

Oracle® Database Vault

Release Notes

10g Release 2 (10.2.0.4) for AIX 5L Based Systems (64-Bit)

B32491-03

May 2008

These Release Notes describe issues you may encounter with Oracle Database Vault 10g Release 2 (10.2.0.4). The Oracle Database Vault installation is covered in detail in the *Oracle Database Vault Installation Guide*.

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/>

This document contains the following sections:

- [Installation Issues and Recommendations](#)
- [Usage Issues and Recommendations](#)
- [Frequently Asked Questions on Installation](#)
- [Manually Deploying the DVA Application](#)
- [Miscellaneous Notes](#)
- [Documentation Accessibility](#)

Installation Issues and Recommendations

This section describes the known issues pertaining to installation. It also provides the workarounds that you can use.

DVA Fails to Start If the Database Vault Installer Is Run from a Remote Node

Bug 7006861

The Database Vault Administrator (DVA) console starts if both the Database Vault installer and the Enterprise Manager (EM) instance exist on the same local node. But, the DVA application does not start if you run the Database Vault installer from a remote node.

Workaround: If you have run the Database Vault installer from a remote node, then to start the DVA application, perform the following:

1. Shut down any existing EM instances:

```
$ORACLE_HOME/bin/emctl stop dbconsole
```

2. Start the EM instance explicitly on the remote node:

```
emca -reconfig dbcontrol -cluster
```

3. Now, start DVA from the remote node:

```
emctl start dbconsole
```

Generation of Invalid Component After Database Vault Installation

Bug 6899612

If you upgrade your existing database to 10.2.0.4 and then install Database Vault 10.2.0.4 on the upgraded database, the Oracle XML Database component becomes invalid.

Execute the following SQL statement to check if the Database Vault instance contains an invalid Oracle XML Database component:

```
column comp_name format a35
select comp_name, status, version from dba_registry where status='INVALID';
```

COMP_NAME	STATUS	VERSION
Oracle XML Database	INVALID	10.2.0.4.0

The workaround is to run the `utlrp.sql` script. This script recompiles all PL/SQL modules that might be in an invalid state, including packages, procedures, and types. Run the `utlrp.sql` script as follows:

1. Set the environment variable `ORACLE_HOME` to the `oracle_home` path
2. Run the `utlrp.sql` script:

```
$ sqlplus /NOLOG
SQL> CONNECT SYS AS SYSDBA
Enter password:SYS_password
SQL>@?/rdbms/admin/utlrp.sql
```

DVCA Fails If the SID Is Longer than 8 Characters

Bug 5258820

Running Database Vault Configuration Assistant (DVCA) manually, after creating a new database in the Database Vault home, fails if the Oracle System Identifier (SID) for the database is longer than 8 characters.

The following steps reproduce the bug:

1. Use Database Configuration Assistant (DBCA) to create a new database in an existing Database Vault home.
2. Run DVCA on the newly created database:

```
$_ORACLE_HOME/bin/dvca -action option -oh oracle_home -jdbc_str
jdbc_connection_string -sys_passwd SYS_password -owner_account
DV_owner_account_name -owner_passwd DV_owner_account_password
[-acctmgr_account DV_account_manager_account_name] [-acctmgr_passwd
DV_account_manager_password] [-logfile ./dvca.log] [-silent]
[-nodecrypt][-lockout] [-languages
```

```
{["en"],["de"],["es"],["fr"],["it"],["ja"],["ko"],["pt_BR"],["zh_CN"],  
["zh_TW"]}]
```

See Also: *Oracle Database Vault Installation Guide* for more information on running the DVCA command.

The reason for the bug is that the Oracle Net service name in the `tnsnames.ora` (`$ORACLE_HOME/network/admin/tnsnames.ora`) file is truncated to 8 characters.

The workaround for the bug is to change the truncated Net service name in the `tnsnames.ora` file to its correct value. For example, say the SID for the database is `ORACLEDB90`, and the entry in `tnsnames.ora` appears as:

```
ORACLEDB = (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP)(HOST ....
```

Replace the truncated entry in the `tnsnames.ora` file with the correct entry:

```
ORACLEDB90 = (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP)(HOST ....
```

Cannot Install Oracle Database Vault in a Data Guard Environment

Bug 5577503

The Database Vault installer fails to install Database Vault in an existing physical standby database.

You can create a new physical standby database by using the following steps:

1. Install Database Vault on the primary database.
2. Create a physical standby database using a hot backup of the primary database. This backup should include the Oracle home.
3. Set up communications between the primary and the physical standby database. Redo logs communicate changes from the primary database to the standby database.

See Also: *Data Guard Concepts and Administration Guide* for more information on creating a physical standby database

Enterprise Manager Does Not Start Automatically

Bug 5613521

After installing Database Vault on a database, and running the postinstallation steps on the nodes, you get an error when trying to access Enterprise Manager.

Also, when you try to check the status of `dbconsole` using the `emctl status dbconsole` command, you get a message saying that the EM daemon is not running even though the process is running.

The workaround is to manually restart the `dbconsole` process using the following commands:

```
$ORACLE_HOME/bin/emctl stop dbconsole  
$ORACLE_HOME/bin/emctl start dbconsole
```

Enterprise Manager Does Not Start Automatically on the Remote Nodes

Bug 5654876

After installing Database Vault on a Real Applications Cluster (RAC) database, and running the `dvca -action optionrac` command on the remote nodes, Enterprise Manager does not start automatically on the remote nodes.

See Also: *Oracle Database Vault Installation Guide* for more information on running the `dvca -action optionrac` command.

The workaround is to set the correct value for the `ORACLE_SID` variable in the `$ORACLE_HOME/bin/dvca.bat` file on the remote node. The `ORACLE_SID` variable needs to be changed from the local node SID to the remote node SID on the remote node. You can then run DVCA on the remote node.

Alternatively, you can manually restart the `dbconsole` process using the following commands:

```
$ORACLE_HOME/bin/emctl stop dbconsole
$ORACLE_HOME/bin/emctl start dbconsole
```

Unable to Log In to Enterprise Manager As the SYS User After Database Vault Installation

Bug 6630108

The `SYS` user is unable to log in to Enterprise Manager after installing Database Vault on an Oracle database. The following error is encountered:

```
ORA-01031: insufficient privileges
```

You need to regenerate the password file, using the `orapwd` utility, to reenabte the `SYS` user to connect as `SYSDBA`. Use the following syntax to enable `SYSDBA` logins:

```
orapwd file=password_filename password=password [entries=users] force=y
nosysdba=n
```

See Also: *Oracle Database Vault Installation Guide* for more information on using the `orapwd` utility

Database Instance and Listener Do Not Start Automatically on the Remote Node After Database Vault Installation

Bug 6630191

After you install Database Vault, the database instances and listeners on the remote nodes do not start automatically. You must start these manually.

This is expected behavior. The `DVCA` utility configures the local node, and starts the database instance and listener processes on the local node. You need to start these processes manually on each of the remote nodes.

Error When Installing Database Vault for a Database That Does Not Have Enterprise Manager Configured

Bugs 6640232 and 6640203

When you install Database Vault for a database that does not have Enterprise Manager configured, you may notice error messages in the DVCA install log. The DVCA install log may contain the following error messages:

```
DVCA_ERROR:java.io.IOException: java.io.IOException:
/scratch/aime/10.2DV/071120/dvr2/db/bin/dvca_getipc.sh: cannot execute
Error executing task DEPLOY_DVA:java.io.IOException:
java.io.IOException: /scratch/aime/10.2DV/071120/dvr2/db/bin/dvca_getipc.sh:
cannot execute
```

You may also see error files containing the following errors:

```
java.lang.NullPointerException
    at javax.swing.LayoutComparator.compare(Unknown Source)
    at java.util.Collections.indexedBinarySearch(Unknown Source)
    at java.util.Collections.binarySearch(Unknown Source)
    at javax.swing.SortingFocusTraversalPolicy.getComponentAfter(Unknown
Source)
    at javax.swing.LayoutFocusTraversalPolicy.getComponentAfter(Unknown
Source)
    at java.awt.Component.nextFocusHelper(Unknown Source)
    at java.awt.Container.nextFocusHelper(Unknown Source)
    at java.awt.Component.nextFocus(Unknown Source)
    at java.awt.Component.transferFocus(Unknown Source)
    at oracle.ewt.lwAWT.LWComponent.processFocusEvent(Unknown Source)
    at oracle.ewt.lwAWT.AbstractButton.processFocusEvent(Unknown Source)
    at oracle.ewt.button.PushButton.processFocusEvent(Unknown Source)
    at java.awt.Component.processEvent(Unknown Source)
    at java.awt.Container.processEvent(Unknown Source)
    at oracle.ewt.lwAWT.LWComponent.processEventImpl(Unknown Source)
    at oracle.ewt.button.PushButton.processEventImpl(Unknown Source)
    at oracle.ewt.lwAWT.LWComponent.redispatchEvent(Unknown Source)
    at oracle.ewt.lwAWT.LWComponent.processEvent(Unknown Source)
    at java.awt.Component.dispatchEventImpl(Unknown Source)
    at java.awt.Container.dispatchEventImpl(Unknown Source)
```

You can safely ignore these errors if you do not wish to deploy Enterprise Manager and Database Vault Administrator (DVA) for your Database Vault instance.

Database Vault Home Might Contain Invalid Objects

Bug 6658315

The following steps are used to create a cloned Database Vault instance:

1. Install Oracle Database Vault 10g Release 2 (10.2.0.4) in the first Oracle home.
2. Clone the first instance to create a second Oracle home.
3. Run Net Configuration Assistant (NetCA) and Database Configuration Assistant (DBCA) to configure a listener and database for the cloned instance.
4. Run DBCA again to configure Oracle Label Security (OLS) for the cloned instance.

5. Run Database Vault Configuration Assistant (DVCA) as follows:

```
$ORACLE_HOME/bin/dvca -action option -oh oracle_home
-jdbc_str jdbc_connection_string -sys_passwd SYS_password -owner_account
DV_owner_account_name -owner_passwd DV_owner_account_password
-acctmgr_account DV_account_manager_account_name -acctmgr_passwd
DV_account_manager_password -logfile ./dvca.log -nodecrypt
```

Execute the following SQL statement to check if either the Database Vault or the cloned Database Vault instance contains invalid objects:

```
SQL> select count(*) from all_objects where status = 'INVALID';

COUNT(*)
-----
         45
```

The workaround is to run the `utlvp.sql` script. This script recompiles all PL/SQL modules that might be in an invalid state, including packages, procedures, and types. Use the following commands to run the `utlvp.sql` script:

1. Run Oracle Database Vault Configuration Assistant (DVCA) by using the `dvca -action disable` option:

```
dvca -action disable
      -service service_name
      -instance Oracle_instance_name
      -owner_account DV_owner_account_name
```

```
Enter SYS password: sys_password
Enter owner password: owner_password
```

2. Run the `utlvp.sql` script:

```
cd $ORACLE_HOME/rdbms/admin
sqlplus SYS "AS SYSDBA"
Enter password:
SQL> @utlvp.sql
```

3. Run Oracle Database Vault Configuration Assistant (DVCA) by using the `dvca -action enable` option:

```
dvca -action enable
      -service service_name
      -instance Oracle_instance_name
      -owner_account DV_owner_account_name
```

```
Enter SYS password: sys_password
Enter owner password: owner_password
```

Incorrect Installer Warning for Non-English Locales

Bug 6645805

The Database Vault installer displays the following warning for non-English locales after you select the details in the Specify Installation Details screen:

Note that OS authentication will be turned off for all databases in the selected Oracle Home. It is recommended that Oracle Database Vault be

installed into an Oracle Home with only one database in it.

Operating system (OS) authentication is not turned off after you install Oracle Database Vault 10g Release 2 (10.2.0.4). However, the recommendation to install Oracle Database Vault in it's own Oracle home still holds true.

Error Occurs When DVCA Is Run on a Remote Node

Bug 6140164

After you add a second node to a single-node Oracle Real Application Cluster (RAC) installation, the following error occurs when Database Vault Configuration Assistant (DVCA) is run with the `-action optionrac` switch on the newly added RAC node:

```
ORA-32001: write SPFILE requested but no SPFILE specified at startup
```

The following steps reproduce the bug:

1. Install Oracle Cluster Ready Services (CRS) on a 2-node cluster.
2. Install Oracle Database Vault on the first node.
3. Run the `addnode . sh` script on the first node to add the second node.
4. Configure the database listener and database instance for the second node.
5. Run DVCA with the `-action optionrac` switch on the second node.

The workaround is to run the following steps before running the `addnode . sh` script in Step 3:

Note: These steps must be run from the first node.

1. Shut down the database.

```
$ORACLE_HOME/bin/srvctl stop database -d db_name
```

2. Start the database with the `nomount` option.

```
$ORACLE_HOME/bin/srvctl start database -d db_name -o nomount
```

3. Connect to the database AS `SYSDBA`.

```
sqlplus SYS "AS SYSDBA"  
Enter password:
```

4. Create a server parameter file (SPFILE) using the traditional initialization parameter file (PFILE). The initialization parameter file is usually located at `$ORACLE_HOME/admin/db_name/pfile` for Optimal Flexible Architecture compliant databases.

For example:

```
SQL> CREATE SPFILE='SHARED_LOCATION/spfileORACLE_SID.ora'  
FROM 'PFILE=ORACLE_HOME/admin/db_name/pfile/initORACLE_SID.ora'
```

This statement reads the text initialization parameter file to create a server parameter file. You must have the `or SYSOPER` system privilege to run the `CREATE SPFILE` statement.

5. Shut down the database.

```
$ORACLE_HOME/bin/srvctl stop database -d db_name
```

6. Clear the current contents of the initialization parameter file. Add the server parameter file location in the initialization parameter file:

```
SPFILE = 'SHARED_LOCATION/spfileORACLE_SID.ora'
```

7. Restart the database.

For example:

```
$ORACLE_HOME/bin/srvctl start database -d db_name
```

Usage Issues and Recommendations

This section discusses usage issues that you may encounter with Database Vault. It also provides the workarounds for these issues.

Accounts with DV_OWNER, DV_ADMIN, or DV_SECANALYST Role Cannot Use the ALTER USER Command

Bug 5161953

Accounts with the DV_OWNER, DV_ADMIN, or DV_SECANALYST role cannot run the following command:

```
ALTER USER user QUOTA UNLIMITED ON tablespace
```

The workaround is to REVOKE the role from the account, run the ALTER USER command, and then GRANT back the role to the account. This works if the account is not the DV_OWNER account that was created during installation. If the account is the DV_OWNER account created during installation, then you would need to use the following steps:

1. Disable the Database Vault command rule for the ALTER USER command.
2. Run the ALTER USER command.
3. Re-enable the Database Vault command rule for the ALTER USER command.

Command Rule SELECT Not Found for SYSADM.%

Bug 5508407

The following error is displayed when you try to update the owner or the rule set for the SELECT command rule:

```
Command Rule SELECT not found for schema.%
```

After the update has failed, you are not allowed to delete the command rule. You can use the following workaround steps:

1. Login to SQL*Plus using the SYSTEM account. Run the following command:

```
SQL>ALTER SYSTEM FLUSH SHARED_POOL;
```

2. Delete the command rule.

3. If you were trying to update the command rule, then re-create the command rule with the new parameters.
4. Repeat Step 1 for the new command rule to take effect.

CREATE SESSION Privilege Is Controlled by the Data Dictionary Realm

Use the following steps to grant the `CREATE SESSION` privilege:

1. Temporarily disable the data dictionary realm.
2. Log in as the `SYSTEM` user.
3. Grant the `CREATE SESSION` privilege.
4. Enable the data dictionary realm.

Incorrect Version and Copyright Information for Non-English Locales

Bug 6660620

The Database Vault Administrator (DVA) application displays incorrect version and copyright year information in the About Oracle Database Vault Administrator page, for non-English locales. The version numbers for Database Vault and Oracle Database are erroneously mentioned as 10.2.0.3.0. The correct version numbers should be as follows:

- Oracle Database Vault Administrator: 10.2.0.4.0
- Supported Target Databases: 10.2.0.4.0

The copyright year is incorrectly mentioned as follows:

Copyright © 1996,2006, Oracle. All rights reserved.

This should be:

Copyright © 1996, 2008, Oracle. All rights reserved.

Frequently Asked Questions on Installation

This section covers some of the frequently asked questions related to Database Vault installation. Oracle Database Vault installation is covered in detail in the *Oracle Database Vault Installation Guide*.

The installer does not detect my existing Oracle Database Enterprise Edition 10g Release 2 (10.2.0.4) instance. What should I do?

To allow the installer to find the database instance information, you should check the following:

- The database home has Oracle Enterprise Manager Console DB 10.2.0.4.0 installed.
- For an Oracle Real Application Clusters (RAC) database, make sure that Cluster Ready Services (CRS) is running on all nodes.
- `/etc/oratab` has an entry for the database.
- All database names listed in `/etc/oratab` have unique system identifier (SID) names.
- The file, `/etc/oraInst.loc` exists.

- The oraInventory location is set in the `/etc/oraInst.loc` file.
- The oraInventory location set in `/etc/oraInst.loc` is the same as the 10.2.0.4 Enterprise Edition database's oraInventory location.
- The 10.2.0.4 database home does not have Oracle Database Vault in it.
- The 10.2.0.4 database home does not contain an Automatic Storage Management (ASM) instance.

I have installed Oracle Database Vault into an Oracle home that has multiple databases. How do I secure the other databases in the Oracle home?

You would need to run Database Vault Configuration Assistant (DVCA) manually on the other databases. Refer to the *Oracle Database Vault Installation Guide* for detailed instructions.

I have installed Oracle Database Vault on a Real Application Clusters (RAC) database instance. How do I secure the other nodes in the cluster?

You need to run DVCA manually on the other RAC nodes. Refer to the *Oracle Database Vault Installation Guide* for detailed instructions.

Manually Deploying the DVA Application

You can manually deploy Database Vault Administrator (DVA) to the following Oracle Application Server Containers for J2EE (OC4J) home:

```
$ORACLE_HOME/oc4j/j2ee/home
```

Use the following steps to manually deploy the DVA application:

1. Edit the file, `$ORACLE_HOME/oc4j/j2ee/home/config/server.xml`. Enter the following line just before the last line that reads, `</application-server>`:

```
<application name="dva" path="$ORACLE_HOME/dv/jlib/dva_webapp.ear"
auto-start="true" />
```

For example:

```
<application name="dva"
path="/u00/app/oracle/oracle/product/dv12/dv/jlib/dva_webapp.ear"
auto-start="true" />
```

2. Edit the file, `$ORACLE_HOME/oc4j/j2ee/home/config/http-web-site.xml`. Enter the following line just above the last line that reads, `</web-site>`:

```
<web-app application="dva" name="dva_webapp" root="/dva" />
```

3. Edit the file, `$ORACLE_HOME/oc4j/j2ee/home/config/global-web-application.xml`. Search for `<servlet-class>oracle.jsp.runtimev2.JspServlet</servlet-class>`. Uncomment the following lines after this:

```
<init-param>
  <param-name>main_mode</param-name>
  <param-value>justrun</param-value>
</init-param>
```

4. Create the directory, `$ORACLE_HOME/dv/jlib/sysman/config`.

```
mkdir -p $ORACLE_HOME/dv/jlib/sysman/config
```

5. Create the database connection configuration file, `emoms.properties`, in the configuration directory that you just created. Add the following lines to the file:

```
oracle.sysman.emSDK.svlt.ConsoleMode=standalone
oracle.sysman.eml.mntr.emdRepRAC=FALSE
oracle.sysman.eml.mntr.emdRepDBName=ORACLE_SID
oracle.sysman.eml.mntr.emdRepConnectDescriptor=TNS_connection_string
```

Note:

- `oracle.sysman.eml.mntr.emdRepRAC` should be set to `TRUE` for a Real Application Clusters (RAC) database.

- For `oracle.sysman.eml.mntr.emdRepConnectDescriptor`, you can use an alias from `$ORACLE_HOME/network/admin/tnsnames.ora`. Alternatively, you can use the following syntax:

```
oracle.sysman.eml.mntr.emdRepConnectDescriptor=(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=HOSTNAME)(PORT=PORT)))(CONNECT_DATA=(SERVICE_NAME=ORACLE_SID)))
```

6. Start OC4J. Before starting OC4J, ensure that the correct environment variables are set. For example :

```
ORACLE_SID=orcl
export ORACLE_SID
ORACLE_HOME=/u00/app/oracle/product/10.2/dv
export ORACLE_HOME
LIBPATH=$ORACLE_HOME/bin:$ORACLE_HOME/lib32:$ORACLE_HOME/jdbc/lib
export LIBPATH
PATH=$ORACLE_HOME/bin:$ORACLE_HOME/jdk/bin:$PATH
export PATH
```

Note: LIBPATH must be set to use the OCI-based JDBC libraries.

Start OC4J using the following syntax:

```
$ORACLE_HOME/jdk/bin/java -Djava.awt.headless=true
-DEMROOT=$ORACLE_HOME/dv/jlib -jar $ORACLE_HOME/oc4j/j2ee/home/oc4j.jar
-userThreads -config $ORACLE_HOME/oc4j/j2ee/home/config/server.xml
```

7. You can now access the DVA application. The HTTP port defaults to 8888 for this environment. Use the following URL:

```
http://hostname:8888/dva
```

Miscellaneous Notes

This section contains miscellaneous notes not covered in the Oracle Database Vault documentation.

Snapshots and Materialized Views

The keyword `SNAPSHOT` is supported in place of `MATERIALIZED VIEW` for backward compatibility.

JOB_QUEUE_PROCESSES Initialization Parameter

The `JOB_QUEUE_PROCESSES` initialization parameter specifies the maximum number of processes that can be created for the execution of jobs. It specifies the number of job queue processes per instance.

This parameter must have a non-zero value. The default value for `JOB_QUEUE_PROCESSES` is 10.

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.

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.

TTY Access to Oracle Support Services

Oracle provides dedicated Text Telephone (TTY) access to Oracle Support Services within the United States of America 24 hours a day, 7 days a week. For TTY support, call 800.446.2398. Outside the United States, call +1.407.458.2479.

Oracle Database Vault Release Notes 10g Release 2 (10.2.0.4) for AIX 5L Based Systems (64-Bit)
B32491-03

Copyright © 2006, 2008, Oracle. All rights reserved.

The Programs (which include both the software and documentation) contain proprietary information; they are provided under a license agreement containing restrictions on use and disclosure and are also protected by copyright, patent, and other intellectual and industrial property laws. Reverse engineering, disassembly, or decompilation of the Programs, except to the extent required to obtain interoperability

with other independently created software or as specified by law, is prohibited.

The information contained in this document is subject to change without notice. If you find any problems in the documentation, please report them to us in writing. This document is not warranted to be error-free. Except as may be expressly permitted in your license agreement for these Programs, no part of these Programs may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose.

If the Programs are delivered to the United States Government or anyone licensing or using the Programs on behalf of the United States Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the Programs, including documentation and technical data, shall be subject to the licensing restrictions set forth in the applicable Oracle license agreement, and, to the extent applicable, the additional rights set forth in FAR 52.227-19, Commercial Computer Software--Restricted Rights (June 1987). Oracle USA, Inc., 500 Oracle Parkway, Redwood City, CA 94065.

The Programs are not intended for use in any nuclear, aviation, mass transit, medical, or other inherently dangerous applications. It shall be the licensee's responsibility to take all appropriate fail-safe, backup, redundancy and other measures to ensure the safe use of such applications if the Programs are used for such purposes, and we disclaim liability for any damages caused by such use of the Programs.

Oracle, JD Edwards, PeopleSoft, and Siebel are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

The Programs may provide links to Web sites and access to content, products, and services from third parties. Oracle is not responsible for the availability of, or any content provided on, third-party Web sites. You bear all risks associated with the use of such content. If you choose to purchase any products or services from a third party, the relationship is directly between you and the third party. Oracle is not responsible for: (a) the quality of third-party products or services; or (b) fulfilling any of the terms of the agreement with the third party, including delivery of products or services and warranty obligations related to purchased products or services. Oracle is not responsible for any loss or damage of any sort that you may incur from dealing with any third party.

