

Oracle® Database

Release Notes

10g Release 2 (10.2) for Solaris Operating System (SPARC 64-Bit)

B15689-10

January 2008

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.

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/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](#)
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- [Preinstallation Requirements](#)
- [Documentation Corrections and Additions](#)
- [Software Contents on Installation Media](#)
- [Installation, Configuration, and Upgrade Issues](#)
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1 Certification Information

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

<http://metalink.oracle.com>

Oracle C++ Call Interface STLPort4 Certification

Starting Oracle Database 10g release 2 (10.2.0.3) STLPort4 libraries for OCCI are supported on this platform. These libraries are available at the following location:

`$ORACLE_HOME/lib/libocci_stlport4.so.10.1`

If you want to use STLPort4 libraries with OCCI, then you must create a soft link `$ORACLE_HOME/lib/libocci.so` pointing to `$ORACLE_HOME/lib/libocci_stlport4.so.10.1`.

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.
- JDBC 1.2 driver
JDBC 1.2 driver is not supported on Solaris 10
- Radius with the CHAP protocol
- Verity
Verity filters used for Oracle Text are not supported on Solaris 10.

3 Preinstallation Requirements

Refer to the installation guides for the preinstallation requirements.

4 Documentation Corrections and Additions

This section lists the following corrections to the installation guides for Solaris operating System (SPARC 64-Bit):

- The note for Solaris 10 under the Configuring Kernel Parameter section of *Oracle Database Installation Guide for Solaris Operating System (SPARC 64-Bit)* reads as: "In Solaris 10, you are not required to make changes to the `/etc/system` file to implement the System V IPC. Solaris 10 uses the resource control facility for its implementation." The following is the complete note text for the same:

In Solaris 10, you are not required to make changes to the `/etc/system` file to implement the System V IPC. Solaris 10 uses the resource control facility for its implementation. However, Oracle recommends that you set both resource control and `/etc/system/` parameters. Operating system parameters not replaced by resource controls continue to affect performance and security on Solaris 10 systems. For further information, contact the Sun vendor.
- The "Software Requierments" section of the installation guides mention that the `SUNWspox` package is supported in all the supported operating systems. However, the package is not supported in Solaris 10 on this platform.
- In the "Configuring Kernel Parameters" section of the Database Quick Installation Guide and Preinstallation Tasks chapter of the installation guide for this platform contains the procedure for changing the kernel parameters on Solaris 10. However, if you set the kernel parameters using this procedure, the values are lost when you restart the system. To make the values available after the system restart, use the following procedure to change the kernel parameters:
 1. By default, Oracle instances are run as the `oracle` user of the `dba` group. A project with the `group.dba` name is created to serve as the

default project for the oracle user. Run the id command to verify the default project for the oracle user:

```
# su - oracle
$ id -p
uid=100(oracle) gid=100(dba) projid=100(group.dba)
$ exit
```

2. To set the maximum shared memory size to 2 GB, run the projmod command:

```
# projmod -sK "project.max-shm-memory=(privileged,2G,deny)" group.dba
```

Alternatively, add the project.max-shm-memory=(privileged, 2147483648, deny) resource control to the last field of the project entries for the Oracle project.

3. After these steps are complete, the /etc/project file should contain the following:

```
# cat /etc/project
```

The following is the output of the command:

```
system:0::::
user.root:1::::
noproject:2::::
default:3::::
group.staff:10::::
group.dba:100:Oracle default
project:::project.max-shmmemory=(privileged,2147483648,deny)
```

4. To verify that the resource control is active, run the id and prctl commands:

```
# su - oracle
$ id -p
uid=100(oracle) gid=100(dba) projid=100(group.dba)
$ prctl -n project.max-shm-memory -i process $$
process: 5754: -bash
NAME      PRIVILEGE      VALUE      FLAG      ACTION      RECIPIENT
project.max-shm-memory
                privileged      2.00GB      -              deny
```

Note: The value for the maximum shared memory depends on the SGA requirements and should be set to a value greater than the SGA size.

For additional information, refer to the Solaris Tunable Parameters Reference Manual.

- The "Checking Software Requirements" section of Chapter 2 in *Oracle Database Installation Guide for Solaris Operating System (SPACR 64-Bit)* does not specify the command to verify the update level of the operating system. You can use the following command to verify the update level of the operating system:

```
$ cat /etc/release
Solaris 9 4/03 s9s_u3wos_
```

In the output of the command, `_u3` refers to update 3 of Solaris 9.

- 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, Oracle Universal Installer 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.

- The section 1.3.1, "DB_BLOCK_SIZE Initialization Parameter" of Chapter 1, "Administering Oracle Database" in *Oracle Database Administrator's Reference for UNIX-Based Operating Systems* states an incorrect value (16 KB) for the `DB_BLOCK_SIZE` on Solaris. The correct value for this parameter on Solaris is 32 KB.
- Chapter 2, "Stopping and Starting Oracle Software" of *Oracle Database Administrator's Reference for UNIX-Based Operating Systems* list the following symbolic link to be made in the "Automating Database Startup and Shutdown on Other Operating Systems" section:

Platform	Symbolic Links Commands
AIX	<pre># ln -s /etc/dbora /etc/rc.d/rc2.d/S99dbora # ln -s /etc/dbora /etc/rc.d/rc2.d/K01dbora</pre>
HP-UX	<pre># ln -s /sbin/init.d/dbora /sbin/rc3.d/S990dbora # ln -s /sbin/init.d/dbora /sbin/rc3.d/K001dbora</pre>
Linux	<pre># ln -s /etc/init.d/dbora /etc/rc.d/rc3.d/K01dbora # ln -s /etc/init.d/dbora /etc/rc.d/rc3.d/S99dbora # ln -s /etc/init.d/dbora /etc/rc.d/rc5.d/K01dbora # ln -s /etc/init.d/dbora /etc/rc.d/rc5.d/S99dbora</pre>
Solaris	<pre># ln -s /etc/init.d/dbora /etc/rc3.d/K01dbora # ln -s /etc/init.d/dbora /etc/rc3.d/S99dbora</pre>

Platform	Symbolic Links Commands
Tru64 UNIX	# ln -s /sbin/init.d/dbora /sbin/rc3.d/S99dbora # ln -s /sbin/init.d/dbora /sbin/rc3.d/K01dbora

This following is the correct list of symbolic links to be made:

Platform	Symbolic Links Commands
AIX	# ln -s /etc/dbora /etc/rc.d/rc2.d/S99dbora # ln -s /etc/dbora /etc/rc.d/rc0.d/K01dbora
HP-UX	# ln -s /sbin/init.d/dbora /sbin/rc3.d/S99dbora # ln -s /sbin/init.d/dbora /sbin/rc0.d/K001dbora
Linux	# ln -s /etc/init.d/dbora /etc/rc.d/rc0.d/K01dbora # ln -s /etc/init.d/dbora /etc/rc.d/rc3.d/S99dbora # ln -s /etc/init.d/dbora /etc/rc.d/rc5.d/S99dbora
Solaris	# ln -s /etc/init.d/dbora /etc/rc0.d/K01dbora # ln -s /etc/init.d/dbora /etc/rc3.d/S99dbora
Tru64 UNIX	# ln -s /sbin/init.d/dbora /sbin/rc3.d/S99dbora # ln -s /sbin/init.d/dbora /sbin/rc3.d/K01dbora

- In the "Overview" section of Chapter 20, "JDBC RowSets" in *Oracle Database JDBC Developer's Guide and Reference* the following information is missing:

The `javax.sql.rowset` package has to be downloaded from the following link at the Sun site:

http://java.sun.com/products/jdbc/download.html#rowset1_0_1

Extract the `rowset.jar` file from the zip file downloaded and include this jar file in the CLASSPATH.

5 Software Contents on Installation Media

The following products and documentation are located on the first DVD:

- Oracle Database 10g release 2 (10.2) software and documentation
- Oracle Database Companion Products 10g release 2 (10.2) software and documentation
- Oracle Database 10g release 2 (10.2) Documentation Library

The following products and documentation are located on the second DVD:

- Oracle Clusterware 10g release 2 (10.2) software and documentation
- Oracle Database Client 10g release 2 (10.2) software and documentation
- Oracle Gateway 10g release 2 (10.2) software and documentation
- Oracle Database 10g release 2 (10.2) Documentation Library

6 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 RAC Support](#)
- [Installing Enterprise Security Manager](#)
- [Installing Oracle Database on a Computer That has an Automatic Storage Management Instance](#)
- [extjob Executable Required Directory Permissions](#)
- [Modifying a Virtual IP Address Node Application](#)
- [Network Attached Storage for RAC Databases](#)

6.1 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.

6.2 Oracle RAC Support

The list of supported installation options and supported storage types for Oracle Clusterware, Oracle RAC, and vendor clusterware are described in this section. Oracle plans to support additional Oracle Clusterware and Oracle RAC configurations in the future. Please check for updates to this document for the latest list of supported installation scenarios on the OTN Web site at:

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

6.3 Installing Enterprise Security Manager

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

6.4 Installing Oracle Database on a Computer That has an Automatic Storage Management Instance

Oracle Universal Installer displays an error message that reads 0. This message is displayed after you specify the database home and path in the Specify Home Details screen and click Next. Ignore the error message whenever it is displayed, and continue the installation.

6.5 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`.

6.6 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 `svctl modify nodeapps` command and include the existing interfaces for the VIP in the `-A` argument. For example:

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

This issue is tracked with Oracle bug 4500688.

6.7 Network Attached Storage for RAC Databases

To use NAS as a shared storage for RAC, apply the following patches:

- Patch 112168-03 for Solaris 8
- Patch 114388-03 for Solaris 9

7 Other Known Issues

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

- [Materialized View and Partition Change Tracking Rewrite](#)
- [Host-Based Mirroring](#)
- [Oracle ODBC Driver Limitations](#)
- [Importing a User Certificate Into Oracle Wallet Using Oracle Wallet Manager](#)
- [Removing Metrics for Wait Classes Removes Them Permanently](#)
- [Preventing Loss of Quorum](#)
- [Increasing the CSS misscount Parameter](#)
- [Oracle Clusterware Private IP Addresses with Sun Cluster](#)

7.1 Cluster Verification Utility

Third Party Clusterware

If your deployment environment does not use SunCluster, ignore the SunCluster version, ORCLUdlm version, and patch 113800-06 errors reported by Cluster Verification Utility (CVU).

If your deployment environment is Solaris 9, then the expected patch for SunCluster is 113801 instead of patch 113800-06. In addition, ignore kernel parameter `SHMMIN` and `SHMSEG` errors reported by Cluster Verification Utility (CVU).

Missing Patch Error Message

When CVU finds a missing patch, it reports a `xxxx patch is unknown error`. This should be read as `xxxx patch is missing`.

This issue is tracked with Oracle bug 4566437.

Raw Devices Shared Storage and Veritas Logical Volumes

Cluster Verification Utility validates the readiness of a cluster to install Oracle Clusterware and RAC, and create databases. It also helps verify the integrity of individual cluster components. CVU discovers raw disks, and performs shared checks for raw disks and Veritas logical volumes by verifying the unique "storage signature" across all nodes. However, it does not check whether the device is actually writeable or readable by the `oracle` user.

7.2 Materialized View and Partition Change Tracking Rewrite

When the query has single column in-lists, the materialized view has ranges, and partition change tracking rewrite is used, you might get stale results with Query Rewrite. Turn off the fresh partition containment rewrite to avoid this problem by using the following command:

```
SQL> alter session set "_query_rewrite_fpc" = false;
```

7.3 Host-Based Mirroring

The host-based mirroring is not supported with ASM. Note that there is no issue with resilvering for storage based mirroring.

Workaround: Use ASM redundancy.

This issue is tracked with Oracle bug 4466206.

7.4 Oracle ODBC Driver Limitations

Oracle ODBC driver for Solaris does not work if you use the REAL data type for a column and the application tries to retrieve data as native double or float data type through PL/SQL stored procedure.

Workaround: Instead of the REAL data type, use the NUMBER(s,p) data type while creating a table.

This issue is tracked with Oracle bug 4551566.

7.5 Importing a User Certificate Into Oracle Wallet Using Oracle Wallet Manager

Oracle Wallet Manager will fail to recognize the user certificate as valid if you capture the user certificate contents from the Oracle Certificate Authority site and save this as a flat file. This is because when saving as a flat file, all the lines of the user certificate are run together with no line breaks.

Workaround: Edit the user certificate. Insert a new line after
-----BEGIN CERTIFICATE----- and a new line before
-----END CERTIFICATE-----.

7.6 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.

7.7 Preventing Loss of Quorum

If a storage area network (SAN) device is used to provide access to a shared storage and IO Multi-pathing (MPxIO) is enabled, then you must install the following patches on all the nodes of the cluster.

- 119374-13
- 119715-10

Without these patches, a node can lose access to the shared storage being accessed through the physical link that gets disconnected or fails.

7.8 Increasing the CSS `misscount` Parameter

When the Solaris fiber channel port driver senses that a link is down, it gives two minutes timeout period before offlining the LUN path associated with the port. The purpose of this delay is to prevent a premature fail over in as a result of a transient link failure. If there are alternate active paths to the LUNs and SCSI reservations are not active, then within this timeout MPxIO automatically reconfigures to use the alternate path.

However, during this timeout period the port failure is not perceived by CRS because the path is not offlined. If the node is evicted during this timeout period, the CRS daemons fail to reboot the node and services will not fail over to other nodes. In this case, the node will reboot only until the link is up again. After the reboot, all services belonging to the node will be up.

To avoid this problem the `misscount` parameter must be set to a value greater than 120 seconds. As a result, the eviction and reboot process is not affected by the Solaris timeout period. The node is evicted, it reboots and its services fail over to other nodes as expected.

After CRS installation is complete, you can change the `misscount` parameter by completing the following steps:

1. On any node run the `$CRS_HOME/bin/crsctl set css misscount 130` command.
2. On all nodes run the `$CRS_HOME/bin/crsctl stop crs` command.
3. On all nodes run the `$CRS_HOME/bin/crsctl start crs` command.

The default value for the `misscount` parameter is 27. Increasing the value of this parameter increases the time the node takes to fail over. Therefore, the service level of the cluster reduces for a longer period of time. It is up to the user to decide if a longer fail over time is acceptable. Solaris has a mechanism in place to allow applications to be notified immediately of a link down.

In this release, Oracle is not using this mechanism but work is in progress to make use of this mechanism. In a future Oracle release this workaround will no longer be needed.

7.9 Invalid Link to Monitor in Memory Access Mode Feature

Do not click the link to the Monitor in Memory Access Mode feature in the database screen. This feature is not available in Enterprise Manager Database Control 10.2.0.2 release. Clicking this link may stop an agent from responding.

This issue is tracked with Oracle bug 4866231.

7.10 Oracle Clusterware Private IP Addresses with Sun Cluster

If you are using a Sun Cluster, then do not enter the private interconnect in the `/etc/hosts` file, but instead use `clusternodeX-priv` to indicate the private interconnect for Oracle Clusterware and Oracle RAC.

This issue is tracked with bug 6238217.

8 Documentation Accessibility

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