Oracle® Database

Release Notes

10*g* Release 1 (10.1.0.2.0) for Linux x86

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Part No. B10817-01

This document contains important information that was not included in the platform-specific or product-specific documentation for this release.

It contains the following topics:

- Product Issues
- Documentation Updates
- Documentation Accessibility

This document may be updated after release. To check for updates to this document and to view other product-specific release notes, see the Documentation section on the OTN Web site:

`http://otn.oracle.com/documentation`

For additional information about this release, see the readme files located in the `$ORACLE_HOME/relnotes` directory.

Product Issues

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

- Silent Installations that Use ASM
- Oracle Cluster Ready Services Silent Installation
- Oracle CRS Installation Errors Caused by stty Commands
- Net Configuration Assistant Help
- Network Utilization Metrics Not Displayed
- Generic Connectivity
- Oracle Transparent Gateway for DRDA
- Flashback Table or Flashback Analysis
- Oracle Workflow
- Enabling Automated Backups
- Removing Cloned Oracle Homes
- Using the Intel C++ Compiler for PL/SQL Native Compilation
- Oracle Real Application Clusters Installed on an Oracle Cluster File System
- Using Network Attached Storage for RAC Installations
- Building Pro*C Applications if PostgreSQL is Installed
- Linking Applications With Oracle Client Libraries
- OCCI Applications on Red Hat Enterprise Linux 3.0
- OCCI Support for UnitedLinux 1.0
- Sockets Direct Protocol
- Using Shared CRS Home or Oracle Home Directories

Silent Installations that Use ASM

You cannot use the silent installation method to install Oracle Database 10*g* and create a database that uses ASM for database storage during the same installation. This is because the `root.sh` script must run before the Database Configuration Assistant (DBCA) can start an ASM instance.

If you want to use the silent installation method to install Oracle Database 10*g* and create a database that uses ASM, follow these steps:

1. Use the `enterprise.rsp` response file to complete a software-only installation.
2. Run `$ORACLE_HOME/root.sh` after the installation completes.
3. Use the `dbca.rsp` response file to run DBCA in silent mode, using a command similar to the following:

   ```
   $ $ORACLE_HOME/bin/dbca -silent -responseFile /full_path/dbca.rsp
   ```

Oracle Cluster Ready Services Silent Installation

If you perform a silent installation of Oracle Cluster Ready Services (CRS) on multiple nodes, on a system that does not have other Oracle installations, the Installer does not set up the Oracle Inventory correctly.

In this case, after the installation is complete, follow these steps:

1. Run the `orainstRoot.sh` script on a local node.
2. Copy the `oraInventory` directory from the local node to each of the remote nodes.
3. Log in as the `root` user and run the following script on each remote node:

   ```
   oraInventory/orainstRoot.sh
   ```

Oracle CRS Installation Errors Caused by stty Commands

During an Oracle CRS installation, the Installer uses SSH (if available) to run commands and copy files to the other nodes. During the installation, you might see errors similar to the following if a "dot" file on the system (for example, `.bashrc` or `.cshrc`) contains `stty` commands:

```
stty: standard input: Invalid argument
stty: standard input: Invalid argument
```

To avoid this problem, Oracle recommends that you modify these files to suppress all output on STDERR, as follows:

- Bourne, Bash, or Korn shell:

```
if [ -t 0 ]; then
   stty intr ^C
fi
```

- C shell:

```
test -t 0
if ($status == 0) then
   stty intr ^C
endif
```

> **Note:** When SSH is not available, the Installer uses the `rsh` and `rcp` commands instead of `ssh` and `scp`. If there are "dot" files that contain `stty` commands that are loaded by the remote shell, this error can also occur.

This issue is tracked through Oracle Bug 3414362.

Net Configuration Assistant Help

In the Net Configuration Assistant (NetCA) help, the link to the Select Oracle Context help topic is broken. The text for this topic is as follows:

Directory Usage Configuration, Select Oracle Context

Oracle administrative content has been found in more than one location in the directory. Oracle administrative content is stored in an Oracle Context, a subtree in the directory that stores Oracle entries.

From the list, select or enter the location you want to use as the default Oracle Context location from which this computer will access Oracle entries, such as connect identifiers.

Network Utilization Metrics Not Displayed

The Oracle Enterprise Manager Grid Control or Database Control should display the following network utilization metrics for each network interface:

- Network Interface Combined Utilization (%)
- Network Interface Read Utilization (%)
- Network Interface Write Utilization (%)

If these metrics are not displayed for a particular network interface, create the `$ORACLE_HOME/sysman/config/network_speed` file and enter the network interface name and speed in the file as follows, where *`interface`* is the network interface name and *`speed`* is the speed of the interface in megabits per second (Mbps):

```
interface_name speed
```

For example, if the `eth0` network interface does not display metrics, create the `$ORACLE_HOME/sysman/config/network_speed` file and enter the following, where `100` is the network speed in Mbps:

```
eth0 100
```

Generic Connectivity

Oracle Database 10*g* supports generic connectivity (`hsodbc`) on Linux x86.

Oracle Transparent Gateway for DRDA

Oracle Transparent Gateway for DRDA is available on Linux x86.

Flashback Table or Flashback Analysis

If a user invokes the Flashback Table or Flashback Analysis operation, and that user has FLASHBACK ANY TABLE privileges but does not have specific flashback privileges on the objects that flashback is invoked on and does not have DBA privileges, then the following errors may occur:

```
ORA-02002: error while writing to audit trail
ORA-00600: internal error code, arguments: [kzasps1], [4], [47], [],[],
```

To fix this problem, as SYSDBA, grant the user FLASHBACK privilege on the objects that are referred to in the FLASHBACK TABLE statement and then invoke the flashback operation. For example:

```
SQL> GRANT FLASHBACK ON SCOTT.EMP_1 TO user1;
```

This issue is tracked through Oracle bug 3403666.

Oracle Workflow

Although Oracle Workflow is listed on the Companion CD installation screens, it is not included in this release.

Enabling Automated Backups

While installing Oracle Database, the Specify Backup and Recovery Options screen may appear truncated if your system does not have the required fonts installed. If your system has only fixed-width fonts, you may not be able to fully specify the required information in the Backup Job Credentials area of the screen. To work around this issue, do not select **Enable Automated Backups** on this screen. After the installation is complete, use the Oracle Enterprise Manager 10*g* Database Control to enable automated backups.

Removing Cloned Oracle Homes

> **Note:** This issue occurs only if the cloned and source Oracle homes are on the same system.

If you use the Installer to remove a cloned Oracle home, and the cloned Oracle home is on the same system as the source Oracle home, the Installer removes essential files from the source Oracle home. To avoid this issue, remove the cloned Oracle home as follows:

1. Remove the cloned Oracle home manually by deleting the cloned Oracle home directory.
2. Start the Installer from the source Oracle home directory:

   ```
   $ source_oracle_home/oui/bin/runInstaller
   ```

3. In the Welcome window, click **Deinstall Products**.

   The Inventory window appears, listing all of the Oracle homes on the system.

4. In the Inventory window, select the cloned Oracle home, then click **Remove**.

This issue is tracked through Oracle bug 3417663.

Using the Intel C++ Compiler for PL/SQL Native Compilation

By default, PL/SQL native compilation is configured to use the Gnu gcc compiler. To use the Intel C++ compiler (`icc`) instead of the gcc compiler, make the following changes in the `$ORACLE_HOME/plsql/spnc_commands` file:

- Comment out the gcc section.
- Uncomment the icc section.

Oracle Real Application Clusters Installed on an Oracle Cluster File System

If you installed Oracle Real Application Clusters (RAC) on an Oracle Cluster File System (OCFS), after installation perform the following steps on each node of the cluster:

1. Stop the Oracle instance.
2. Move the `$ORACLE_HOME/dbs/hc_*.dat` files to a directory on a local file system.
3. Create symbolic links from the `$ORACLE_HOME/dbs` directory to the `hc_*.dat` files on the local file system.
4. Restart the Oracle instance.

Using Network Attached Storage for RAC Installations

On Linux, you can use an NFS file system on a certified NAS device for storing Oracle software or database files. The file system that you use must have the same mount point path on all cluster nodes. In addition, you must use the following mount options when mounting the NFS file systems:

- Use the `noac` option to disable attribute caching.
- Use the `tcp` option to specify the TCP protocol.
- Verify that the NFS file system and the correct mount options are specified in the `/etc/fstab` file on every node to ensure that the file system is mounted when each node boots.

For more information about using NAS devices and NFS file systems:

- See Oracle*Metalink* for information about certified NAS devices
- Contact your NAS vendor for specific recommendations about using the device with Oracle Real Application Clusters
- See Appendix C in the *Oracle Database Installation Guide for UNIX Systems* for general guidelines about using NAS devices for Oracle Database installations

Building Pro*C Applications if PostgreSQL is Installed

If the `postgresql-devel` package is installed on the system, 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, 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'
```

Linking Applications With Oracle Client Libraries

If your client application is compiled using a version of `glibc` other than version 2.2.4, you must link it with the client shared library. The use of the client static library is not supported.

Note: Do not use the `libc` stubs in the following file:

```
$ORACLE_HOME/lib/stubs
```

OCCI Applications on Red Hat Enterprise Linux 3.0

On Red Hat Enterprise Linux 3.0, you must use version 2.96 of the g++ compiler (`/usr/bin/g++296`) to compile Oracle C++ Call Interface (OCCI) applications. g++ version 3.2 is not supported for compiling OCCI applications.

OCCI Support for UnitedLinux 1.0

For this release, OCCI is not supported on UnitedLinux 1.0. This issue is tracked through Oracle bug 3426344.

Sockets Direct Protocol

Oracle Net supports Sockets Direct protocol (SDP) over the InfiniBand network architecture on Red Hat Enterprise Linux AS 2.1 and 3 for Oracle Database 10*g* release 1. However, the `$ORACLE_HOME/bin/adapters` utility does not list SDP, even though it is supported.

See Also: For more information about SDP support on Linux, see the *Oracle Database 10g Administrator's Guide* .

Using Shared CRS Home or Oracle Home Directories

For this release, Oracle supports shared CRS home and Oracle home directories on Linux only if they are located on a certified NAS device. This configuration is supported only if you also use the NAS device to store the Oracle database files.

Note: Do not locate the CRS home or Oracle home directories on an OCFS file system.

Documentation Updates

The following sections contain updates to the Oracle Database 10*g* documentation:

- Installer Path
- RAC racgons Command
- Running DBCA on RAC
- Deleting Nodes from Oracle Clusters on UNIX-Based Systems
- Globalization Support

Installer Path

Pages 5-4 and 5-8 of the *Oracle Real Application Clusters Administrator's Guide* include the following path:

```
<CRS home>/OUI/bin
```

In these examples, the correct path should be:

```
<CRS home>/oui/bin
```

RAC racgons Command

The following example appears on page 5-6 of the *Oracle Real Application Clusters Administrator's Guide*:

On all platforms, execute the `racgons` utility from the `bin` subdirectory of the CRS home to configure the Oracle Notification Services (ONS) port number as follows:

```
racgons <nodeI>:4948 <nodeI+1>:4948 ... <nodeI+n>:4948
```

The command should be:

```
racgons add_config <newnodename>:4948
```

Running DBCA on RAC

The following text appears on page 5-10 of the *Oracle Real Application Clusters Administrator's Guide*:

Execute the following procedures on each new node to add instances:

1. Start the Database Configuration Assistant (DBCA) by entering `dbca` at the system prompt from the `bin` directory in the `$ORACLE_HOME` on UNIX.

This text should be changed as follows:

Execute the following procedures *for* each new node to add instances:

Deleting Nodes from Oracle Clusters on UNIX-Based Systems

The following text replaces the "Deleting Nodes from Oracle Clusters on UNIX-Based Systems" section, on page 5-13 of the *Oracle Real Application Clusters Administrator's Guide*:

Use the following procedures to delete nodes from Oracle clusters on UNIX-based systems:

1. If there are instances on the node that you want to delete, then execute the procedures in the section titled "Deleting Instances from Real Application Clusters Databases" on page 5-12 before executing these procedures. If you are deleting more than one node, then delete the instances from all the nodes that you are going to delete.
2. To delete node applications, enter the following command as the `root` user, where `<node1>` through `<nodeN>` is a comma-separated list of the nodes that you want to delete:

   ```
   rootdeletenode.sh <node1>,<node2>,...,<nodeN>
   ```

3. On the same node that you are deleting, enter the following command as the `oracle` user, where `node1` through `<nodeN>` is a comma-separated list of nodes that are remaining in the cluster. This list must exclude the nodes that you are deleting.

   ```
   <Oracle home>/oui/bin/runInstaller -updateNodeList \
    ORACLE_HOME=<Home location> \
    CLUSTER_NODES=node1,node2,...<nodeN>
   ```

> **Note:** This command line invocation will not launch the GUI version of the Installer.

4. If you are not using a cluster file system for the Oracle home, then on the node that you are deleting, remove the Oracle database software by executing the `rm` command as the `oracle` user. Make sure that you are in the correct Oracle home of the node that you are deleting when you execute the `rm` command. Execute this command on all the nodes that you are deleting.

5. Log in as the `root` user. If the `ocr.loc` file is on a shared file system, then enter the following command:

   ```
   <CRS home>/install/rootdelete.sh remote sharedvar
   ```

   If the `ocr.loc` file is not on a shared file system, then enter the following command:

   ```
   <CRS home>/install/rootdelete.sh remote nosharedvar
   ```

   If you are deleting more than one node from your cluster, then repeat this step on each node that you are deleting.

6. As the `root` user, enter the following command on any remaining node in the cluster to delete the nodes from the Oracle cluster and to update the Oracle Cluster Registry (OCR):

   ```
   <CRS Home>/install/rootdeletenode.sh
   ```

   If you are deleting multiple nodes, then enter the following command, where `node1` through `<nodeN>` is a list of the nodes that you want to delete, and `<node1-number>` through `<nodeN-number>` represents the node number:

   ```
   <CRS Home>/install/rootdeletenode.sh \
   node1,<node1-number>,node2,<node2-number>,...<nodeN>,<nodeN-number>
   ```

   To determine the node number of any node, enter the following command:

   ```
   <CRS Home>/bin/olsnodes -n
   ```

7. On the same node, as the `oracle` user, enter the following command, where `node1` through `<nodeN>` is a comma-separated list of nodes that are remaining in the cluster:

   ```
   <CRS home>/oui/bin/runInstaller -updateNodeList \
    ORACLE_HOME=<CRS home> \
    CLUSTER_NODES=node1,node2,... <nodeN>
   ```

8. If you are not using a cluster file system, then on the node that you are deleting, remove the Oracle CRS software by executing the `rm` command as the `root` user. Make sure that you execute the `rm` command from the correct Oracle CRS home. Execute the `rm` command on every node that you are deleting.

Globalization Support

The instructions about the ORA_NLS10 environment variable in the "Using Oracle9*i* Database Language and Territory Definition Files with Oracle Database 10*g*" section of the *Oracle Database 10g README* file are incorrect. This is because the `$ORACLE_HOME/nls/data/old` directory contains definitions files which have changed in Oracle Database 10*g* release 1 only, and not the complete set of the database locale definition files. To include the Oracle 9*i* definitions:

1. Create a new directory:

   ```
   $ mkdir $ORACLE_HOME/nls/data/9i
   ```

2. Copy the contents of the `$ORACLE_HOME/nls/data` directory to the new directory:

   ```
   $ cp $ORACLE_HOME/nls/data/*.nlb $ORACLE_HOME/nls/data/9i
   ```

3. Copy the contents of the `$ORACLE_HOME/nls/data/old` directory to the directory that you created in step 1:

   ```
   $ cp $ORACLE_HOME/nls/data/old/*.* $ORACLE_HOME/nls/data/9i
   ```

4. Set the ORA_NLS10 environment variable to specify the directory that you created, for example:

   - Bourne, Bash, or Korn shell:

     ```
     $ ORA_NLS10=$ORACLE_HOME/nls/data/9i ; export ORA_NLS10
     ```

   - C shell:

     ```
     % setenv ORA_NLS10 $ORACLE_HOME/nls/data/9i
     ```

     See Also: Refer to the *Oracle Database 10g Globalization Support Guide* and the *Oracle Database 10g README* for more information about the changes in the language and territory definition files between Oracle9*i* and Oracle Database 10*g*.

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`http://www.oracle.com/accessibility/`

Accessibility of Code Examples in Documentation

JAWS, a Windows screen reader, may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, JAWS may not always read a line of text that consists solely of a bracket or brace.