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 Web site:


For additional information about this release, refer to the readme files located in the \ORACLE_BASE\ORACLE_HOME\relnotes directory.

Note: The Database Quick Installation Guides are no longer available in printed format. These documents are available with the media in the same location as the software and on Oracle Technology Network.

This document contains the following topics:

- Certification Information
- Oracle HTML DB Update
- Unsupported Products
- Preinstallation Requirements
- Installation, Configuration, and Upgrade Issues
- Known Issues on Windows Vista and Windows Server 2008
- 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 My Oracle Support (formerly OracleMetaLink) at:

https://support.oracle.com

Postrelease Certification Information

The following items were certified after the 10.2.0.1 release:
Oracle Software

The following operating systems are supported for these releases:

- **Windows Vista x64**
  Oracle Database 10g Release 2 (10.2.0.4 or later) for Windows x64 is certified on Windows Vista x64. The 32-bit versions of Oracle Database Client (10.2.0.4 or later) are supported on Windows Vista x64.

- **Windows Server 2008 x64**
  Oracle Database 10g Release 2 (10.2.0.4 or later) for Windows x64 is certified on Windows Server 2008 x64 (all editions). The 32-bit versions of Oracle Database Client (10.2.0.4 or later) are supported on Windows Server 2008 x64.

- **Windows 7 x64**
  Oracle Database and Oracle Database Client 10g Release 2 (10.2.0.5) for Windows x64 are supported on Windows 7 x64.

- **Windows Server 2008 R2 x64**
  Oracle Database and Oracle Database Client 10g Release 2 (10.2.0.5) for Windows x64 are supported on Windows Server 2008 R2 x64.

**JDK Version**

JDK 1.5.0 is used in Oracle Database 10g Release 2.

**Microsoft Internet Explorer**

Microsoft Internet Explorer 7 and Microsoft Internet Explorer 8 are certified on all Windows platforms and are supported for Oracle Enterprise Manager Database Control.

**Oracle Services for Microsoft Transaction Server Support**

Microsoft introduced Agile Recovery for distributed transactions in Windows Vista and Windows Server 2008. Starting with Oracle Database 10g Release 2 (10.2.0.4), Oracle Services for Microsoft Transaction Server supports Agile Recovery when the operating system is Windows Vista with Service Pack 1 or Windows Server 2008.

Agile recovery permits "in-doubt" Microsoft Distributed Transaction Coordinator (MSDTC) transaction outcomes on one node of a mid-tier Windows cluster to be queried through the MSDTCs on other participating cluster nodes. It only applies to Windows machines in a mid-tier clustered environment.

**Oracle Data Provider for .NET and Oracle Database Extensions for .NET**

Starting with Oracle Database 10g Release (10.2.0.4), Oracle Data Provider for .NET (64-bit) and Oracle Database Extensions for .NET (64-bit) are supported. The supported .NET framework version is 2.0.

**Grid Control**

Oracle Enterprise Manager Grid Control Agent 10g Release 4 (10.2.0.4) is supported on Windows Vista and Windows Server 2008.

*See Also:* The certification matrix, Note 412431.1, on My Oracle Support (formerly OracleMetaLink) for the latest Grid Control certification information.
■ Pro*COBOL

Pro*COBOL has been tested and certified with Net Express 5.0 starting with 10.2.0.4 patch set.

---

**Note:** Oracle Clusterware and Oracle RAC are not supported on Windows Vista x64, Windows XP, and Windows 7 x64.

---

### 2 Oracle HTML DB Update

At the time of Oracle Database release 10.2, the product was called Oracle HTML DB. After the release, the product was renamed Oracle Application Express. Oracle Application Express is bundled with Oracle Database and is also available on the Oracle Technology Network (OTN) Web site:


### 3 Unsupported Products

The following products are not supported with Oracle Database 10g Release 2 (10.2):

- Oracle Enterprise Manager Grid Control Media
  
  Oracle Enterprise Manager Grid Control is not available on Windows 64-bit platforms. Only Oracle Management Agent is provided for this platform. To manage targets on Windows 64-bit platforms with Oracle Enterprise Manager Grid Control, go to OTN to download the Windows (x64) agent.

- Oracle Real Application Clusters, including Cluster File System and Server Management, is not supported on Windows XP, Windows Vista, and Windows 7.

- Oracle Clusterware is not supported on Windows XP, Windows Vista, and Windows 7.

- GCC
- Object Oriented COBOL (OOCOBOL) specifications
- Pro*COBOL is not supported on Windows Server 2008 R2 and Windows 7.
- DCE Adapter Support
- Entrust PKI Support
- Generic Connectivity
- nCipher Accelerator Support
- GNU Compiler Collection (GCC)
- Oracle Procedural Gateway
- Oracle Transparent Gateway
- Oracle Workflow
- Oracle HTTP Server
- Business Components for Java (BC4J)
- CyberSafe Adapter Support
- Java Server Pages

---

Note: Oracle Clusterware and Oracle RAC are not supported on Windows Vista x64, Windows XP, and Windows 7 x64.
- Oracle Enterprise Manager Java Console
- Oracle Migration Workbench
  You can execute Oracle Migration Workbench from a 32-bit Windows environment to migrate third-party databases, as supported by release 9.2.0.2.1 or later, to an Oracle Database 10g Release 2 (10.2) database installed on a 64-bit Windows computer.
- Oracle Objects for OLE
- Oracle Workflow Builder
- Oracle Enterprise Integration Gateways, which include the following:
  - Oracle Procedural Gateway for APPC
  - Oracle Transparent Gateway for IBM DRDA
- Oracle Open Gateways, which include the following:
  - Oracle Transparent Gateway for Sybase
  - Oracle Transparent Gateway for Teradata
  - Oracle Transparent Gateway for Microsoft SQL Server

4 Preinstallation Requirements
Review the following minimum requirements before installing Oracle Database 10g Release 2:

Minimum Requirements
The following table describes the minimum requirements for the operating systems that were certified after the release:

<table>
<thead>
<tr>
<th>Operating Systems</th>
<th>RAM</th>
<th>Minimum Processor Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows Server 2008</td>
<td>512 MB</td>
<td>1.4 GHz</td>
</tr>
<tr>
<td>Windows Server 2008 R2</td>
<td>512 MB</td>
<td>1.4 GHz</td>
</tr>
<tr>
<td>Windows 7</td>
<td>1024 MB</td>
<td>1 GHz</td>
</tr>
</tbody>
</table>

5 Installation, Configuration, and Upgrade Issues
Review the following sections for information about issues that affect Oracle Database installation, configuration, and upgrade:

- Latest Upgrade Information
- Do Not Format the Disk When Installing Oracle Clusterware
- NTFS is Recommended for File Security
- File Permissions Set by Database Configuration Assistant
- Installation Media for Windows Vista and Windows Server 2008
- Installation Media for Windows 7 and Windows Server 2008 R2
- Installing 32-bit Client Software on Windows 7 x64, Windows Server 2008 x64, or Windows Server 2008 R2 x64
5.1 Latest Upgrade Information
For late-breaking updates and best practices about preupgrade, postupgrade, compatibility, and interoperability discussions, refer to Note 466181.1 on My Oracle Support (formerly Oracle MetaLink) (https://support.oracle.com/) that links to "Oracle 10g Upgrade Companion" page.

5.2 Do Not Format the Disk When Installing Oracle Clusterware
After installing Oracle Clusterware on Windows Server 2008 R2, when you run the postinstallation configuration tool, the system may display an incorrect warning message to format the disk. Do not format it. If you format the disk, it becomes unusable for OCFS format and you must start the installation again after cleaning the disks.

Workaround:
Ignore the warning message and click Cancel to proceed.
This issue is tracked with Oracle bug 9112569.
5.3 NTFS is Recommended for File Security
Oracle recommends installing Oracle Database on NTFS. NTFS allows for strong security of database files, trace files, incident data, and so on stored in Oracle home.

5.4 File Permissions Set by Database Configuration Assistant
When you apply any of the 10.2.0.x patch sets, Database Configuration Assistant installs files and directories in the following default locations, where *database_name* is the database name or SID:

- `ORACLE_BASE\admin\database_name` (administration file directories)
- `ORACLE_BASE\oradata\database_name` (database file directories)
- `ORACLE_BASE\oradata\database_name` (redo log files and control files)
- `ORACLE_BASE\ORACLE_HOME\database` (SPFILE.SID.ORA)

Database Configuration Assistant sets the following permissions to these directories, and all files and directories under these directories:

- **Administrators** - Full Control
- **System** - Full Control

---

**Important:** If these accounts exist and possess more restrictive permissions, then the most restrictive permissions are retained. If accounts other than **Administrators** and **System** exist, then the permissions for these accounts are removed.

Beginning with Oracle Database 10g Release 2 (10.2), Database Upgrade Assistant can also configure Enterprise Manager. If the "Enable daily backup" option is selected while configuring Enterprise Manager, then Database Upgrade Assistant shows a separate screen asking for Flash Recovery Area. Database Upgrade Assistant tries to create the directory structure in whatever file system location is specified if it does not exist. It puts the same set of file permissions to this location. The default location shown by DBUA for flash recovery area is:

- `ORACLE_BASE\flash_recovery_area`

5.5 Installation Media for Windows Vista and Windows Server 2008
Oracle Database is supported on Windows Vista and Windows Server 2008 with the 10.2.0.4 release. Use the *Oracle Database 10g Release 2 (10.2.0.4.0) for Microsoft Windows Vista x64 and Microsoft Windows Server 2008 x64* media. This new software is available in the updated media pack.

5.6 Installation Media for Windows 7 and Windows Server 2008 R2
Oracle Database is supported on Windows 7 and Windows Server 2008 R2, starting with the 10.2.0.5 release. Use the *Oracle Database 10g Release 2 (10.2.0.4.0) for Microsoft Windows Vista x64 and Microsoft Windows Server 2008 x64* media to install the software.

5.6.1 Installing Oracle Software on Windows 7 and Windows Server 2008 R2
To install 64-bit Oracle software:
1. Download the software for the type of installation you want to complete. For installations on Windows 7 and Windows Server 2008 R2, you must use the software specifically designated for these operating systems. This software is available from the Oracle Technology Network Web site:

http://www.oracle.com/technetwork/database/10204-winx64-vista-win2k8-082253.html

2. To install the software, extract it and run the following command:

setup.exe -ignoreSysprereqs

To silently install the software, run the following command:

setup.exe -ignoreSysprereqs -ignorePrereq -silent -responseFile ResponseFile

Ignore the following prerequisite errors displayed during the installation:

- Checking operating system requirements
- Checking service pack requirements

3. Complete the installation.

4. Download the 10.2.0.5 patch set from My Oracle Support (formerly OracleMetaLink) and install it. This is a required step.

5.7 Installing 32-bit Client Software on Windows 7 x64, Windows Server 2008 x64, or Windows Server 2008 R2 x64

To install the 32-bit client software on Windows 7 x64, Windows Server 2008 x64, or Windows Server 2008 R2 x64, follow the instructions in Oracle Database Release Notes for Microsoft Windows (32-Bit).

5.8 Shutdown of Oracle Clusterware Stack May Leave Processes Running

After shutting down the Oracle Clusterware stack on a given node using the following command:

CRSCTL.EXE stop crs

the OracleEVMService or OracleCRService may not be listed in the STOPPED state. Furthermore, you may notice the existence of CRSD.EXE or EVMD.EXE in the Task Manager list of running processes. To stop these processes, issue the following commands from the operating system command prompt:

net stop OracleCRService
net stop OracleEVMService

5.9 Installing Oracle Database Client into an Existing Oracle Home

Oracle Database Client can be installed in the same Oracle Database home if both products are at the same release level. For example, you can install Oracle Database Client 10g Release 2 (10.2) into an existing Oracle Database 10g Release 2 (10.2) home. If you apply a patch set before installing the client, then you must apply the patch set again.
5.10 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 `srvctl modify nodeapps` command 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.

5.11 Error While Deleting a Remote Instance from an Oracle RAC-Shared Oracle Home Database

During a delete instance operation on a cluster database using a shared Oracle home, you can encounter the following error message if the database has been configured for Enterprise Manager Database Control:

```
Error updating EM configuration for node node name
```

As a result, the Enterprise Manager configuration is not completely removed from the node where the deleted instance was running. However, this does not have any adverse effects. You can click OK, ignore the error, and proceed.

This issue is tracked with Oracle bug 4547265.

5.12 Reading a Downgraded Oracle Cluster Registry with Database Management Tools

Oracle Database 9.2 management tools (such as `srvctl`) encounter errors when attempting to read an Oracle Cluster Registry (OCR) that was downgraded from 10.2 to 9.2 on Windows.

**Workaround:**

1. Dump the contents of the 10.2 OCR before downgrading by using the `ocrdump` tool. Identify the set of 9.2 configured databases. The database configuration resides under the `DATABASE.DATABASES` key.
2. Follow the downgrade procedure as documented.
3. Identify the location of the 9.2 OCR. It is either `\\srvcfg` or the file pointed to by registry value `CfsOcrRoot` under `HKEY_LOCAL_SYSTEM\SOFTWARE\Oracle\osd9i\ocr`.
4. Clear the contents of the 9.2 OCR.
5. Execute the following command from the 9.2 Oracle home:
   ```
srvconfig -init -f
```
6. Configure the 9.2 cluster databases identified in Step 1:
   ```
srvt1 add database
```

This issue is tracked with Oracle bug 4507090.
5.13 Oracle Database 9.2 Startup Error with srvctl when the Global Services Daemon is Running in a 10.2 Home

The `srvctl` tool fails with the following errors when starting Oracle9i databases after Oracle Clusterware 10g Release 2 is installed and the Global Services Daemon (GSD) is started from the Oracle Clusterware home:

/ORA-01005: null password given; logon denied /
/ORA-01031: insufficient privileges /
/ORA-01005: null password given; logon denied" /

Workaround:

1. Execute the following command to get the list of nodes in the Oracle Clusterware:
   
   \`CRS_home/bin/olsnodes\`

   where `CRS_home` is the Oracle Clusterware home.

2. Execute the following command on one node.
   
   \`CRS_home/bin/crsuser add Oracle_user\`

   This command creates the service on all other nodes.

3. Execute the following commands for each node identified in Step 1:
   
   \`CRS_home/bin/crs_stop ora.node_name.gsd\`
   \`CRS_home/bin/crs_setperm ora.node_name.gsd -o Oracle_user\`
   \`CRS_home/bin/crs_start ora.node_name.gsd\`

This issue is tracked with Oracle bug 4523043.

5.14 Oracle Database 9.2 Startup Error with srvctl when the Global Services Daemon is Running in an Oracle 10.2 Clusterware

Starting Oracle Database release 9.2 with `srvctl` fails when the Global Services Daemon (GSD) is running from Oracle 10.2 Clusterware. A dialog window displays the following error message:

The instruction at \`hex_address\` referenced memory at \`hex_address\`. The memory could not be read

Workaround:

1. Copy `srvctl.bat` to `srvctl.orig.bat` in the 9.2 `ORACLE_HOME\bin` directory.

2. Edit the 9.2 `ORACLE_HOME\bin\srvctl.bat` file to add the following before `-classpath`.
   
   `-DTRACING.ENABLED=true -DTRACING.LEVEL=2`

3. Save the `ORACLE_HOME\bin\srvctl.bat` file and reissue the same command with `srvctl` that previously failed.

This issue is tracked with Oracle bug 4571520.

5.15 Deleting a Node from Oracle Clusterware

If the \`ORA.ORA_SID=DB\` resource is \`ONLINE\` on a node to delete from Oracle Clusterware, the delete node procedure displays the following errors while running `crssetup:`
prompt> crssetup del -nn node_name
Step 1: shutting down node apps
  :node_name ora.racr1.db in ONLINE state
  ...
please manually stop dependent CRS resource before continuing

Workaround:
For the database resource (ora.*.db) mentioned in the error as being ONLINE, perform a relocation of that resource to any other node that is a part of the cluster. Run the crs_relocate command as shown below to perform the relocation:
crs_relocate name_of_the_db_resource -c cluster_node

This issue is tracked with Oracle bug 4564000.

5.16 Configuring Raw Devices for Storage
While Oracle Database 10g supports raw devices, tools such as Database Configuration Assistant do not support the configuration of raw devices for single instances. Instead, use Automatic Storage Management (ASM) or the file system to store database files.

For Oracle Real Application Clusters (Oracle RAC) installations, configure raw device shared storage by stamping disks with Oracle Object Link Manager. You can also use your own scripts to configure raw devices.

See Also:
- Oracle Database Installation Guide for Microsoft Windows x64 for single-instance database installations
- Oracle Database Oracle Clusterware and Oracle Real Application Clusters Installation Guide for Microsoft Windows

This issue is tracked with Oracle bug 4554058.

5.17 Installing Oracle Messaging Gateway
Oracle Messaging Gateway is supported starting from patch set 10.2.0.3. Follow these steps to install Oracle Messaging Gateway:
1. Log on to My Oracle Support (formerly OracleMetaLink) at:
   https://support.oracle.com
2. Download and install the patch 6688246.
3. Download and install the Oracle Database 10.2.0.3 patch set. Make sure you follow the instructions in the patch set readme file.
4. Set the MGW_PRE_PATH variable as follows:
   set MGW_PRE_PATH = JRE_HOME\bin\server
5. See the configuration steps in Chapter 18, “Getting Started with Oracle Messaging Gateway” in Oracle Streams Advanced Queuing User’s Guide and Reference. The existing document sets the MGW_PRE_PATH variable to client because it is for Windows 32-bit.
5.18 Central Configuration of Oracle Real Application Clusters Disabled on Windows

The option for configuring central management of your database by Enterprise Manager 10g Grid Control is not available during Oracle 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 Oracle RAC.

If you want central management for the installed Oracle RAC database, then discover the Oracle RAC database target manually from Grid Control after the installation.

5.19 ODBC Online Help in Japanese is Not Installed

Select Oracle ODBC Help using the following steps:

1. Click the Start menu button.
2. From the Programs menu, select Oracle - HOME_NAME, Application Development, and then Oracle ODBC Help.

The online help displays in English instead of Japanese.

This issue is tracked with Oracle bug 4490895.

5.20 Re-creating a Service on a Remote Node Throws Exception

During installation of Oracle Database 10g Release 2 on a pre-existing Oracle RAC cluster, you may receive the following error message:

CreateServiceMarkedForDeleteException_desc

Click 'Help' for more information.
Click 'Retry' to try again.
Click 'Continue' to use the default value and go on.
Click 'Cancel' to stop this installation.

[Help]  [Retry]  [Continue]  [Cancel]

Workaround:

Click Retry to enable this operation to proceed. If the retry fails, try again until the operation completes. Afterward, the service should be created successfully.

This issue is tracked with Oracle bug 4508168.

5.21 Oracle Universal Installer Help Files Incorrect for Oracle Database Companion CD

The Oracle Universal Installer online help files for Oracle Database Companion CD are not specific to the Oracle Database Companion CD installation.

Workaround:

Refer to Chapter 3, "Installing the Oracle Database Companion CD Software," in Oracle Database Companion CD Installation Guide for Microsoft Windows (32-Bit) for detailed information about the installation process.

This issue is tracked with Oracle bug 4604992.
5.22 Database Control Startup Not Timed Properly after Oracle RAC Database Creation

When a new Oracle RAC database is created either during installation or using Database Control Configuration Assistant (DBCA), the Database Control console may start before the new database instance has been registered with the listener. When this happens, in some conditions, some metrics are not monitored. The following error in the Database Control console appears:

java.lang.Exception: Can't get query descriptor or execution descriptor

Workaround:

Stop and restart the Database Control console. From the Start menu, select Programs, then Oracle - HOME_NAME, then Database Control.

This issue is tracked with Oracle bug 4591002.

5.23 Error Message in Cluster Verification Utility

If you run the Cluster Verification Utility (CVU) from the runcluvfy.bat script before installing Oracle Clusterware, the first line of output may contain the following error message:

The system cannot find the file specified.

This is a benign message which you can ignore. CVU should continue processing normally and provide the required output a short time later.

This issue is tracked with Oracle bug 5369224.

5.24 OracleCRService Fails on Computer Restart

If different user IDs are used for installing Oracle Database 10g and Oracle Clusterware, then restarting the system results in OCR errors. See My Oracle Support (formerly OracleMetaLink) Note 551478.1 for more information.

Workaround:

Oracle recommends that you apply the patch set 10.2.0.3 or higher to your Oracle Clusterware install before you patch Oracle Database.

This issue is tracked with Oracle bug 4748946.

5.25 oraxml10.dll Error

The file oraxml10.dll gets copied to the system directory on a computer with previously installed Oracle Access Manager. This interferes with the installation of other Oracle products even after Oracle Access Manager is uninstalled, giving the following error:

The procedure entry point xqGetXQXDOM could not be located in the dynamic link library oraxml10.dll.

Workaround:

Remove oraxml10.dll file from the system directory after uninstalling Oracle Access Manager.

This issue is tracked with Oracle bug 6852359.
5.26 Enterprise Manager Database Control Fails to Start
When installing Oracle Database 10g Release 2 (10.2.0.4) on Microsoft Windows x64 2008 R2, Enterprise Manager Database Control fails to start and the agent trace file shows the following error message:

.. Common Name = "hostname" Does not Match Hostname = "HOSTNAME.domain"

Workaround:
Ignore the error message and install 10.2.0.5 patchset. Upgrading to 10.2.0.5 patchset automatically starts the Enterprise Manager Database Control.
This issue is tracked with Oracle bug 9752942.

5.27 Error When Installing Oracle RAC on Windows Server 2003
When you install Oracle RAC on Windows Server 2003, if you select the German locale, the installation fails with an OUI-35006: Error.

Workaround:
Select the English locale when you install Oracle RAC on Windows Server 2003.
This issue is tracked with Oracle bug 9745814.

6 Known Issues on Windows Vista and Windows Server 2008
The following are the sections covering known issues on Windows Vista and Windows Server 2008:

■ Managing User Accounts with User Account Control on Windows Vista and Windows Server 2008
■ Stamping Issue on Windows Vista and Windows Server 2008
■ Oracle Universal Installer Issue on Windows Vista and Windows Server 2008
■ Automatic Storage Management Tool Displays Error Messages on Windows Vista
■ Compiler Support on Windows Vista
■ Support for Microsoft Active Directory for Net Naming on Windows Vista
■ Shared Oracle Home Shortcuts Do Not Work on Windows Server 2008
■ Incorrect Operating System Appears on Windows Server 2008 Hosts
■ Oracle ODBC Help Shortcut Does Not Work on Windows Server 2008
■ Oracle Enterprise Manager Reconfiguration Issues on Windows Server 2008
■ Oracle Clusterware Installation Issue on Windows Server 2008
■ Configuration Assistants Intermittently Hang in Oracle RAC Environment on Windows Server 2008
■ Database Workload Capture Fails with Oracle Enterprise Manager on Windows Server 2008
■ Oracle Clusterware Preinstallation Steps on Windows Server 2008 R2

To ensure that only trusted applications run on your computer, Windows Vista and Windows Server 2008 provide User Account Control. If you have enabled this security feature, then, depending on how you have configured it, Oracle Universal Installer prompts you for either your consent or your credentials when installing Oracle Database. Provide either the consent or your Windows Administrator credentials as appropriate.

You must have Administrator privileges to run some Oracle tools, such as Oracle Universal Installer, Database Configuration Assistant, Net Configuration Assistant, and OPatch, or to run any tool or application that writes to any directory within the Oracle home. If User Account Control is enabled, and you are logged in as the local Administrator, then you can successfully run each of these commands in the usual way. However, if you are logged in as "a member of the Administrator group," then you must explicitly start these tasks with Windows Administrator privileges. See "Starting Database Tools on Windows Vista" in Oracle Database Platform Guide for Microsoft Windows (x64) for more information.

All executables in the Oracle Clusterware Home should be run with administrative privileges.

To Run a Windows Shortcut with Windows Administrator Privileges:
1. Click the Start menu button.
2. Navigate to Programs, then to Oracle - HOME_NAME.
3. Right-click the name of the command or application you want to run, then select Run as administrator.

---

**Note:** Many Oracle Start menu shortcuts are coded to run as administrator. When prompted, select to trust the application or grant your permission to continue.

---

To Start a Command Prompt Window with Windows Administrator Privileges:
2. Right-click the icon for the newly created shortcut, and specify "Run as administrator."

When you open this window, the title bar reads Administrator: Command Prompt. Commands run from within this window are run with Administrator privileges.

6.2 Stamping Issue on Windows Vista and Windows Server 2008

The stamped disks are not displayed in Oracle Database Configuration Assistant on Windows Vista and Windows Server 2008.

**Workaround:**

Complete the following steps to resolve this issue:
1. Click Stamp Disk.
2. Delete the labels.
3. Click Stamp Disk.
4. Stamp the disks again.

This issue is tracked with Oracle bug 5944993.

6.3 Oracle Universal Installer Issue on Windows Vista and Windows Server 2008

If the Oracle Universal Installer is run from the Start menu to remove Oracle Database, then the database is not completely removed as the Start menu shows Oracle home. The top level directory is shown but no contents exist.

Workaround:

Remove the Oracle home entry from the Start menu manually or run the Oracle Universal Installer from the command prompt to ensure a clean removal of Oracle Database software.

This issue is tracked with Oracle bug 6983386.

6.4 Automatic Storage Management Tool Displays Error Messages on Windows Vista

If you configure Automatic Storage Management, the Automatic Storage Management tool displays the following error messages:

- OS Error: (OS 5) Access is denied
- OS Error: (OS 21) The device is not ready
- OS Error: (OS 1) Incorrect function

**Note:** These are the Operating System error messages. Oracle tools display the Oracle error messages triggered by these Operating System errors.

6.4.1 OS Error: (OS 5) Access is denied

Workaround:

Complete the following steps to resolve this issue:

1. Create a desktop shortcut for Windows command window.
2. Right-click the desktop shortcut icon.
3. From the shortcut menu, select Run as administrator.
4. Run the `asmtool.exe` or `asmtoolsg.exe` command in the command window.

This issue is tracked with Oracle bug 5873952.

6.4.2 OS Error: (OS 21) The device is not ready

Workaround:

Use the `diskpart.exe` command to create a raw partition and raw logical drive on the basic disk. You can also use the Disk Management MMC snap-in to create a raw partition or raw logical drive. However, you must assign a drive letter to it when using
the Disk Management MMC snap-in. Remove the drive letter after the partition or the drive is created. You enable automount before you create raw devices.

This issue is tracked with Oracle bug 5873952.

6.4.3 OS Error: (OS 1) Incorrect function
Workaround:
It is caused by the raw devices in dynamic disk. Dynamic disk is not supported so this error message can be ignored.

This issue is tracked with Oracle bug 5873952.

6.5 Compiler Support on Windows Vista
The following compilers are not supported on Windows Vista:
- GCC
- Micro Focus Net Express 4.0
- Pro*COBOL is supported when Micro Focus Net Express is available on Windows Vista

6.6 Support for Microsoft Active Directory for Net Naming on Windows Vista
Oracle Net Directory Naming and Oracle Directory Objects are not supported with Active Directory from Windows Vista clients.

This issue is tracked with Oracle bug 5943019. This issue is fixed in the 10.2.0.4 patch set.

6.7 Shared Oracle Home Shortcuts Do Not Work on Windows Server 2008
Starting Net Configuration Assistant or Database Configuration Assistant from shared Oracle home shortcut gives the following error:

Missing shortcut: windows is searching launch.exe

The shortcuts exit following the error.

Workaround:
Start the tools from the command prompt.

This issue is tracked with Oracle bug 6791055.

6.8 Incorrect Operating System Appears on Windows Server 2008 Hosts

This issue is tracked with Oracle bug 7110300.
6.9 Oracle ODBC Help Shortcut Does Not Work on Windows Server 2008
You must run Oracle ODBC Help shortcut as administrator on Windows Server 2008. The following are the steps:

1. Click the Start menu button.
2. From the Programs menu, select Oracle - HOME_NAME, Application Development, and then Oracle ODBC Help.
3. Right-click Oracle ODBC Help, then select Run as administrator.

This issue is tracked with Oracle bug 6656171.

6.10 Oracle Enterprise Manager Reconfiguration Issues on Windows Server 2008
Reconfiguring Oracle Enterprise Manager on a database where database control is installed or on a new node when adding an instance may fail with the following error:

SEVERE: Error starting Database Control

Workaround:
Manually start the OracleDBConsoleSID service from the Services control panel of the node where it failed.

This issue is tracked with Oracle bug 7146689.

6.11 Oracle Clusterware Installation Issue on Windows Server 2008
When formatting an Oracle Cluster File System drive during Oracle Clusterware installation on Windows Server 2008, the following message appears and should be ignored:

You need to format the disk in drive H: before you can use it. Do you want to format it?
[format disk] [cancel]

Workaround:
Click Cancel.

This issue is tracked with Oracle bug 7148951.

When installing Oracle Clusterware on Windows Server 2008, the prerequisite check fails with the following message:

Security certificates for OCFS and Orafence drivers on Windows Server 2008 have expired.

Workaround:
If you encounter the certificate expiration problem, then download the new drivers from My Oracle Support (formerly OracleMetaLink) and follow the instructions on the site to proceed with the installation.

This issue is tracked with Oracle bug 7320726.
6.13 Configuration Assistants Intermittently Hang in Oracle RAC Environment on Windows Server 2008

Network Configuration Assistant and Database Configuration Assistant intermittently hang on Windows Server 2008 if Oracle RAC cluster nodes have Symantec Antivirus software enabled.

Workaround:
Upgrade the Symantec Antivirus software to version 10.2.2 otherwise uncheck the Enable Scanning option in the Symantec Antivirus software. Follow the instructions on the Symantec Web site:


The Symantec case number is 311-992285. This issue is also tracked with Oracle bug 7332683.

6.14 Database Workload Capture Fails with Oracle Enterprise Manager on Windows Server 2008

When Oracle Enterprise Manager is used to capture database workload on Windows Server 2008, the following error message is displayed:

Can't locate C:\oracle/sysman/admin/scripts/db/workload/workload_capture.pl in ...

Workaround:
Apply the patch for bug 7372915 to the 10.2.0.4 Oracle home.

This issue is tracked with Oracle bug 7372915.

6.15 Oracle Clusterware Preinstallation Steps on Windows Server 2008 R2

Before you install Oracle Clusterware on Windows Server 2008 R2, download the one-off patch from My Oracle Support Web site. If you do not download the patch, then an OCFS and FENCE driver signature expiration issue may occur.

Complete the following steps to download the patch and install the software:

1. Download patch 7320726 from:
   https://support.oracle.com

2. Unzip the downloaded patch file and rename the following files:
   ocfs.sys to ocfs.sys.w2k864
   orafencedrv.sys to orafencedrv.sys.w2k8

3. Start Oracle Universal Installer as follows:
   setup.exe New_Driver_Loc="<new_drv_loc>"
   oracle.has.cfs:s_newOcfspath="new_drive_location"
   oracle.has.crs:b_isWIN2k8="TRUE"
   oracle.has.crs:s_newOcfspath="new_drive_location"
   -ignoreSysprereqs

This issue is tracked with Oracle bug 9200219.
7 Other Known Issues

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

- Readme Text Files
- NTS Authentication Failure with .NET Remote Objects
- Windows Firewall Configuration
- Untranslated Start Menu Item for Oracle Workflow
- Transportable Tablespaces feature in Enterprise Manager Database Console
- Enterprise Manager Database Control Exception Error To Ignore
- Remote Users Not Being Added to ORA_DBA Group in Cluster Installations
- Removing Metrics for Wait Classes Removes Them Permanently
- Oracle JVM JDK1.4 Compatibility
- Building SQLJ Programs on x64
- Data Mining
- Port-Specific Limitation for UTL_FILE
- MAX_IDLE_BLOCKER_TIME Does Not Work in Oracle RAC Environment
- Database Control Does Not Display the Listener Details
- Unmounted Diskgroup After Restart
- Deploying a .NET Stored Procedure Using Oracle Developer Tools for .NET
- Dedicated Extproc Configuration for Oracle Database Extensions for .NET
- Null Pointer Exception While Using Oracle Messaging Gateway
- Vendor Clusterware Restrictions for Node Names

7.1 Readme Text Files

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

7.2 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 fails 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 My Oracle Support (formerly OracleMetaLink) for more details.

7.3 Windows Firewall Configuration

Windows 2003 Service Pack 1 and Windows XP Service Pack 2 changes the security of WebDAV configurations. The following access error message may display when computers with Windows XP Service Pack 2 attempt to access an Oracle XML DB repository using the HTTP/Web Distributed Authoring and Versioning (WebDAV) protocol from Windows Explorer or other tools:
The folder you entered does not appear to be valid. Please choose another.

Perform the following steps to access Oracle XML DB from a client computer using the WebDAV protocol:

1. Create the following registry key on the client computer and set it to a nonzero value:
   
   ```
   HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\WebClient\Parameters\UseBasicAuth (DWORD)
   ```

2. Restart the client computer or restart the WebClient service.

   **See Also:**
   - "Postinstallation Configuration Tasks on Windows" in *Oracle Database Platform Guide for Microsoft Windows (x64)* for more information about required Microsoft Firewall configuration tasks

### 7.4 Untranslated Start Menu Item for Oracle Workflow

If you install Oracle Database 10g Products, which include Oracle Workflow server, in a language other than English, the installation adds a submenu named Configuration and Migration Tools in English to the Windows Start menu under the corresponding Oracle home. This submenu includes only one item: Workflow Configuration Assistant. Other Oracle Database tools still appear under a separate, properly translated Configuration and Migration Tools submenu.

This issue is tracked with Oracle bug 4551276.

### 7.5 Transportable Tablespaces feature in Enterprise Manager Database Console

The transportable tablespaces feature accessible from the Maintenance tab has some limitations when generating and integrating tablespaces in Automatic Storage Management (ASM). The limitations and workarounds are described below:

**Limitation:**

There is a limitation when generating the transportable tablespace set on databases using ASM as storage. On Page 4, Files Page, if you provide the disk group name in the dump file location, you receive the following error when you submit the job:

```
RMAN-00571: ============
RMAN-00569: ERROR MESSAGE STACK FOLLOWS =========
RMAN-00571: ============
RMAN-03009: failure of backup command on ORA_DISK_1 channel at 08/22/2005 08:23:58
ORA-19504: failed to create file
'+DATA/naresh/testtablespace1.260.566954713'
ORA-17502: ksfdcre:4 Failed to create file
'+DATA/naresh/testtablespace1.260.566954713'
ORA-15046: ASM file name '+DATA/naresh/testtablespace1.260.566954713' is not
```
in single-file creation form

**Workaround:**
On Page 4, Files Page, provide a file system location instead of the disk group name. Data files and dump files are generated on the file system location you provide.

**Limitation:**
There is a limitation when integrating the transportable tablespace set on databases using ASM as storage. On Page 2, Datafile Destination Page, if in the data files table you provide the same disk group name for all data files, you can receive the following error when you submit the job:

```
RMAN> 2> 3>
Starting backup at 22-AUG-05
allocated channel: ORA_DISK_1
channel ORA_DISK_1: sid=152 devtype=DISK
RMAN-00571: ==============================================================
RMAN-00569: =============== ERROR MESSAGE STACK FOLLOWS ===============
RMAN-00571: ==============================================================
RMAN-00569: RMAN-03002: failure of backup command at 08/22/2005 09:08:36
ORA-15122: ASM file name '+MAKI/+MAKI/+MAKI/+MAKI/' contains an invalid file number
```

**Workaround:**
On Page 2, Datafile Destination Page, provide a unique disk group name for each data file.

This issue is tracked with Oracle bug 4566250.

**7.6 Enterprise Manager Database Control Exception Error To Ignore**
Immediately after switching the Enterprise Manager Agent from nonsecure to secure mode, or vice versa, Enterprise Manager Database Control can show the following exceptions on the home page:

```
java.lang.Exception: Exception in sending Request :: null
java.lang.Exception: IOException in reading Response :: Connection reset
```

The home page is fully functional despite these exceptions, and these exceptions should disappear within five minutes. Starting and stopping Enterprise Manager Database Control should also make these exceptions disappear.

This issue is tracked with Oracle bug 4562655.

**7.7 Remote Users Not Being Added to ORA_DBA Group in Cluster Installations**
When you install Oracle Database on Microsoft Windows, Oracle Universal Installer creates a Windows local group called ORA_DBA, and then adds your Windows user name to it. Members of ORA_DBA automatically receive the SYSDBA privilege. However, for cluster installations, Oracle Universal Installer does not add the user to ORA_DBA if they have performed the installation remotely. As a result, this user cannot log in to SQL*Plus using the SYSDBA role.

**Workaround:**
Manually add remote users to ORA_DBA.
This issue is tracked with Oracle bug 4553355.

7.8 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.

7.9 Oracle JVM JDK1.4 Compatibility

Oracle JVM is JDK 1.4 compatible. Because the supported JDK is version JDK 1.5, when you compile Java applications, be sure to pass additional cross-compilation options to javac as described below. This is complicated and error prone, since typos on jars paths remain obscure and there is no easy way to verify exactly which version of jars javac loads when driving compilation. For this reason, the best and safest approach is to load sources into Oracle JVM with loadjava, which in turn invokes the 1.4 version of javac directly in Oracle JVM.

Another safe approach is to compile sources and build jars using any client-side, JDK 1.4-based environment which can access the jars from the Windows x64 release (using network paths to ORACLE_BASE\ORACLE_HOME\javavm\lib\aurora.zip, ORACLE_BASE\ORACLE_HOME\jdbc\lib\classes12.jar, ORACLE_BASE\ORACLE_HOME\sqlj\lib\translator.zip, and so on, or physically copy these jars). After that, you can upload the jars using loadjava as usual.

If this is not feasible, you can compile using the 1.5 version of javac as follows. Javac must be forced to cross-compile, to use 1.4 jars and emit 1.4 bytecodes. For that, you must pass it by using the following set of flags:

```
-bootclasspath jdk14-jars -classpath other-jars -source 1.4 -target 1.4 -extdir ""
```

where jdk14-jars is a list of standard JDK jars such as

```
myjdk1.4home\jre\rt.jar;myjdk1.4home\lib\tools.jar
```

The list can include any other JDK 1.4 jars as needed.

The flag -extdir is empty but Sun recommends using it.

To get good results, it is essential to verify that the pathnames to rt.jar and tools.jar are valid and they are in fact JDK 1.4 jars.

7.10 Building SQLJ Programs on x64

SQLJ in this release on Windows x64 is supported with JDK 1.5 with source compatibility set to 1.4 only. This complicates SQLJ program compilation. If code needs to be compiled from source, care must be taken to force 1.5 javac to generate 1.4-compatible bytecodes.

The best and safest approach is to compile sources and build jars using a client-side, JDK 1.4-based environment which can access the jars for the Windows x64 release (using network paths to ORACLE_BASE\ORACLE_HOME\javavm\lib\aurora.zip, ORACLE_
BASE\ORACLE_HOME\jdbc\lib\classes12.jar, ORACLE_BASE\ORACLE_HOME\sqlj\lib\translator.zip, and so on, or physical copy of these jars).

If this is not feasible, you can compile SQLJ sources using the 1.5 javac forced to cross-compile in 1.4 env and as 1.4 javac. For that, you must pass it by using the following flags:

-.bootclasspath jdk14-jars -classpath other-jars -source 1.4 -target 1.4 -extdir ""

where jdk14-jars is a list of standard JDK jars such as
myjdk1.4home\jre\rt.jar; myjdk1.4home\lib\tools.jar

The list can include any other JDK 1.4 jars as needed.
The flag -extdir is for directories where 1.4 classes may reside.
To pass these options through SQLJ to javac, use -C as follows:
sqlj -C-bootclasspath=jdk14-jars -C-classpath=other-jars -C-source=1.4 -C-target=1.4 -C-extdir="" abc.sqlj

This passes all the cross-compilation flags to the Java compiler, which assumes that the input Java files are Java 1.4-compatible, not having any Java1.5 specific features. However, the execution of SQLJ programs is done using Java Runtime Environment 1.5 (JRE 1.5).

7.11 Data Mining
SVMClassificationModelDetails.getBias() is not supported in this release because it is incompatible with J2SE 5.0.

7.12 Port-Specific Limitation for UTL_FILE
The service account for OracleServiceSID, where SID represents the Oracle system identifier of the database instance, must be Local System, you can only use the UTL_FILE function for read and write operations on files that are stored on local file systems. In other words, due to this limitation, UTL_FILE cannot access remote or shared file systems.

This issue is tracked with Oracle bug 5591946.

7.13 MAX_IDLE_BLOCKER_TIME Does Not Work in Oracle RAC Environment
Setting a value for MAX_IDLE_BLOCKER_TIME feature of Resource manager does not work as expected in Oracle RAC environment.

Workaround: Set a value for MAX_IDLE_TIME instead of setting a value for MAX_IDLE_BLOCKER_TIME.

This issue is tracked with Oracle bug 6114355.

7.14 Database Control Does Not Display the Listener Details
When you connect to the database using Database Control, the page does not display the listener details.

Workaround:
After installing Oracle Database 10g Release 2, you must shut down the Database Control with the command `emctl stop dbconsole`. Modify the `targets.xml` file located in `ORACLE_BASE\ORACLE_HOME\hostname_SID\sysman\emd` directory so that the value of the ` machinename` field is the same for listener and database. Restart Database Control with the command `emctl start dbconsole` to display the listener details.

This issue is tracked with Oracle bug 6743916.

### 7.15 Unmounted Diskgroup After Restart

The diskgroup does not get mounted after restarting the computer.

**Workaround:**

Change startup type of OracleASMService+ASMInstanceName into manual from the Services Control Panel and restart the node.

This issue is tracked with Oracle bug 6688751.

### 7.16 Deploying a .NET Stored Procedure Using Oracle Developer Tools for .NET

You can use 32-bit Oracle Developer Tools for Visual Studio .NET, ODT.NET to deploy a .NET stored procedure on Windows x64 database. For the .NET stored procedure, select `AnyCPU` from the Platform Target list.

### 7.17 Dedicated Extproc Configuration for Oracle Database Extensions for .NET

Oracle recommends the use of multithreaded `extproc` for Oracle Database Extensions for .NET. However, if dedicated `extproc` is used, then it is recommended to add `ENVS` attribute to the `CLRExtProc` entry in `SID_LIST_LISTENER` list of `ORACLE_BASE\ORACLE_HOME\network\admin\listener.ora` as shown below:

```plaintext
(SID_DESC =
(SID_NAME = CLRExtProc)
(ORACLE_HOME = Oracle_Home_Path)
(PROGRAM = extproc)
(ENVS="EXTPROC_DLLS=ONLY:Oracle_Home_Path\bin\oraclr10.dll")
)
```

### 7.18 Null Pointer Exception While Using Oracle Messaging Gateway

If the application creates JMS Topic Connections and sets the link options to all the three exit types, namely, `MQ_SENDEXIT`, `MQ_RECEIVEEXIT`, and `MQ_SECURITYEXIT`, then you may receive the following error:

```
[Linked-exception]
javax.jms.JMSException: MQJMS1007: failed to create instance of exit class oracle.mgw.test.misc.mySecurityExit
at
com.ibm.mq.jms.services.ConfigEnvironment.newException(ConfigEnvironment.java:614)
at
com.ibm.mq.jms.MQConnection.checkExitType(MQConnection.java:4386)
```

**Workaround:**
Do not set all the three exit types at the same time. You can use any two exit types at the same time or any of the exit types individually.

This issue is tracked with Oracle bug 7248134.

7.19 Vendor Clusterware Restrictions for Node Names
If you use a vendor clusterware with Oracle Clusterware and Oracle Real Application Clusters, then you must use the node names and host names registered with that vendor clusterware you have installed. Refer to the Certifications page on My Oracle Support (formerly OracleMetaLink) for information about vendor clusterware supported for your Windows distribution.

8 Documentation Corrections and Additions
The following are the corrections to the installation guides for Microsoft Windows x64:

- Oracle Clusterware and Oracle RAC Virtual IP Address Status
- Node Deletion Syntax for Oracle Real Application Clusters Databases
- Incorrect Default Value for OSAUTH_PREFIX_DOMAIN
- Incorrect operfcfg Syntax
- Incorrect Information About JPublisher and Oracle SQLJ Installation

8.1 Oracle Clusterware and Oracle RAC Virtual IP Address Status
In Oracle Database Oracle Clusterware and Oracle Real Application Clusters Installation Guide for Microsoft Windows, Chapter 2, "Pre-Installation Tasks," section 2.6.1, "IP Address Requirements," the following text 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.

8.2 Node Deletion Syntax for Oracle Real Application Clusters Databases
The Oracle Database Oracle Clusterware and Oracle Real Application Clusters Administration and Deployment Guide provides the node deletion procedure in the "Step 2: Deleting Nodes from Oracle Real Application Clusters Databases" section in Chapter 11, "Adding and Deleting Nodes and Instances on Windows-Based Systems".

The following is the corrected step 4 of the procedure:

Use the following syntax to delete a node from Oracle Real Application Clusters Databases:

```
setup.exe -updateNodeList ORACLE_HOME=Oracle_home
CLUSTER_NODES="" -local
```

The updated document, B14197-10, is available on OTN.
8.3 Incorrect Default Value for OSAUTH_PREFIX_DOMAIN

In Oracle Database Platform Guide for Microsoft Windows (x64), Chapter 14, "Configuration Parameters and the Registry," incorrectly states the default value for OSAUTH_PREFIX_DOMAIN as false. The correct default value for OSAUTH_PREFIX_DOMAIN parameter is true.

The document is revised and the latest revision is available on OTN.

8.4 Incorrect operfcfg Syntax

In Oracle Database Platform Guide for Microsoft Windows (x64), Chapter 4, section, "Configuring Oracle Counters for Windows Performance Monitor," states the incorrect operfcfg syntax.

Here is the correct information:

You must specify the system password by running operfcfg.exe, located in the ORACLE_HOME\bin directory. operfcfg.exe prompts for a user name, password, and TNS alias.

For example:

DRIVE_LETTER:\> ORACLE_HOME\bin\operfcfg.exe
Enter user-name: system
Enter password: password
Enter tns-alias: orcl
operfcfg: New registry values have been successfully set.

If you run the following command, then operfcfg.exe does not prompt for a password:

operfcfg.exe -U user_name -D tns_alias

The document is revised and the latest revision is available on OTN.

8.5 Incorrect Information About JPublisher and Oracle SQLJ Installation

- In Oracle Database Installation Guide for Microsoft Windows (32-Bit), Chapter 4, section, "Installing Oracle Database 10g Products from the Companion CD," erroneously states that JPublisher and Oracle SQLJ are installed. The correct information is that JPublisher is not a part of Companion CD and Oracle SQLJ Demos are installed with the Companion CD instead of Oracle SQLJ.

- In Oracle Database Companion CD Installation Guide for Microsoft Windows (x64), Chapter 1, section, "Products Available in the Oracle Database 10g Products Installation Type," erroneously states that JPublisher and Oracle SQLJ are installed. The correct information is that JPublisher is not a part of Companion CD and Oracle SQLJ Demos are installed with the Companion CD instead of Oracle SQLJ.

Note: The SQLJ Demos are installed if Oracle SQLJ was installed before running the Companion CD installation.
9 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at

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Oracle customers have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.