These Release Notes contain important last minute information not included in the Oracle Database documentation library. They may also contain information regarding components that are no longer installed with the database. For the most current information, refer to updates of this document, which are located at the following Web site:

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

This document is an update of Oracle Database Release Notes Release 10g Release 1 (10.1.0.2.0) for Windows, Part No. B10132-03, published September 2004. The information in this update is current as of April 2005. At the time of this publication, Oracle Database 10g release 1 (10.1.0.3) patch set 1 is available for download from Oracle MetaLink. Oracle recommends installing the latest patch set release after successful installation of the Oracle Database.

http://metalink.oracle.com/

This document contains these topics:

- Documentation Accessibility
- Accessibility Software Recommendations
- Documentation
- Location of README Files
- Microsoft Active Directory Support
- New Features
- Preinstallation Step for Windows Server 2003
- Upgrading an Oracle9i Database to Oracle Database 10g
- Components and Features Not Supported for Windows
- Components Requiring Separate Installations
- Desupported Components
- Open Bugs and Known Issues
- Documentation Corrections and Additions
- Real Application Clusters (RAC)
1 Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible, with good usability, to the disabled community. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For additional information, visit the Oracle Accessibility Program Web site at

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.

Accessibility of Links to External Web Sites in Documentation This documentation may contain links to Web sites of other companies or organizations that Oracle does not own or control. Oracle neither evaluates nor makes any representations regarding the accessibility of these Web sites.

2 Accessibility Software Recommendations

Our goal is to make Oracle products, services, and supporting documentation accessible to the disabled community. Oracle Database 10g release 1 (10.1.0.2.0) supports accessibility features. To make best use of these accessibility features, Oracle recommends the following software configuration:

- Windows 2000 with Service Pack 2 or higher
- Sun Java Access Bridge 1.0.3 (included with the Oracle Database 10g release 1 (10.1.0.2.0) media)
- JAWS screen reader 3.70.87
- Microsoft Internet Explorer 5.5 or above

Additional accessibility information for Oracle products can be found at

http://www.oracle.com/accessibility

For the latest configuration information, and for information on addressing accessibility and assistive technology issues, see the Oracle Accessibility FAQ at

http://www.oracle.com/accessibility/faq.html

3 Documentation

Documentation for Oracle Database 10g release 1 (10.1.0.2.0) is available at

http://otn.oracle.com/documentation/index.html
4 Location of README Files

Additional component README files are accessible after installation. They are located in:

- `ORACLE_BASE\ORACLE_HOME\doc`
- `ORACLE_BASE\ORACLE_HOME\relnotes`
- Product subdirectories in directory `ORACLE_BASE\ORACLE_HOME`

5 Microsoft Active Directory Support

Microsoft Active Directory is supported with Oracle Database 10g release 1 (10.1).

See Also: Oracle Database Platform Guide for Windows

6 New Features

This section describes new features of Oracle Database for Windows that are not documented elsewhere.

6.1 New Oracle C++ Call Interface Libraries Available for Windows

New Oracle C++ Call Interface (OCCI) libraries are available for Microsoft CRT debugging and for developing applications with Microsoft Visual C++ 7.0 .NET 2002 and Microsoft Visual C++ 7.1 .NET 2003.

6.1.1 Support for Debug Version of Microsoft Visual C++ 6.0

Applications that are linked with `MSVCRTD.DLL` (debug version of Microsoft C-Runtime) in order to debug memory issues should link with `oraocci10d.lib` and `oraocci10d.dll`. These files are for use with Microsoft Visual C++ 6.0. The installed location is `ORACLE_BASE\ORACLE_HOME\oci\lib\msvc\vc6`.

6.1.2 Support for Microsoft Visual C++ 7.0 .NET 2002

Applications developed in Microsoft Visual C++ 7.0 .NET 2002 should use `oraocci10.lib` and `oraocci10.dll`. The currently shipped OCCI DLL is built with Microsoft Visual C++ 6.0 and cannot be used from a Microsoft Visual C++ 7.0 .NET 2002 compiled application. This OCCI library links with the non-debug version of Microsoft CRT (`MSVCR70.DLL`). The installed location is `ORACLE_BASE\ORACLE_HOME\oci\lib\msvc\vc7`.

6.1.3 Support for Debug Version of Microsoft Visual C++ 7.0 .NET 2002

Applications that are linked with `MSVC70D.DLL` (debug version of Microsoft C-Runtime) in Microsoft Visual C++ 7.0 .NET 2002 in order to debug memory issues should link with `oraocci10d.lib` and `oraocci10d.dll`. The installed location is `ORACLE_BASE\ORACLE_HOME\oci\lib\msvc\vc7`.

6.1.4 Support for Microsoft Visual C++ 7.1 .NET 2003

Applications developed in Microsoft Visual C++ 7.1 .NET 2003 should use `oraocci10.lib` and `oraocci10.dll`. The currently shipped OCCI DLL is built with Microsoft Visual C++ 6.0 and cannot be used from a Microsoft Visual
C++ 7.1 .NET 2003 compiled application. This OCCI DLL links with the non-debug version of Microsoft CRT (MSVCR71.DLL). The installed location is ORACLE_BASE\ORACLE_HOME\oci\lib\msvc\vc71.

6.1.5 Support for Debug Version of Microsoft Visual C++ 7.1 .NET 2003
Applications that are linked with MSVCR71D.DLL (debug version of Microsoft C-Runtime) in Microsoft Visual C++ 7.1 .NET 2003 in order to debug memory issues should link with oraocci10d.lib and oraocci10d.dll. The installed location is ORACLE_BASE\ORACLE_HOME\oci\lib\msvc\vc71.

---

**Note:** The current Oracle C++ Call Interface library for Microsoft Visual C++ 6.0 is available as in previous releases.

- oraocci10.lib is available in ORACLE_BASE\ORACLE_HOME\oci\lib\msvc.
- oraocci10.dll is available in ORACLE_BASE\ORACLE_HOME\bin.
- Copies of these two files are also installed in ORACLE_BASE\ORACLE_HOME\oci\lib\msvc\vc6.

---

**Note:** Ensure that the LIB and PATH environment variables are set appropriately for the Visual C++ compiler version being used. For example, if you are using Visual C++ 7.0, then add directory ORACLE_BASE\ORACLE_HOME\oci\lib\msvc\vc7 to the LIB and PATH variables. Environment variables can be set from the Windows Control Panel or using the SET command.

---

7 Preinstallation Step for Windows Server 2003
To use raw partitions or logical drives on Windows Server 2003, you must enable disk automounting. Enable disk automounting for:

- Raw Partitions for Oracle Real Application Clusters (RAC)
- Cluster File System for Oracle Real Application Clusters
- Oracle Clusterware
- Raw partitions for a single-node database
- Logical drives for Automatic Storage Management (ASM)

Follow these steps to enable automounting:

1. Enter the following commands at a command prompt:
   ```
   C:\> diskpart
   DISKPART> automount enable
   DISKPART> exit
   ```

2. Restart your computer.
If you upgrade an Oracle9i database to Oracle Database 10g release 1, Oracle Flashback features using a timestamp may fail. To work around this problem, enter the following SQL commands from the Oracle Database 10g database:

```
SQL> DELETE FROM smon_scn_time WHERE orig_thread <> 0;
SQL> COMMIT;
```

This issue is tracked with Oracle bug 3994270.

### 9 Components and Features Not Supported for Windows

This section contains these topics:

- **RADIUS Adapter**
- **Central Configuration of RAC Disabled on Windows**
- **User Threads**

#### 9.1 RADIUS Adapter
Oracle Advanced Security supports RADIUS-compliant servers and authentication devices. As in prior releases, RSA ACE/Server and tokens can authenticate Oracle users only through the RADIUS adapter.

In this release, the CHAP (challenge-response) mode has been disabled for Windows, so the challenge-response default interface does not function.

**Note:** Check your platform specific documentation for availability on other platforms.

#### 9.2 Central Configuration of RAC Disabled on Windows

The option for configuring central management is not available during RAC installation on Windows. Also not supported on Windows is the use of standalone Enterprise Manager Configuration Assistant or Database Configuration Assistant to configure central management for RAC.

**Note:** All nodes in the cluster must have automatic mounting enabled in order to correctly install RAC and Oracle Clusterware. Oracle recommends that you enable the automatic mounting feature before creating any logical partitions for use by the database, ASM, or the Cluster File System.

You must restart each node after enabling this feature. After it is enabled and the node restarted, automatic mounting remains active until it is disabled.

**See Also:** Operating system documentation for more information about DiskPart
If you want central management for the installed RAC database, then you will have to discover the RAC database target manually from Grid Control after the installation.

9.3 User Threads
This feature is not available with the 32-bit or 64-bit releases of 10g release 1 (10.1.0.2.0).

10 Components Requiring Separate Installations
Some components are no longer installed with the Oracle Database software. A list of installation changes is provided in Oracle Database Installation Guide for Windows.

See Also: "Additional Software Installations" in Oracle Database Installation Guide for Windows

11 Desupported Components
The following components are desupported in this release:

- INTYPE File Assistant (IFA)
- Pro*C GUI
- Pro*COBOL 1.8.77
- Migration Utility
- Oracle Names
- Oracle Trace

12 Open Bugs and Known Issues
This section describes bugs and known issues for Oracle Database for Windows:

- Installation on Windows 2000 with Service Pack 4
- Readme Text Files
- Stop Database Control Service Before Deinstalling
- Switching Between Database Control and Grid Control
- PGA Memory Usage Details in Oracle Enterprise Manager
- Quick Tour Not Available in Oracle Change Management Pack
- Error When Viewing Period SQL Execution Plan in Korean
- NTS Authentication Failure with .NET Remote Objects
- Errors During Cluster Ready Services Deinstallation
- Shortcut Not Removed After Cluster Ready Services Deinstallation on Deleted Node
- Oracle Wallet Manager Missing from the Start Menu
- Installing Oracle Database on Non English Versions of Windows 2000

See Also: "Additional Software Installations" in Oracle Database Installation Guide for Windows
12.1 Installation on Windows 2000 with Service Pack 4

Oracle Universal Installer may appear and then disappear on Windows 2000 with Service pack 4. This is because of an underlying JRE bug. There are three workarounds, depending on what you are installing.

For an Enterprise Manager Grid Control installation, run

```
install\setup.exe -J-Dsun.java2d.nodraw=true
```

For an Oracle Database installation, run

```
install\setup.exe -J-Dsun.java2d.nodraw=true
```

For a Cluster Ready Services installation, run

```
install\setup.exe -J-Dsun.java2d.nodraw=true
-Doracle.installer.formCluster=true
```

12.2 Readme Text Files

Some Readme text files contain Unix line breaks. If you simply double-click these files, they will open in Notepad by default, and Notepad does not recognize Unix line breaks. Use WordPad (`write.exe`) or `edit.com` instead.

12.3 Stop Database Control Service Before Deinstalling

If you want to deinstall Oracle software or delete Database Control configuration, then Oracle recommends that you first stop the Database Control service (named `OracleDBControl\SID`). This assures complete deconfiguration of Database Control. For Real Application Clusters databases, the Database Control service should be stopped on each node in the cluster.

Not doing so will not fail the deinstallation, but you might encounter Enterprise Manager configuration directories that are not cleaned up after deinstallation. This is because some processes are holding handlers to Enterprise Manager configuration files if processes are not shut down completely.

If you encounter errors when deconfiguring Enterprise Manager, then you can manually delete the following Enterprise Manager configuration directories:

- `ORACLE_HOME\HOSTNAME_SID`
- `ORACLE_HOME\oc4j\j2ee\OC4J_DBConsole\HOSTNAME_SID`

The same problem may occur when running Enterprise Manager Configuration Assistant in standalone mode to remove Enterprise Manager configuration without removing the database (`emca.bat -x`). The same solution should be applied if this problem is encountered.
12.4 Switching Between Database Control and Grid Control

If you want to switch between Database Control and Grid control, then Oracle recommends that you remove the previous configuration before switching to a different mode. For example, if you initially have Database Control configured, then in order to switch to Grid control using Enterprise Manager Configuration Assistant in standalone mode (emca.bat -m), you must first run emca.bat -x to remove Database Control configuration and then run emca.bat -m to switch to Grid control configuration.

12.5 PGA Memory Usage Details in Oracle Enterprise Manager

The PGA Memory Usage Details page (under Administration > Instance:Memory Parameters > PGA) will show garbled characters when the product is run in a multi-byte (Asian) language environment. The only workaround currently available is to run the product in a single-byte Western European language when you need to view this page.

12.6 Quick Tour Not Available in Oracle Change Management Pack

Quick Tour is not available in Oracle Change Management Pack. If you try to run it, then an error results.

12.7 Error When Viewing Period SQL Execution Plan in Korean

Viewing the execution plan of a Period SQL in Korean causes an internal server error. This problem is unique to Korean; it does not reproduce in Japanese or Chinese. The only workaround currently available is to run the product in a non-Korean language when you need to view this page.

12.8 NTS Authentication Failure with .NET Remote Objects

If NTS authentication is used with an Oracle client as a .NET remote object impersonating a user credential, then NTS authentication will fail with the error ora-12638 Credential Retrieval Failed. This happens due to the failure of the Windows API AcquireCredentialsHandle() in the NTS adapter inside the .NET remote object. Refer to Oracle Metalink for more details.

12.9 Errors During Cluster Ready Services Deinstallation

When deinstalling Cluster Ready Services, you might see multiple windows appear with the message "olsnodes.exe - unable to locate dll the dynamic link library oran10.dll could not be found in the specified path". Ignore these errors and continue.

12.10 Shortcut Not Removed After Cluster Ready Services Deinstallation on Deleted Node

If you deinstall Cluster Ready Services from a different node (remote node) than the node from which the install was performed (local node), then its shortcut on the Start menu might not be removed. You can manually delete the shortcut by right-clicking on it and selecting Delete.
12.11 Oracle Wallet Manager Missing from the Start Menu

After installing Oracle Database 10g Companion Products, Oracle Wallet Manager is not available from the Start menu. Use commands similar to the following to start Oracle Wallet Manager:

```
x:\> cd ORACLE_BASE\ORACLE_HOME\bin
x:\ORACLE_BASE\ORACLE_HOME\bin> launch.exe ORACLE_HOME\bin owm.cl
```

12.12 Upgrading a Database

If you choose the custom install path and have previous versions of Oracle databases installed, then Oracle Universal Installer displays the option to upgrade the previous databases. If you choose to upgrade an existing database, then Oracle Universal Installer displays another dialog asking if you want to create a starter database.

Database Upgrade Assistant upgrades the older version of the database to 10g release 1 (10.1) at the end of installation. Oracle Universal Installer does not create a new database.

12.13 Installing Oracle Database on Non English Versions of Windows 2000

When creating a database on Windows 2000 with a version other than English, the database service creation may fail and display a DIM-00019, OS-1387 error.

Use the 10.1.0.2.1 version of the oraimr10.dll file. This file is located in the ORACLE_BASE\ORACLE_HOME\bin directory.

12.14 Using Database Upgrade Assistant to Upgrade a Database

Before selecting Finish on the Summary Page of Database Upgrade Assistant, close all open applications such as Services panel, Registry Editor, and Performance Monitor.

The following error message may display if applications are open when using Database Upgrade Assistant:

```
Error in Process: ORACLE_BASE\ORACLE_HOME\bin\oradim.exe
Upgrade failed due to running the step "Upgrading Oracle Server"
```

The following error message may display if applications are open when manually upgrading a database:

```
DIM-00020: A service for this SID is already created. Please enter a different SID name. No action has been taken O/S-Error: (OS 1072) The specified service has been marked for deletion.
```

To work around this problem, restart the computer, manually re-create the Oracle Database service using the ORADIM utility, then start Database Upgrade Assistant.

This issue is tracked through Oracle bug 3761912.

12.15 ASM Instance Terminates

The ASM instance may terminate with the following error in RBAL:
ora-04030: out of process memory when trying to allocate ... bytes (callheap, NT device list)

**Workaround:** Use NTFS mount points as documented in *Oracle Database Installation Guide for Windows*. Do not use default discovery or any string beginning with `\.`. To temporarily resolve this issue, restart the service.

### 12.16 Remove pdh.dll

After installing Oracle Database 10g release 1 (10.1.0.3) on computers with operating systems other than Windows NT Server, delete the `pdh.dll` file from `ORACLE_BASE\ORACLE_HOME\bin`.

### 13 Documentation Corrections and Additions

This section contains these topics:

- Grid Features
- Full-Text Searching with Oracle Text
- View Descriptions
- Configuring Management Service Processes
- Monolingual Linguistic Sorting
- Installing Enterprise Security Manager

#### 13.1 Grid Features

*Oracle Database New Features* for Oracle Database 10g release 1 (10.1) lists two Grid features that are not available in the first release of Oracle Database 10g, Resonance and Transparent Session Migration. These features will be available in an upcoming release.

#### 13.2 Full-Text Searching with Oracle Text

For full-text searching with Oracle Text, you must create XML tables manually.

If you need to use Oracle Text indexes for text-based `ora:contains` searches over a collection of XML elements, then do not use XML schema annotation `storeVarrayAsTable="true"`. This annotation causes element collections to be persisted as rows in an Index Organized Table (IOT). Oracle Text does not support IOTs.

To be able to use Oracle Text to search the contents of element collections, set parameter `genTables="false"` during schema registration. Then create the necessary tables manually, without using the clause `ORGANIZATION INDEX OVERFLOW`. The tables will then be heap-organized instead of index-organized (IOT), as shown in Example 1.

**Example 1  Manually Creating a Heap-Organized Table that Conforms to an XML Schema**

```sql
CREATE TABLE PurchaseOrder of XMLTYPE
  XMLSCHEMA http://localhost:8080/home/SCOTT/poSource/xsd/purchaseOrder.xsd
  ELEMENT "PurchaseOrder"
  VARRAY 'XMLDATA'.'ACTIONS'.'ACTION'
```
13.3 View Descriptions

Oracle Database Performance Tuning Guide, Chapter 10, "Instance Tuning Using Performance Views", has two incorrect view descriptions. The view names and correct descriptions are as follows:

- **V$EVENT_HISTOGRAM**
  
  The `V$EVENT_HISTOGRAM` view displays a histogram of the number of waits, the maximum wait, and total wait time on an event basis.

- **V$SYSTEM_WAIT_CLASS**

  The `V$SYSTEM_WAIT_CLASS` view provides the instance wide time totals for the number of waits and the time spent in each class of wait events. [This description removes the reference to object number.]

13.4 Configuring Management Service Processes

In Oracle HighAvailability Architecture and Best Practices, Chapter 8, "Using Enterprise Manager for Monitoring and Detection", the section "Configure At Least Two Service Processes and Load Balance Them" should read as follows:

For the middle tier, the baseline recommendation is to have a minimum of two Management Service processes, using a hardware server load balancer to mask the location of an individual Management Service process and a failure of any individual component. This provides immediate coverage for a single failure in the most critical components in the Enterprise Manager architecture with little interruption of service for all systems monitored using Enterprise Manager. Management Service processes connect to the repository instances using Oracle Net.

13.5 Monolingual Linguistic Sorting

In Oracle Database Globalization Support Guide, Chapter 5, "Linguistic Sorting and String Searching", the section called "Monolingual Linguistic Sorts" should end with the following note:

Monolingual linguistic sorting is not available for non-Unicode multibyte database character sets. If a monolingual linguistic sort is specified when the database character set is non-Unicode multibyte, then the default sort order is the binary sort order of the database character set. One exception is `UNICODE_BINARY`. This sort is available for all character sets.

13.6 Installing Enterprise Security Manager

Enterprise Security Manager is available on the Oracle Database Client installation media and is installed from the Administrator installation option.

**See Also:** "Starting Enterprise Security Manager" in Oracle Database Advanced Security Administrator's Guide
14 Real Application Clusters (RAC)

This section contains corrections and supplemental information for Oracle Database 10g Real Application Clusters (RAC) documentation for Windows-based platforms.

This section contains these topics:

- Installing Cluster Ready Services
- Using Raw Partitions for Database When Choosing OCFS for Data Storage During CRS Install
- Installing Oracle Real Application Clusters Release 9.2 Clusterware When Oracle Database 10g Cluster Ready Services Is Installed
- DBUA Listed Duplicate Entries of the Same Database During Oracle9i Release 9.2 to Oracle Database 10g RAC Upgrade
- When Running VIPCA, Starting GSD May Time Out, OCFS Processing May Be Adversely Affected
- Upgrading Real Application Clusters
- Adding a Node on a Shared Oracle Home
- Intermittent Windows Shutdown Issue in RAC Environments
- Lengthy Startup of OracleDBConsole and OracleCRService on Windows
- Network Interface Names—Special Characters and Case Sensitivity

14.1 Installing Cluster Ready Services

In *Oracle Real Application Clusters Installation and Configuration Guide*, Chapter 8, "Installing Cluster Ready Services", in "Installing Cluster Ready Services with the OUI" you are told to run the following script *before* running Oracle Universal Installer from the CRS CD-ROM:

```
CRS_HOME\bin\localconfig delete
```

Instead, you must run this script *after* starting the CRS installation, when you get the warning to stop all Oracle services.

---

**Note:** The documentation is correct in instructing you to stop the existing ASM instances before installing CRS. Only the timing of `localconfig delete` is changed from *before* to *during* installation.

---

14.2 Using Raw Partitions for Database When Choosing OCFS for Data Storage During CRS Install

To use raw partitions for storing Oracle data files, during the CRS installation on the Select Disk Formatting Options page, choose one of the following options:

- Format one logical drive for software storage
- Do not format any logical drives

These choices create and start the Oracle Object Service on each node, which is required for using raw partitions for Oracle database files. If you are
using other options that specify data storage on CFS, and if you want to use raw partitions, then create and start the Oracle Object Service on each node of the cluster as follows:

1. On each node, run \CRS_Home\bin\OracleOBJService.exe /install to install Oracle Object Service.

2. On each node, start the Oracle Object Service using the Windows Services Control panel.

   **See Also:** Microsoft online help for more information about starting services

3. From any of the cluster nodes, run \CRS_home\bin\GUIOracleOBJManager.exe to create persistent symbolic links to the corresponding raw partitions.

4. After creating the symbolic links, on the GUIOracleObjectManager GUI, perform Options->Commit and Options->Exit

   **See Also:** The Oracle9i release 9.2 RAC Configuration and Setup Guide, Appendix B for more details

5. From all other nodes, if you already had GUIOracleObjectManager.exe running, then perform Options->Refresh. Otherwise, run \CRS_home\bin\GUIOracleOBJManager.exe on these nodes before proceeding to the Oracle Database 10g with RAC installation and before creating your database using DBCA.

**Note:** To use raw partitions on Windows 2003, be sure to enable disk automount on all of the nodes of the cluster. This ensures that all of the nodes can access the raw partitions. Do this prior to starting the CRS installation. You can enable automount in one of two ways:

1. Use the diskpart Windows utility and issue the automount enable command from within the diskpart command line.

2. Use the mountvol Windows utility and issue the mountvol.exe /e command.

   Restart your cluster after performing either of these procedures to ensure that the changes take effect.

**14.3 Installing Oracle Real Application Clusters Release 9.2 Clusterware When Oracle Database 10g Cluster Ready Services Is Installed**

You cannot install Oracle9i release 9.2 Oracle Real Application Clusters clusterware if Oracle Database 10g Cluster Ready Services (CRS) is also installed. To install the release 9.2 Oracle clusterware, you must first deinstall the Oracle Database 10g Cluster Ready Services software.
14.4 DBUA Listed Duplicate Entries of the Same Database During Oracle9i Release 9.2 to Oracle Database 10g RAC Upgrade

When DBUA displays a list of databases to upgrade, it may display duplicate entries for the same database. This occurs for Oracle9i release 9.2 databases created using DBCA that have database names containing non-uppercase characters. In this case, an additional entry will be displayed consisting of the database name that contains upper-case characters. You can choose either of the entries to proceed with upgrading the database.

14.5 When Running VIPCA, Starting GSD May Time Out, OCFS Processing May Be Adversely Affected

Depending on the size of your cluster as well as other factors, when running the Virtual Interconnect Protocol Assistant (VIPCA) in a shared Oracle home on Oracle Cluster File System (OCFS), the GSD may be slow to start. A time out may occur after 15 minutes or more with the error Failure in starting GSD resource on node. Workaround: If the error and time out occurs, then select Ignore to continue. VIPCA will proceed much faster and complete its operations more quickly.

14.6 Upgrading Real Application Clusters

Database Upgrade Assistant does not support a direct upgrade of Oracle Parallel Server version 8.1.7 databases to Oracle Database 10g with RAC.

First upgrade the Oracle Parallel Server database to Oracle Real Application Clusters Oracle9i release 2 (9.2), and then upgrade it to Oracle Database 10g with RAC.

14.7 Adding a Node on a Shared Oracle Home

If you are using Oracle Universal Installer to add a node on a shared Oracle home, then an error similar to the following may appear:

Alert: The following file(s) have been modified on the disk:
y:\oracle\rac\inventory\ContentsXML\comps.xml y:\oracle\rac\inventory\ContentsXML\libs.xml
Proceeding with the installation may corrupt some important data. You should stop this session and restart OUI. Do you want to stop this session now?

Ignore this error and click No and continue.

14.8 Intermittent Windows Shutdown Issue in RAC Environments

In an Oracle Real Application Clusters release 10.1.0.2 environment on Windows, a normal Windows shutdown may cause errors that prevent the Windows shutdown from completing. As a result, you may need to perform a power reset. The following steps are recommended to avoid this during Windows shutdowns. Before shutting down or restarting any Oracle cluster node, perform a graceful shutdown of all registered Cluster Ready Service (CRS) resources on the affected cluster node. Do this by using SRVCTL commands to shutdown:

- All services on the node.
- All database instances on the node.
- All ASM instances on the node.
- All node applications on the node.

Then run the following additional CRS shutdown and shutdown verification commands from the CRS bin directory:

1. `crs_stop -c cluster node`
2. `crs_stat -t`

### 14.9 Lengthy Startup of OracleDBConsole and OracleCRService on Windows

After a cluster node restart, the node may not be fully responsive for some period of time. During this time, Oracle is attempting to restart the process `OracleDBConsole` and the `OracleCRService` resource. Eventually, all of the resource startup operations will complete and the computer will operate normally.

### 14.10 Network Interface Names—Special Characters and Case Sensitivity

Network interfaces names may not contain multi-byte or unicode characters or the character `. (dot or period). Interface names that contain these characters can cause Virtual Interconnect Protocol Configuration Assistant (VIPCA) configurations to fail. You must change network interface names that contain these characters before you begin your installation.

In addition, interface names are case sensitive. If the interface names are not identical with respect to case, then the VIP can fail. For example, if node 1’s public interface name is `LAN` and node 2’s public interface name is `Lan`, then the VIPCA configures them correctly. However, the VIP will fail on node 2 because `racgvip.exe` is unable to locate the interface named `LAN`, which is what is recorded in the Oracle Cluster Registry (OCR). To avoid this problem, ensure that your interface names are identical on all cluster nodes with respect to case.