

Oracle® Database

Release Notes

10g Release 2 (10.2) for Microsoft Windows (x64)

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This document may be updated after it is released. To check for updates to this document and to view other Oracle documentation, see the Documentation section on the Oracle Technology Network (OTN) Web site:

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

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

It contains the following topics:

- [Certification Information](#)
- [Unsupported Products](#)
- [Accessibility Software Recommendations](#)
- [Installation, Configuration, and Upgrade Issues](#)
- [Other Known Issues](#)
- [Documentation Accessibility](#)

1 Certification Information

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

<http://metalink.oracle.com>

2 Unsupported Products

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

- AUTO_FILTER is not supported in this release
- Oracle Enterprise Manager Grid Control CD
 - A 64-bit Windows version of Oracle Enterprise Manager Grid Control is not available in this release.
- Oracle Enterprise Manager Grid Control Agent
 - Oracle Enterprise Manager Grid Control Agent is not available at this time.

The following components are not supported on Windows XP:

- Oracle Real Application Clusters, including Cluster File System and Server Management
- Oracle Clusterware

The following components are not supported on Windows 2003 or Windows XP:

- DCE Adapter Support
- Entrust PKI Support
- Generic Connectivity
- Oracle Messaging Gateway
- nCipher Accelerator Support
- Oracle Fail Safe
- GNU Compiler Collection (GCC)
- Oracle Database Extensions for .NET
- Oracle Procedural Gateway
- Oracle Transparent Gateway
- Oracle HTML DB
- Oracle Workflow
- Oracle HTTP Server
- Business Components for Java (BC4J)
- CyberSafe Adapter Support
- Java Server Pages
- Oracle Data Provider for .NET
- Oracle Enterprise Manager Java Console
- Oracle Messaging Gateway
- 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
- Pro*COBOL
- Oracle Database Extensions for .NET
- 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
- Database Upgrade Assistant

3 Accessibility Software Recommendations

Our goal is to make Oracle products, services, and supporting documentation accessible to the disabled community. Oracle Database 10g release 2 (10.2) supports accessibility features. To make best use of these accessibility features, Oracle recommends the following software configuration:

- Windows 2003 or later
- Microsoft Internet Explorer 6.0 or later

Additional accessibility information for Oracle products can be found at

<http://www.oracle.com/accessibility>

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

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

4 Installation, Configuration, and Upgrade Issues

Review the following sections for information about issues that affect Oracle Database installation, configuration, and upgrade:

- [Database Upgrade Using Database Upgrade Assistant](#)
- [Limitations with 64-Bit Windows](#)
- [RAC and ASM Interoperability With Oracle Database 10g Release 2](#)
- [Shutdown of Cluster Ready Services Stack May Leave Processes Running](#)
- [Remote Node Listener Resource Offline after 10.1.0.4 to 10.2 Cluster Ready Services Upgrade](#)
- [Modifying a Virtual IP Address Node Application](#)
- [10.2 RAC Installations on an Oracle Database Release 10.1.0.4 Cluster](#)
- [Error While Deleting a Remote Instance From a RAC-Shared Oracle Home Database](#)
- [Reading a Downgraded Oracle Cluster Registry with Database Management Tools](#)
- [Oracle Database 9.2 Startup Error with srvctl when the Global Services Daemon is Running in a 10.2 Home](#)
- [Oracle Database 9.2 Startup Error with srvctl when the Global Services Daemon is Running in an Oracle 10.2 Clusterware](#)
- [Deleting a Node from Oracle Clusterware](#)
- [Configuring Raw Devices for Storage](#)
- [Central Configuration of Oracle Real Application Clusters Disabled on Windows](#)
- [ODBC Online Help in Japanese is Not Installed](#)

- [Recreating a Service on a Remote Node Throws Exception](#)
- [Oracle Universal Installer Help Files Incorrect for Oracle Database Companion CD](#)
- [Database Control Startup Not Timed Properly after RAC Database Creation](#)

4.1 Database Upgrade Using Database Upgrade Assistant

If the database version does not match the Oracle release version, Database Upgrade Assistant displays a warning message. The warning message incorrectly instructs you to run `catpatch.sql` from the Oracle Database 10g release 1 home. Do not do this. Instead, run `catpatch.sql` from the `rdbms\admin` directory of the source Oracle home from which you are upgrading.

The issue is tracked with Oracle bug 4551401.

After the upgrade, the `ORACLE_SID` parameter is not defined in the Windows registry.

Workaround:

1. Set `ORACLE_SID=Oracle_Sid` at the command prompt *before* you use `SQL*Plus`.
2. Set the `ORACLE_SID` parameter in the registry (`My Computer\HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE\KEY_10.2UpgradeHome\ORACLE_SID`).

This issue is tracked with Oracle bug 4534421.

4.2 Limitations with 64-Bit Windows

If you do not have sufficient address space to allocate PGA memory, you can run into `ORA-04030` errors or system commands can fail with OS error 1450 or 997. The following solutions are suggested:

- Run a smaller work load and use less users.
- Reduce the per thread stack space usage using `orastack`.

This issue is tracked with Oracle bugs 4552171, 4552150, and 4552097.

4.3 RAC and ASM Interoperability With Oracle Database 10g Release 2

10.1.0.2 or 10.1.0.3 RAC or Automatic Storage Management, instances do not interoperate with 10.2 Cluster Synchronization Service on Windows. The following error may appear on the top of the stack:

```
/_propopen+2162      CALLrel _propurutidtoname/
```

Workaround:

Apply the patch for bug 3843632 to the 10.1.0.2 or 10.1.0.3 Oracle home.

This issue is tracked with Oracle bug 3843632.

4.4 Shutdown of Cluster Ready Services Stack May Leave Processes Running

After shutting down the Cluster Ready Services (CRS) 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
```

4.5 Remote Node Listener Resource Offline after 10.1.0.4 to 10.2 Cluster Ready Services Upgrade

After upgrading 10.1 Cluster Ready Services (CRS) to 10.2 CRS, you may notice that some remote listener CRS resources are offline.

Workaround:

1. Execute the following command and check the output to see if the state of any CRS resources for LISTENER (* .lsnr) are identified as OFFLINE.

```
CRS Home/bin/crs_stat
```

2. List all CRS listener resources identified as offline in step 1.

3. Execute the following command for each CRS listener resource identified in step 2.

```
crs_stat -p CRS_listener_resource
```

4. Check if the ACTION_SCRIPT attribute points to racgwrap.bat in the CRS Home\bin directory.

5. If yes, execute the following commands. Otherwise, return to step 2.

```
CRS Home/bin/crs_register CRS_listener_resource -update -a Oracle RAC
Home/bin/racgwrap.bat
```

```
CRS Home/bin/crs_start CRS_listener_resource
```

This issue is tracked with Oracle bug 4575086.

4.6 Modifying a Virtual IP Address Node Application

When modifying the name, IP address, or netmask of an existing virtual IP address (VIP) resource using the following command:

```
srvctl modify nodeapps
```

you must include the existing interfaces for the VIP in the -A argument. For example:

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

This issue is tracked with Oracle bug 4500688.

4.7 10.2 RAC Installations on an Oracle Database Release 10.1.0.4 Cluster

When Oracle Universal Installer is performing a RAC 10g release 2 installation on a cluster that already has Oracle Database release 10.1.0.4, Oracle Universal Installer gives you an option of performing an upgrade on any databases running on the system.

If you select this option to upgrade, Oracle Universal Installer invokes Database Upgrade Assistant to perform the upgrade. As part of the database upgrade, Enterprise Manager Database Control is also upgraded. This does not impact the upgrade itself. The impact is that if the preupgrade version of the database is 10.1.0.4, Database Control may not start on one or more nodes after the upgrade. As a result, if you run the following command on that node:

```
emctl status dbconsole
```

it reports that Enterprise Manager Database Console is not running. Logging in through the browser also fails. This bug is intermittently observed.

Workaround:

1. Go to the node where the Enterprise Manager Database Console is not running.
2. End the `emagent.exe` process from the Task Manager.
3. Restart the `OracleDBConsoleSID` service.

This issue is tracked with Oracle bug 4550226.

4.8 Error While Deleting a Remote Instance From a 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.

4.9 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_MACHINE\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:

```
srvctl add database
```

This issue is tracked with Oracle bug 4507090.

4.10 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 10g release 2 Clusterware 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 *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.

4.11 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 memeory 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.

4.12 Deleting a Node from Oracle Clusterware

If the `ORA.ORA_SID.DB` resource is `ONLINE` on a node that you want 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.rac1.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.

4.13 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 (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* (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.

4.14 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 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.

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.

4.15 ODBC Online Help in Japanese is Not Installed

If you select **Start > Programs > Oracle - HOME_NAME > Application Development > Oracle ODBC**, the online help displays in English instead of Japanese.

This issue is tracked with Oracle bug 4490895.

4.16 Recreating a Service on a Remote Node Throws Exception

During installation of Oracle Database 10g release 2 on a pre-existing 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. Afterwards, the service should be created successfully.

This issue is tracked with Oracle bug 4508168.

4.17 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 (x64)* for detailed information about the installation process.

This issue is tracked with Oracle bug 4604992.

4.18 Database Control Startup Not Timed Properly after RAC Database Creation

When a new 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 will not be monitored. The following error in the Database Control console will appear:

```
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 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](#)
- [Local Oracle Database Client Connections](#)
- [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](#)

5.1 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.

5.2 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 *OracleMetalink* for more details.

5.3 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 machine and set it to a non-zero value:

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\WebClient\Parameters\UseBasicAuth (DWORD)
```

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

See Also:

- <http://www.microsoft.com/technet/prodtechnol/winxppro/maintain/sp2netwk.msp#XSLTsection129121120120> for more information about the WebDAV security changes in Service Pack 2
- "Postinstallation Configuration Tasks on Windows" in *Oracle Database Platform Guide for Microsoft Windows (x64)* for more information about required Microsoft Firewall configuration tasks

5.4 Local Oracle Database Client Connections

If you plan to connect the Oracle Database to a release of Oracle Database Client that is earlier than 10g release 2 (10.2), you cannot do so if all of the following conditions exist:

- Oracle Database Client is running on the same computer as Oracle Database 10g release 2 (10.2).
- Microsoft Windows Terminal Services is not running on the same computer as Oracle Database Client. Typically, Terminal Services is installed and configured with Microsoft Windows 2003, but on Microsoft Windows 2000 or XP, it may not be installed or enabled.
- Oracle Database Client is version 9.0.x to 9.2.0.6 or 10.1 to 10.1.0.3.
- Oracle Database Client is not running as Administrator.

To remedy this problem, upgrade Oracle Database Client to release 9.2.0.7, or 10.1.0.4 or higher by downloading the Oracle Database Family patch set from *OracleMetaLink* at:

<http://metalink.oracle.com/>

5.5 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.

5.6 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-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.

5.7 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 they should go away within five minutes. Starting and stopping Enterprise Manager Database Control should also make these exceptions go away.

This issue is tracked with Oracle bug 4562655.

5.8 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 username 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.

See Also: *Oracle Database Platform Guide for Microsoft Windows (x64)* for more information on ORA_DBA and instructions on manually granting administrator and operator privileges for an Oracle database

This issue is tracked with Oracle bug 4553355.

5.9 Removing Metrics for Wait Classes Removes Them Permanently

Do not remove the key values for the wait class metrics. Doing so removes them permanently and currently there is no easy way to recover them.

This issue is tracked with Oracle bug 4602952.

5.10 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.

5.11 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 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 sthrough 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).

5.12 Data Mining

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

6 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. Accessibility 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 more information, visit the Oracle Accessibility Program Web site at <http://www.oracle.com/accessibility/>.

Accessibility of Code Examples in Documentation

Screen readers 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, some screen readers may not always read a line of text that consists solely of a bracket or brace.

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Oracle provides dedicated Text Telephone (TTY) access to Oracle Support Services within the United States of America 24 hours a day, seven days a week. For TTY support, call 800.446.2398.

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