## **Oracle® Enterprise Manager**

Grid Control Release Notes for HP-UX Itanium

10g Release 3 (10.2.0.3.0)

#### E10079-01

March 2007

Oracle Enterprise Manager Grid Control (Grid Control) is a management solution that provides a centralized, integrated framework for managing different versions of Oracle products and some third-party products in the enterprise. Grid Control automates day-to-day maintenance requirements for an enterprise grid such as software installation, patching, upgrading, workload balancing, and security.

This Release Notes document is one of the documents that is bundled with 10.2.0.3.0 Grid Control.

This document contains the following sections:

- Known Issues
- Documentation Accessibility

## 1 Known Issues

This section addresses the known issues pertaining to this release.

## 1.1 Installation and Upgrade Issues In General

This section covers all installation and upgrade issues in general.

#### 1.1.1 Error While Doing an Additional OMS Install

If you are doing an additional OMS install pointing to a repository whose key is not present, then you will see following message:

"The emkey for securing the current Management Service does not exist in the repository you have specified. From the first Oracle Management Service install, execute "emctl prepare repository -new\_oms\_install" before proceeding with this install."

In the this message, the command that needs to be executed is incorrect. Therefore, follow these steps instead:

- **1.** Rebounce the database.
- 2. Copy emkey.ora into /OH/sysman/config/
- run./emctl config emkey -emkeyfile /OH/sysman/config/emkey.ora

(Bug 5658897)



1

# 1.1.2 CCR Configuration Page Not Displayed During Installation of Agent and OMS

During installation of OMS and Agent, the CCR configuration page is not displayed. Due to this, the user can not configure the CCR at the time of installation. As a workaround, after the installation is complete, configure the CCR manually by executing \$ORACLE\_HOME/ccr/bin/setuoCCR -s <csi><metalink-id> <country-code>.

(Bug 5658897)

### 1.1.3 Agent Remains in Blackout State After Upgrade Using "agent push"

After upgrading agent from 10.1.0.5 to 10.2.0.3 using "agent push" method, the agent remians in blackout state.

As a workaround, stop the blackout from oms console or alternatively execute the following command at agent home. emctl stop blackout Agent\_Upgrade.

(Bug 5736358)

### 1.1.4 Execution of Runinstaller Shows Shell Commands Being Executed

The execution of runinstaller shows some shell commands getting executed.

sh: /usr/sbin/psrinfo: not found.

sh: /usr/sbin/swap: not found.

These errors can be ignored.

(Bug 5735438)

## **1.2 Installation and Upgrade Issues Specific to Agent Deploy Application**

This section covers issues that related to the Agent Deploy application.

For more information about Management Agent deployment, refer to the Management Agent Deployment Best Practices document available at:

http://www.oracle.com/technology/products/oem/pdf/10gr2\_ agent\_deploy\_bp.pdf

### 1.2.1 sshConnectivity.sh Overwrites the Keys in Silent Install Mode

If you have existing SSH setup on some machines and if you are using the sshConnectivity.sh script to do a new setup manually, then to restore the old setup, you need to perform the following steps manually:

- mv \$HOME/.ssh/identity.pub.ri.bak \$HOME/.ssh/identity.pub
- mv \$HOME/.ssh/identity.ri.bak \$HOME/.ssh/identity
- mv \$HOME/.ssh/known\_hosts.ri.bak \$HOME/.ssh/known\_hosts
- mv \$HOME/.ssh/config.ri.bak \$HOME/.ssh/config
- chmod 644 \$HOME/.ssh/identity.pub
- chmod 600 \$HOME/.ssh/identity
- chmod 644 \$HOME/.ssh/known\_hosts
- chmod 644 \$HOME/.ssh/config

For more information, refer to the Management Agent Deployment Best Practices document available at:

http://www.oracle.com/technology/products/oem/pdf/10gr2\_ agent\_deploy\_bp.pdf

(Bug 5484944)

## **1.3 Oracle Management Service and Management Agent Issues**

This section addresses OMS and Management Agent-related issues.

### 1.3.1 Issues While Configuring Server Load Balancer

While configuring Server Load Balancer between Grid Control console and Management Service as described in the Section 3.6.2 of *Oracle® Enterprise Manager Advanced Configuration 10g Release 2 (10.2)*, the Management Service redirects the client browser to a Management Service host bypassing the Server Load balancer.

For example, in a Grid Control deployment with three Oracle Management Services (say on omshost1.example.com, omshost2.example.com, omshost3.example.com) and a Server Load Balancer (slbhost.example.com), the client browser request for http(s)://slbhost.example.com[:port]/em gets redirected to http(s)://omshost[1,2,3][:port]/em.

To prevent the browser from bypassing the load balancer when a URL is redirected, edit the \*|ServerName|\* directive defined in the Oracle HTTP Server configuration file at \$ORACLE\_HOME/sysman/config/httpd\_em.conf to match the name of the server load balancer host. So, for the example above, the directive should look as follows :

ServerName slbhost.example.com

This workaround has to be done in addition to the configuration defined in Section 3.6.2.3 "Configuring Oracle HTTP Server When Using a Server Load Balancer for the Grid Control Console" of the *Oracle*® *Enterprise Manager Advanced Configuration 10g Release 2 (10.2)*.

Also, note that in a multi-OMS setup, this workaround has to be done for all the Management Services.

(Bug 5692755)

## 1.3.2 Memory Leak Issue in Management Agent

There is a memory leak in the Management Agent that is amplified while monitoring iAS targets, or more generally, when a lot of HTTP requests are sent to the Management Agent. The leak is in the xdk code that is used by the Management Agent and is tracked by bug 5573534.

To resolve this issue, apply the one-off patch for bug 5573534.

(Bug 5575154, 5573534)

## 1.3.3 RDBMS Issues Related to Daylight Saving Time

According to the "The Energy Policy Act of 2005" beginning 2007, the Daylight Saving Time has been extended by one month and the schedule for the states of the United States that adopt daylight saving time will use the following rules:

- Start: Second Sunday in March
- End: First Sunday in November
- Time: 2 am local time

The new rules have been incorporated in jdk "1.5.0\_06". The details can be found at this site:

http://bugs.sun.com/bugdatabase/view\_bug.do?bug\_id=6317178

Oracle recommends that you apply the patch to reflect this change. Otherwise, it can cause unexpected behavior in the Grid Control, especially with the job system. This includes jobs being scheduled an hour later than expected.

For more information, see Metalink Note:359145.1 titled "Impact of 2007 USA daylight savings changes on the Oracle database" on the Oracle*Metalink* site.

(Bug 5351247)

### 1.3.4 Unsecuring of Management Agent Not Supported if OMS Is Secured

You cannot unsecure a Management Agent if the OMS is secured and locked.

(Bug 5531324)

### 1.3.5 Helpsets Missing in Japanese Version

The translated online help is not available for the following:

- Target Metrics: Oracle Content DB Metrics, Voicemail and Fax Recording Service, JBoss Application Server Metrics, Oracle BPEL Process Manager Metrics, IBM WebSphere MQ Queue Manager Metrics, Identity Manager Server Target Metrics, Identity Manager Repository Target Metrics, Access Manager - Identity Server Metrics, Access Manager - Access Server Metrics, Siebel Server Target Metrics, Siebel Component Metrics, Siebel Gateway Target Metrics, and Siebel Component Group Target Metrics.
- Application Server Management: Managing Oracle BPEL Process Manager, Managing IBM WebSphere MQ Queue Manager, Managing Identity Federation Server, Managing JBoss Application Server, Managing Identity Manager, Managing Access Manager - Access and Identity Servers, Managing JBoss Partition, and Managing IBM WebSphere MQ Cluster.
- Target Policies: Secure Configuration for Oracle Database, Secure Configuration for Oracle Real Application Cluster Database, and Secure Configuration for Oracle Listener.
- Management Operations: Managing Data Exchange, Managing Management Connectors, Managing Policy Groups, and Managing Siebel Targets.

(Bug 5715773)

## 1.4 Connector Framework Issues

This section addresses the connector framework issues.

#### 1.4.1 Run PL/SQL Procedure Periodically

Oracle recommends that you run the following PL/SQL procedure as the repository owner (SYSMAN) periodically. For normal load, run the procedure weekly. If there are large numbers of tickets created everyday, then run it daily.

To run the procedure, login to the repository database as SYSMAN through SQLPLUS and run the following command:

execute mgmt\_cntr\_tt.clean\_up\_old\_ticket\_recs;/

(Bug 5700394)

## 1.5 Enterprise Integration Issues

This section addresses enterprise integration issues.

#### 1.5.1 Cannot Delete the Underlying Jobs of the Sessions Associated with a Hub

After deleting a data exchange hub, the underlying sessions associated with the hub are deleted, but the underlying jobs associated with the outbound data exchange sessions are not deleted. This problem exists only for outbound data exchange sessions and not for inbound ones. On the contrary, these jobs are still scheduled and run.

To resolve this issue, delete the sessions if any before deleting the hub. Alternatively, navigate to the Jobs page and delete all the jobs corresponding to the outbound sessions.

(Bug 5664615)

## 1.6 Database Management Issues

This section addresses Database management issues.

### 1.6.1 Invalid UTF8 Encoding Error Occurs

While executing "db2gc", you may see the error the following error in the terminal session window.

Invalid UTF8 encoding. : Start of root element expected

This error occurs only when the charset encoding setting of the terminal session window is not UTF8-based, and if you choose to rename the current target display name to another one that includes multibyte and native language-based characters.

To resolve this issue, do these:

- 1. Do not rename the target display name if no urgent request.
- **2.** Make sure the charset encoding setting of the terminal session window is UTF8-based. If it is not, set it to UTF8 and try again.

(Bug 5724384)

## 1.6.2 Issues While Migrating Collections with Node Names That Do Not Have Domain Name

The db2gc utility does not migrate metric customizations to GridControl for RAC database targets. After the target migration, review the **All Metrics** page to customize Metric Thresholds and (or) Collection Frequency as needed.

(Bug 5709028)

### 1.6.3 "Add Instance" of RAC Though Grid Control Has Error

You may face errors while performing the "Add Instance" operation of a RAC Database. To workaround this problem, add "+ASM2.instance\_number=2" to the init.ora file of source node, stop the ASM instance with "srvctl stop asm -n destination\_node\_name" and start it again with "srvctl start asm -n destination\_node\_name", and then instance2 can be started normally with "srvctl stop instance -d RAC\_DB\_NAME -i Destination\_INSTANCE\_NAME".

(Bug 5260570)

### 1.6.4 Issues with Starting and Stopping 9i Series RAC Database

If you have any 9i series RAC Database on Microsoft Windows, then you cannot start or stop these targets from the Cluster Database Home Page of the Grid Control console.

However, starting and stopping is possible at instance level. So if you have multiple database instances within a cluster, then you can navigate to the home page of any of those database instances, and then start or stop them.

(Bug 5730084)

## 1.7 Application Server Management Issues

This section addresses application server management issues.

### 1.7.1 Metric Collection Errors for 10.1.3 Oracle HTTP Server

In order to see accurate values on the "mod\_oc4j Metrics Page" for a version 10.1.3.0 Oracle HTTP Server, you must patch your Oracle Application Server 10.1.3.0 installation with patch 5161311 and patch 5088239 available on Oracle*Metalink* site. For additional information, refer to the patches' ReadMes.

(Bug 5042008)

## 1.7.2 Issues While Discovering Oracle Application Server Release 9.0.4

Grid Control fails to discover some installations of Oracle Application Server release 9.0.4. This is due to an internal error that occurs during the discovery, and this is likely to happen when Oracle Process Connect component is present in the application server instance. However, no error message is displayed.

(Bug 5735044)

## 1.7.3 BPEL Processes Monitoring Issues When Using 10.2.0.2 Agent with OMS 10.2.0.3

If you have upgraded your OMS to 10.2.0.3, but have left the Management Agent as 10.2.0.2 or any other previous release, then for the Oracle BPEL Process Manager target, that is BPEL Process Manager release 10.1.3.1, will always show "Down" status. Also, on the **Processes** page, the processes will not get listed.

To resolve this issue and view the processes on the Processes page, upgrade the Management Agent to 10.2.0.3.

To view the correct status, do one of these:

**1.** Upgrade the Management Agent to 10.2.0.3.

- 2. Apply the one-off patch 5708626 on the Management Agent.
- **3.** As a temporary solution, follow these steps:
  - **a.** Open the following file:

\${OH}/sysman/admin/metadata/oracle\_integrationbpm.xml
(agent OH)

**b.** Go to the Response metric and look for the following line in the execution descriptor:

<Filter COLUMN\_NAME="opmn\_process\_type" OPERATOR="CONTAINS">OC4J BPEL</Filter>

**c.** In that line, replace "OC4J\_BPEL" with the name of the OC4J instance on which BPEL is running. For example, if the OC4J instance name is "home", then after making the changes, the line would look like this:

```
<Filter COLUMN_NAME="opmn_process_type"
OPERATOR="CONTAINS">home</Filter>
```

**d.** Save the file, go to \${OH}/bin (agent OH), and execute the following command:

emctl reload agent

(Bug 5708626, 5704583)

## 1.7.4 OC4J "Enable Logging" Takes You to the OC4J Topology Page Instead of the Trace Configuration Page

As a Grid Control admin user, when you try to configure 10.1.3.1 OC4J to enable the end-to-end tracing feature by clicking **Enable Logging** on the Manage OC4J Data Collection page, you are redirected to the Application Server Control.

The desired behavior is that after you login to Application Server Control, you should be redirected to the OC4J Trace Property Configuration Page. Instead, you are re-directed to the Application Server Control Topology Page, where you have to manually drill down to get to the appropriate page. This problem is applicable to Application Server 10.1.3.1 Release.

To workaround this issue, after you login to Application Server Control, on the Topology page, select the appropriate OC4J instance, click the **Administration** tab, click **Edit Server Properties**, and then scroll down to the bottom of the page and click **Trace Properties**.

(Bug 5439369)

#### 1.7.5 Deployment Procedure Fails to Restart the Web Tier

When you try the deployment procedure using Grid Control to restart the web tier, the procedure may end successfully with the message that the web tier has been restarted, but it may not actually restart the web tier.

To resolve this issue, you have to modify the directive manuallymanagedclusterconfig.pl before executing of the deployment procedure.

To modify the directive manuallymanagedclusterconfig.pl, follow these steps:

- **1.** In the Grid Control console, click **Deployments** to navigate to the Deployments page.
- 2. On the Deployments page, click **Provisioning** and select the **Directives** tab.
- **3.** From the table, select **Directives**, then select **Oracle Directives**, then select **myJ2EECompany Provisioning**. Now select **10.1.2.0.2** and then select **Configure Manually Managed Cluster**.
- 4. Now click **Edit** to reach the Edit Directive page.
- 5. On the Edit Directive page, click the **Upload File** tab.
- 6. Click the currently associated file manuallymanagedclusterconfig.pl to display the contents.
- **7.** Now copy the contents of that file to an editor (for example: Notepad or Wordpad.)
- **8.** Make the following changes:
  - In the function parseCommandLineParams(), change line number 135, that is \$hmpParams{"INSTALL\_BASE"} = "true"; to \$hmpParams{"INSTALL\_BASE"} = \$ARGV[\$i + 1];
  - Similarly, change line number 140, that is \$hmpParams{"VIRTUAL\_HOST"} = "true"; to \$hmpParams{"VIRTUAL\_HOST"} = \$ARGV[\$i + 1];
- 9. Save the modified file to your local machine as manuallymangedclusterconfig.pl.
- **10.** In the Grid Control console, on the Edit Directive page where you see the currently associated file under the Upload File tab, select **Upload from Local Machine**.
- **11.** Select **Browse** and upload the file manuallymangedclusterconfig.pl that was saved in step 9.
- 12. Select Finish.

(Bug 5684224)

## 1.8 Identity Management Issues

This section addresses identity management issues.

## **1.8.1 Infrastructure Performance Charts of an Identity Federation Server Have No Value**

When you access the **Infrastructure Performance** tab of an Identity Federation System, and select **Real Time: Manual Refresh** from the **View Data** menu to view metric information at real time, the charts appear but the data is not depicted.

(Bug 5700277)

# **1.8.2 Internal Error Is Thrown While Associating Oracle Identity Manager Targets with Existing Identity Management System**

Internal exception is found while associating discovered Oracle Identity Manager targets with existing Identity Manager system. Therefore, the discovery of Oracle Identity Manager components fails to complete.

To resolve this issue, discover the Oracle Identity Manager components by associating them with new Identity Manager system. You can then add these components to an existing system from the Systems tab of the Grid Control console.

(Bug 5751839)

## 1.9 Siebel Applications Management Issues

This section addresses Siebel application management issues.

## 1.9.1 Beacon Enhancement Is Not Supported on Microsoft Internet Explorer 7

The Beacon Enhancement functionality is not being supported on Microsoft Internet Explorer 7 browser, as Siebel does not support this browser currently for High Interactive applications.

For more information on the support provided, refer to this site:

http://supportweb.siebel.com/support/private/content/knowled
gedocs/enu/SOD/IE7-SOD.pdf

Refer to the "Planned Support for Microsoft Internet Explorer 7 on Windows XP SP2" section. According to this document, the support for High Interactivity applications on Microsoft Internet Exxplorer 7 will be provided in early CYQ207.

(Bug 5724954)

### 1.9.2 Siebel Service Status Is Always "Down" Even Though the Service Test Runs

The Management Agent performs the remote playback functionality. For this, it spawns a browser and replays the recorded script. The Management Agent runs as a Windows service using the system account credentials. If the system account does not have appropriate privileges or permissions, then this functionality is not permitted.

This particular issue is faced with beacons on Microsoft Windows 2003 Server. So, on these hosts, the status of the application is always shown "Down", and the metrics collected do not have any values. This issue is not faced on Microsoft Windows 2000 and Microsoft Windows XP hosts.

(Bug 5676927)

# 1.9.3 Siebel Enterprise Discovery Fails, or Only a Subset of Components Are Discovered

In Grid Control 10.2.0.3.0 release, support is not provided for monitoring a Siebel server when the total number of enabled Siebel components and component groups in that server is more than 70.

(Bug 5724329)

### 1.9.4 Issues With Starting and Stopping Siebel Server Components

When there are multiple Siebel server installations, if the siebel home directories on which the servers are installed are different on different machines, then you may face issues while starting and stopping the components of a Siebel server.

Make sure that the installation directories of the siebel servers are identical across all machines. Otherwise, as a workaround, perform your start/stop operations from the server manager utility.

For information about using the server manager utility, refer to the following document available at:

http://supportweb.siebel.com/support/private/content/Bookshe lf/78Siebel/books/SystAdm/SystAdm\_SrvrMgrCLI.html#wp1003500

(Bug 5747767)

#### 1.9.5 View Configuration Page Property Navigation Does Not Work

The navigation in View Configuration Page for Siebel targets, that is for Siebel Server, Siebel Gateway Server, and Siebel components, does not work.

To resolve this issue, use the "Show All" option from the navigation menu.

(Bug 5702824)

#### 1.9.6 Newly Added Services Do Not Get Reflected in the Service Dashboard

Manually added services do not get reflected in the services dashboard. To resolve this issue, follow these steps:

- 1. Click Reports.
- **2.** Select the respective service dashboard and click **Edit**.
- **3.** Click **Elements** and then click the **Set Parameters** link.
- **4.** Add the newly added service and then click **Continue**.
- 5. Click OK.

(Bug 5718696)

#### 1.9.7 Cannot Handle Two Siebel Enterprises with Identical Names

Grid Control cannot handle two Siebel Enterprises with identical names.

(Bug 5654804)

### 1.9.8 Need to Package Release Version of Sarmquery with Management Agent

SARM metrics are not getting collected in Siebel 7.7 and 7.8 environments as SARM query executables are not bundled with Siebel 7.7 and 7.8 versions. To resolve this issue, apply the one-off patch for bug 5684381.

(Bug 5684381)

#### 1.9.9 Incorrect Values Shown in Charts

The charts that appear on the Siebel Enterprise Home Page show incorrect values.

(Bug 5747754)

## 1.10 Host Management Issues

This section addresses host management issues.

### 1.10.1 Issues with HP-UX Itanium OMS and Management Agent

Administration Tab is shown for the HP-UX Itanium host targets, even though this feature is supported for RedHat(RHEL4) and Suse Linux (sles9) hosts only. This issue will be addressed in the next Patch Set.

(Bug 5689719)

### 1.10.2 RedHat Linux Specific Issues with Network Cards

On the Network Card page, changing the Name Server IP address under Global DNS Settings does not work. This issue will be fixed in the next Patch Set.

(Bug 5724608)

## 1.11 Third-Party Application Server Monitoring Issues

This section addresses third-party application server monitoring issues.

## 1.11.1 Metric Collection Error While Monitoring BEA WebLogic Managed Server Targets

While monitoring BEA WebLogic Managed Server targets, you may face metric collection errors. You may see an error message like:

This error is caused when a Management Agent is used to monitor one application server target that is compatible with one version of JMX, and another application server target that is compatible with another version of JMX. For example, when you monitor BEA WebLogic release 8.1 and BEA WebLogic release 9 using the same Management Agent, you will see this error.

To resolve this issue, do not use the same Management Agent for monitoring both these targets. Have one Management Agent monitor one target and another one monitor another target.

(Bug 5458460)

## 1.11.2 Management Agent Should Be Restarted After Discovering Third-Party Application Servers

After discovering IBM WebSphere Application Server, IBM WebSphere Application Server Cell, or BEA WebLogic Server Domain, restart the Management Agent. This is required only when you are discovering these third-party application server for the first time.

(Bug 4451228)

## 1.11.3 Discovery of MQ Target Fails on Microsoft Windows Non-English Edition

If IBM MQ Series is installed on Microsoft Windows non-English edition, or on Linux with characterset of OS locale that is neither 'iso88591' nor 'UTF8', then discovering MQ target from Grid Control fails.

To resolve this issue, install IBM MQ Series on Microsoft Windows English edition or on Linux with OS locale using characterset 'iso88591' or 'utf8'. For example, en\_US.iso88591 and zh\_CN.utf8.

(Bug 5722258)

## 1.12 Network Appliance Filer Management Issues

This section addresses network appliance filer management issues.

# 1.12.1 After Testing The Connection, Clear The Encrypted Fields and Re-Enter Them While Reloading The "Add Target" Page

While adding a target on the Agent home page, you may choose to test the connection. While doing so, the test may be successful and you may be able to add the target to Grid Control. However, when you return to that target's home page, you will see metric collection error for the response metric.

To resolve this issue, when test connection is successful, remove and re-enter the encrypted password before adding the target to Grid Control.

(Bug 5642074)

## 2 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, seven days a week. For TTY support, call 800.446.2398.

Oracle Enterprise Manager Grid Control Release Notes, 10g Release 3 (10.2.0.3.0) for HP-UX Itanium E10079-01

Copyright © 2007, 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 (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.