumes for raw devices for Oracle RAC instances too.
- Oracle Clusterware for 10.2.0.4 on Linux Red Hat and SUSE now uses the Oracle Clusterware Process Monitor Daemon (`oproc`) to monitor the system state of the cluster nodes.

Refer to the Red Hat Enterprise Linux or SUSE Linux Enterprise Server distribution documentation for further information about `oproc`.

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Oracle Database Release Notes, 10g Release 2 (10.2) for IBM zSeries Based Linux  
B25399-07

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