

Oracle® Application Testing Suite

Release Notes

Version 9.31

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This document includes updated information for Oracle Application Testing Suite version 9.31. The information in this document is more up-to-date than that in the manuals. Many of the issues outlined in this document will be corrected in upcoming releases. If you have any questions or problems, please contact our support group at <http://www.oracle.com/support/index.html>.

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2 New Features and Updates in this Release

This version includes maintenance improvements to the existing features as well as new features outlined below.

2.1 Oracle Application Testing Suite 9.31 - New Features and Updates

- **OpenScript Object Test** - The OpenScript Object Test for Web functional scripts now captures all available attributes for lists of values. For multiple select lists: `selectedText`, `allItems`, `selectedIndices`, `selectedItemsCount`. For single select lists: `allItems`.
- **OpenScript Oracle Functional Test API** - The OpenScript Oracle functional test API now supports a timeout value for the `exists` method. The timeout unit can be specified using the `TimeUnit` enum.

- **OpenScript Oracle EBS/Forms API** - The OpenScript Oracle EBS/Forms functional script API supports `OtsHGridContainer` with `forms.otsHGrid` API for `getRowCount()`, `getColumnCount()`, `getCell()`, and `doubleClick()`.
- **OpenScript Oracle Fusion/ADF Recording** - The OpenScript recorder for Oracle Fusion/ADF functional scripts now uses the `absoluteLocator` attribute when recording ADF components instead of `id` as default attribute to record.
- **OpenScript Oracle Fusion/ADF Recording** - The OpenScript recorder for Oracle Fusion/ADF functional scripts records the HTML elements inside ADF container components and not the ADF container component itself. Applies to components `ADFPanelsplitter`, `ADFPAGE`, `ADFMESAGE`, `ADFMESAGES`, `ADFNOTEWINDOW`, `ADFPANELACCORDION`, `ADFPANELBOX`, `ADFPANELLIST`, and `ADFPANELTABBED`.
- **OpenScript RUEI Session Import** - OpenScript supports import RUEI session logs that include FORMS/Socket mode traffic.
- **Oracle Test Manager Import Test Steps** - The Import feature now imports new test steps into an existing test case.
- **Oracle Load Testing Custom Graphs** - The combo box in the Overview sub tab of the View Run graph has a new Custom Graph option. The Custom Graph option is visible only when the user has created at least one custom graph by clicking on New Graph. When selected, the Custom Graph option provides an auto-refreshed view of all the custom graphs created by user. The behavior of Custom Graph is similar to that of Default Graphs.
- Maintenance improvements and bug fixes.

2.2 Oracle Application Testing Suite 9.30 - New Features and Updates

- **OpenScript Data Tables** - OpenScript Data Table view is a spreadsheet-like data table for Functional testing scripts. Data Table content can be changed by manually inputting data into cells or by importing an Excel file before playback. The Data Table API provides methods for accessing the data in the table programmatically within functional test scripts during playback of a script.
- **OpenScript Object Library Enhancements** - Enhancements to the OpenScript Object Library features including sort, search, highlighting in browser, match recorded paths with Regular Expressions or Wildcards and auto-complete hints.
- **OpenScript Object Details View** - The OpenScript Object Details view provides users with a structured view of the all objects of the selected modules, such as a DOM tree of html pages, ADF UI Components tree of an ADF page, and Forms element tree of a forms application. It accelerates the approach of viewing the object path, adding tests, and saving objects to an object library.
- **OpenScript XML Tests** - The XML test for OpenScript Functional Test scripts visually validates the nodes and attributes of XML documents in a web functional test script. The XML test captures the XML content in an IE browser during recording, displays captured XML tree structure and attributes of each node, specifies which nodes should be verified, and displays XML test result in result view and HTML report.
- **OpenScript Remove Unchanging Variables** - OpenScript provides the ability to select and remove script variables that it is known will never change. Removing unchanging variables can improve script playback performance because unchanging variables will not need to be evaluated during script playback. The

script will use the value captured during recording as a fixed value rather than a variable.

- **Oracle Test Manager Test Plans** - A new Test Plan tab in Oracle Test Manager lets you define test plans. Test plans reflect the test plan for the project. Requirements can be associated with test plans so you know which requirements are specified for the test plan. The Oracle Application Testing Suite Administrator includes a new "Planner" user role that assigns the permissions for users designated as planners.
- **Oracle Test Manager Report ScreenShots Links** - Screenshots captured by OpenScript script playback can be accessed from Oracle Test Manager test run reports. The images are uploaded to the Oracle Test Manager server so testers can analyze failures.
- **Oracle Test Manager Tree Performance Enhancements** - Oracle Test Manager Projects defined using the Oracle Application Testing Suite Administrator can disable cached server trees and history tracking to improve the performance of the Oracle Test Manager tree view for projects that contain large datasets.
- **Oracle Test Manager Reset User Profile** - Saved user states can be reset in Oracle Test Manager to recover from an erroneous state in which a process did not end for some reason.
- **Oracle Load Testing AWR and ADDM Reports** - For applications under test using Oracle Database and using Enterprise Manager Grid Control to monitor the Oracle database performance, Oracle Load Testing provides integration points with Enterprise Manager that can drill down to Automatic Database Diagnostic Monitor (ADDM) Reports and Automatic Workload Repository (AWR) Reports.
- **Oracle Load Testing Export/Import Session Data** - Session run data can be exported to a file and then imported to another Oracle Load Testing instance using the file download and file upload options. The export/import feature makes all session run data portable and easily exported from one machine and imported to any other machine running Oracle Load Testing. This enables reporting portability and post run reporting on a Oracle Load Testing controller not involved with the load test session.
- **Oracle Load Testing Agent Scalability Improvements** - Various performance improvements made to the Oracle Load Testing load agent.
- **Change Tracking Schema Updates** - Oracle Application Testing Suite server products (OLT/OTM) include schema updates to make it easier for schema updates to be applied conditionally and keep track of the changes applied.

3 Announcements

The Oracle Test Manager Windows Client and Oracle Application Testing Suite Data Migration tool is Being Planned for Deprecation in Future Release of Oracle Application Testing Suite.

3.1 What is being announced?

Upcoming feature deprecation in Oracle Application Testing Suite - Oracle Test Manager Windows Client and the Oracle Application Testing Suite Data Migration Tool.

The Oracle Test Manager Windows client feature as well as the Oracle Application Testing Suite Data Migration Tool are planned for deprecation in the next release of Oracle Application Testing Suite.

3.2 What is Oracle Test Manager Windows Client?

Starting from Oracle Application Testing Suite 8.x, the Oracle Test Manager Windows client functionality exists as a standalone executable that is installed along with Oracle Application Testing Suite/Oracle Test Manager. It provides one way (in addition to the Web client) for testers or test managers to manage the test process. Future releases of Oracle Application Testing Suite/Oracle Test Manager will offer test process management through the web client.

3.3 What is the impact of the deprecation?

The deprecation will only have impact on your testing or test management if you are currently using the windows client and if you are unable to use the Web client of Oracle Test Manager. Since deprecated features are scheduled to be removed in a future release, Oracle Test Manager Windows client should not be used in any new Oracle Test Manager deployments. Customers are suggested to use the web client for all future deployments.

3.4 What is Oracle Application Testing Suite Data Migration Tool?

The Oracle Application Testing Suite Data Migration Tool functionality exists as a standalone tool that is installed along with Oracle Application Testing Suite. It provides a graphical user interface to migrate data from previous versions of the testing tool that did not use Oracle databases.

3.5 What is the impact of the deprecation?

The deprecation will only have impact if you currently are using an older version of the testing tools together with a non-Oracle database. If this is the case, you will have to upgrade to version 9.3, or earlier in order to use the Data migration tool in order to migrate the data to an Oracle dataset and after this use instructions to be found in the documentation on how to migrate data to other Oracle databases. Since deprecated features are scheduled to be removed in a future release, customers that still are using non-oracle databases should upgrade using version 9.3 or earlier.

3.6 What do you need to do?

What will you do if the deprecated feature is removed in a future release?

If Oracle Test Manager Windows Client is being used in your environment or need to migrate data from a non-oracle database, Oracle will provide alternatives and workarounds for you to make sure the continuity of your test process management, while Oracle Test Manager Windows Client and the Oracle Application Testing Suite Data Migration Tool are phased out in a future release.

3.7 Who to contact for more information?

If you have any questions or concerns regarding this upcoming change, please update the My Oracle Support Communities thread to get resolutions, information or access to the Oracle Application Testing Suite Product Management.

The related My Oracle Support Communities thread can be accessed here:
https://communities.oracle.com/portal/server.pt/community/view_discussion_topic/216?threadid=280470&doPagination=false&Portlet=View%20Discussion&PrevPage=Communities-EditDiscussion.

4 System Requirements

Oracle Application Testing Suite has the following system requirements:

4.1 Oracle Functional Testing/OpenScript

Oracle Functional Testing's OpenScript scripting platform has the following system requirements:

- Operating System (32-bit and 64-bit versions): Windows XP, Windows Vista, Windows 2003, Windows 7, Windows 2008
- Memory: Minimum 1 GB
- System: x86, 32-bit or 64-bit processor, 2.6 GHz or faster
- Disk Space: 4 GB minimum
- Browser: Internet Explorer 6.x, 7.x, 8.x. and Firefox 3.5/3.6

4.2 Oracle Load Testing

Oracle Load Testing has the following system requirements:

- Operating System (32-bit and 64-bit versions): Windows XP, Windows Vista, Windows 2003, Windows 7, Windows 2008
- Memory: Minimum 2 GB.
- System: x86, 32-bit or 64-bit processor, 2.6 GHz or faster
- Disk Space: 10 GB minimum free (at least 3 GB free on the system drive)
- Browser: Internet Explorer 7.x, 8.x, Firefox 3.5/3.6
- Database: Oracle Database 10g, 11g or XE 10g
- Application Server: Oracle WebLogic 11g (10.3.3.0)
- Oracle Load Testing Agent also supported on Linux 32-bit & 64-bit, in addition to Windows 32-bit and 64-bit operating systems listed above

Note: These are minimum requirements only and actual requirements for the Oracle Load Testing Server will vary depending on the size and configuration of your load test. If you are running larger load tests, of greater than 1000 Virtual Users, you should consider deploying Oracle Load Testing on a faster server class machine with additional RAM recommended.

Note: Oracle recommends running the Oracle Load Testing Server and Agents on separate systems for production load testing. The amount of memory required on the Oracle Load Testing Agent systems may increase based on the number of Virtual Users that will be assigned to run on each Agent. For more information, visit the QA/Testing Technology Center on Oracle Technology Network or contact your Oracle representative.

4.3 Oracle Test Manager

Oracle Test Manager has the following system requirements:

- Operating System (32-bit and 64-bit versions): Windows XP, Windows Vista, Windows 2003, Windows 7, Windows 2008
- Memory: Minimum 2 GB.
- System: x86, 32-bit or 64-bit processor, 2.6 GHz or faster
- Disk Space: 10 GB minimum free (at least 3 GB free on the system drive)
- Browser: Internet Explorer 7.x, 8.x, Firefox 3.5/3.6
- Database: Oracle Database 10g, 11g or XE 10g
- Application Server: Oracle WebLogic 11g (10.3.3.0)

Note: These are minimum requirements only and actual requirements for Oracle Test Manager will vary depending on the quantity of test assets stored and number of concurrent users accessing the application. If you have a large quantity of test cases, requirements or issues stored and/or are deploying Oracle Test Manager for a team greater than 10 users, you should consider deploying Oracle Test Manager on a faster server class machine with additional RAM recommended.

4.4 Additional Notes

The following are additional notes about system requirements:

- The ATS installer can automatically install and configure an Oracle 10g Express Edition (XE) database for use with Oracle Load Testing and Oracle Test Manager. Although this is useful for demos, for production usage switching to Oracle's 11g Enterprise Edition database is highly recommended. Oracle 11g Standard Edition and Oracle 10g EE or SE are also supported.
- System memory requirements do not take into account other processes that may be running and using memory on your system, reducing free uncommitted memory available.
- When installed on the same machine, Oracle Load Testing and Oracle Test Manager will run on the same server and use shared system resources. Oracle Functional Test/OpenScript is a separate application that have its own memory and CPU requirements.
- The ATS products will run in 32-bit compatibility mode when installed on 64-bit operating systems. It is possible for Oracle Application Testing Suite to be installed on an existing WebLogic server. However, if the pre-installed WebLogic server is

JRockit plus WebLogic (64-bit) environment, some functions in Oracle Application Testing Suite will not work properly. Oracle Application Testing Suite can be installed on a 32-bit WebLogic, but not a 64-bit.

- The legacy Oracle Functional Testing, VB-based scripting platform and associated components (such as Job Scheduler) are no longer included with the ATS installer starting with version 9.2. Customers that still require this product should use ATS 9.1 or older versions supported under Oracle's Lifetime Support Policy.

5 Installing the Oracle Application Testing Suite

This section explains the installation procedures for the Oracle Application Testing Suite.

Caution: The machines where the OpenScript product is installed should be strictly used for testing. The security features of the browsers have been disabled on this machine to enable recording and playback operations. The browsers cannot be used for secure browsing.

5.1 Installing the Applications

You can install Oracle Application Testing Suite from the product download zip file.

From the Oracle Web site:

<http://www.oracle.com/technetwork/oem/app-test/index.html>

1. Select and download the Oracle Application Testing Suite from the web site and save it to a temporary directory on your hard disk.
 - *oats-plus-prereqs-version.zip*: Full installation plus all prerequisites (Oracle Application Testing Suite, Product documentation PDF files, WebLogic Server 11gR1 (10.3.3) developer edition, Oracle Database Express Edition 10.3.2.4, Oracle Instant Client 11.1.0.7.0, .NET Framework 2.0, Eclipse 3.4.1, Sun JRE 1.6.0_07, Oracle JRockit 4.0.0.1.6.0.R28)
 - *oats-version.zip*: Oracle Application Testing Suite and product documentation PDF files without prerequisites.
 - *oats-upgrade-version.zip*: Oracle Application Testing Suite and Weblogic server. This file can be used to upgrade from Oracle Application Testing Suite version 9.1x/9.20.
 - *oats-docs-version.zip*: Oracle Application Testing Suite documentation PDF files.
 - *oats-linux-agent-x86-version.zip*: Linux Agent only installation for 32-Bit machines.
 - *oats-linux-agent-x86_64-version.zip*: Linux Agent only installation for 64-Bit machines.
2. Unzip the downloaded file and run the `setup.bat` file for Oracle Application Testing Suite.

Note: Important: Windows Vista, 2008 or Windows 7 users, select **Run as Administrator** from the right-click shortcut menu. This is required process for the Operating Systems that have User Account Control (UAC) enabled.

3. Follow the setup instructions to install the Oracle Application Testing Suite.

During the installation you will be asked to provide a master password. *Remember this password.* The master password specified during installation is used to set all of the following user passwords:

- Oracle Test Manager users "default" and "administrator".
- Oracle Load Testing users "default" and "administrator".
- User "JMSAdmin" used for Oracle Load Testing agent to controller authentication.
- User "oats" for Weblogic Server - this is a Weblogic superuser.
- User "oats-agent" in Weblogic Server for JMS communication between agent and controller - this is *not* a Weblogic superuser.
- Database users "oats", "olt", "otm".
- Database users (XE's defaults) "system" or "sys".

5.1.1 Manually Configuring the Installation

The above installation procedure for Oracle Application Testing Suite setup.bat in oats-plus-prereqs-version.zip installs the applications, database, and Web server. If during the installation procedure you select the **Do nothing, I will configure Oracle Application Testing Suite later (advanced)** option you will need to manually create the database schema.

If there is no database installed and you will not be using a remote database, you will need to install Oracle XE or EE on the local machine. Install an Oracle Database or acquire the hostname, port, instance, and credentials for an existing one.

If WebLogic Server is not installed on the local machine, you must download Weblogic 11gR1P2 (10.3.3) from download.oracle.com and install it. Install Weblogic 11gR1P2 (10.3.3) on your local machine or acquire the location on your local machine of a Weblogic instance of the same version.

To manually create the database schema:

1. Open a command window and run the DBConfig utility using this command:

```
<installdir>\jdk\jre\bin\javaw.exe -Djava.library.path=<installdir>\install\lib  
-jar DBConfiguration.jar
```

2. Select **Configuration schema** then click **New** on the toolbar.

3. Select **Create new schema & Tables** then enter your database parameters and click **Save**. Make a note of the OATS schema username (i.e. the user table into which the schema will be created).

4. Select **Oracle Load Testing** then click **New** on the toolbar.

5. Select **Create new schema & Tables** then enter your database parameters and click **Save**. Make a note of the OLT schema username (i.e. the user table into which the schema will be created).
6. Edit `<installdir>\bin\config_ds_offline.py`. Change the line:


```
cmo.setValue('oats')
```

 so that the value set is the same as the user noted in step 3.
7. Open a command window and set the environment variables as follows:

OATS_HOME: your install folder

OATS_PASS: the 'master password' you entered during installation

OATS_DBPASS: the password for the OATS schema user noted in step2

OATS_DBURL: the database URL in the following format:

```
jdbc:oracle:thin:@//<hostname>:<port>/<servicename>
```
8. Run `<installdir>\bin\install.bat`. This will delete your previous OATS domain, if any, and recreate it.
9. Delete the environment variables created, OATS_PASS, OATS_DBPASS, etc. in Step 7.

To manually configure Weblogic:

1. Open a command window and set the environment variables as follows:

MW_HOME: The location of your Weblogic root folder (typically C:\Oracle\Middleware if it was installed with default options).

WLS_PW: Your master password. This will be used to set your admin password for Weblogic, as well as to create your Default and Administrator accounts in Oracle Load Testing and Oracle Test Manager.

DB_HOST: The location of your database.

DB_PORT: The port of your database (typically 1521).

DB_NAME: The name of the database that Oracle Application Testing Suite will use. For XE installations, the name is typically XE. For EE installation this will depend on your installation settings.

DB_USER: The admin user of your database (typically "system"),

DB_PASS: The password of the database user.
2. Change to directory `%OATS_HOME%\bin` and Issue the following commands (in order):


```
initConfig
dbsetup
config_ds
unpack
storeUser
installSvc
restartSvc "Oracle Application Testing Suite Application Service"
deploy %OATS_HOME%\install\oats.ear
config_sec
```

3. Validate your installation by going to <http://localhost:8088/olt> and verify that you can successfully login (i.e. with credentials Default/master password) and use the product.

5.2 Installing the Oracle Load Testing Remote Agent

Oracle Load Testing allows you to distribute your Virtual Users to run from remote Agent machines. The Oracle Load Testing Server will connect to Oracle Load Testing Agent systems to start and run your Virtual Users on those machines. The Oracle Application Testing Suite Remote Agent is a component of the Oracle Application Testing Suite installation that enables Virtual Users to be distributed to these Agent systems. Users can either install the full Oracle Application Testing Suite installation or just the Remote Agent install component on their Agent machines to enable this functionality.

5.2.1 Installing the Remote Agent

To install the Remote agent:

1. Download the appropriate .zip file from the download Web site:
 - For Windows agents, use `oats-plus-prereqs-version.zip` and run `setup.bat`.
 - For Linux agents, use `oats-linux-agent-x86-version.zip` for 32-bit or `oats-linux-agent-x86_64-version.zip` for 64-bit and run `install.sh`. The zip file includes a How to Install.txt file with additional instructions.
2. Unzip the downloaded file and run the installation file.
3. Follow the setup instructions to install just the Remote Agent software.
4. Verify network access from the Controller workstation to the Agent workstations and configure the Agent Workstations as explained in the following section.

5.2.2 Configure Remote Agent Service Login

To specify the user login for the Oracle Load Testing Agent Service, open the Services control panel on the Agent machine and change the login credentials for the "Oracle Load Testing Agent Service". By default, the Oracle Load Testing Agent Service will run under the Local System account.

5.2.3 Verify Network Access to Agent Systems

Once you have the Oracle Load Testing Server and Agent software installed on the individual systems, you should verify network access between the Oracle Load Testing Server system and each Remote Agent system. This section provides basic tips and techniques to make sure the Oracle Load Testing Server system can successfully communicate with each Remote Agent system.

- Make sure that you have the Oracle Load Testing Agent software loaded on the Agent system(s) and that it is the same version as the Oracle Application Testing Suite software that is loaded on the Oracle Load Testing Server system. The systems you plan to use as Agents must have either the Oracle Load Testing Agent software or the full Oracle Application Testing Suite installed to work as agents.
- Make sure you can successfully Ping all of the Agent systems from the Oracle Load Testing Server system. The machine names you use to Ping the systems are the same names that you will specify for the Agent systems in the Oracle Load Testing server. You can also use the IP addresses of the agent systems. If you cannot successfully Ping the Agent systems, contact your network administrator

to resolve the issue. If you cannot Ping the Agent systems from the Oracle Load Testing Server system, you will not be able to run the Agents from the server.

- Make sure that the same user is logged in on both the Oracle Load Testing server system and all of the Agent systems. All of the Agent systems must have a user logged in to be controlled by the Oracle Load Testing Server system. You may be able to log in as a different user on the Agent systems as long as the user login has the same administrative privileges as the user logged in on the server system.
- From the server system, try mapping a drive on each of the Agent systems using Windows Explorer. Depending on how your network is setup, the server system may not be allowed to start up processes on the Agent systems. The easiest way around this is to map a drive to the Agent system in order to authenticate with Windows.
- In the Oracle Load Testing server add a Visual Script to the Scenario Profiles list. Enter the machine name or IP address of the Agent system where you want to run the Visual Script into the Systems Manager and select that machine in the Systems field on the Build Scenario tab of Oracle Load Testing.

5.3 Preparing for a "Clean" Installation

In some cases, you may want to prepare a system for "Clean" installation of the Oracle Application Testing Suite product. This may be required in the following cases:

- There is a previous beta version of the Oracle Application Testing Suite product installed on the system.
- It is necessary to downgrade the product from a newer version.
- An installation failure occurred for some reason and it is necessary to clean the environment to a fresh start.

The following sections provide step-by-step instructions to perform a clean installation of the Oracle Application Testing Suite product on your system.

Make sure to backup all scripts and databases before proceeding. See [Section 5.4, "Installing over beta versions or earlier releases of Oracle Application Testing Suite"](#) for additional information.

5.3.1 Step 1: Deinstall Oracle Application Testing Suite Products

To deinstall Oracle Application Testing Suite product:

1. Run the Oracle Application Testing Suite `Setup.bat` file to launch "Oracle Universal Installer".
2. Click **Deinstall Products**. The Inventory window opens.
3. Expand the Oracle Homes tree and select the "OATS" checkbox.
4. Click **Remove**. The Remove window opens and starts the deinstallation procedure.
5. Wait for the Remove window to automatically dismiss itself. After the successful deinstalltion, the Inventory window may show "There are no installed products" if there no other Oracle products installed.
6. Close the Inventory window.
7. Click **Cancel** to close the Oracle Universal Installer.

5.3.2 Step 2: Uninstall Oracle XE Database

To uninstall Oracle XE Database:

1. Select Control Panel from the **Start** menu.
2. Open **Add/Remove Programs** or **Program and Features** depending upon your Windows version.
3. Find and select **Oracle Database 10g Express Edition**.
4. Click the Remove or the Uninstall/Change button from the tool bar, or double-click the item to launch the InstallShield wizard.
5. Click **Yes** in the dialog box to remove the database.
6. Wait for the unistallation to complete successfully.
7. Click **Finish** to close the InstallShield wizard.

5.3.3 Step 3: Remove or Rename Installation Folders

To remove or rename installation folders:

1. Backup OpenScript scripts and script asset files in repositories or folders under the installation directory (in *installdir\workspace!* directories or *installdir\directoryname* directories).
2. Backup OpenScript scripts and script asset files in repositories under the installation directory (in *installdir\workspace* directories).
3. Remove or rename the Oracle Application Testing Suite installation directory (the default is C:\OracleATS).
4. Remove or rename the directory: C:\Documents and Settings*username*\osworkspace (depending upon your Operating System, it may be similar to: C:\Users*username*\osworkspace).
5. Remove or rename the directory: C:\Program Files\Oracle\Inventory (depending on your Operating System, it may be like: C:\Program Files (x86)\Oracle\Inventory).
6. Remove or rename the file: C:\Windows\rsw.ini

5.3.4 Step 4: Remove the Services (Optional)

To remove Oracle Application Testing Suite services:

1. Select **Run** from the **Start** menu.
2. Type cmd and click **OK**.
3. Type the command: `sc delete servicename`, where *servicename* is each of the following:
 - eloadAgentMon
 - Oracle Application Testing Suite Application Service

If the message "The specified services does not exist as an installed services" is returned from the program, the service was successfully removed by the previous steps.

5.3.5 Step 4: Remove the Registry Keys (Optional)

To remove Oracle Application Testing Suite Registry keys:

1. Select **Run** from the **Start** menu.
2. Type `regedit` and click **OK**.
3. Delete the following Registry keys using the Registry Editor:
 - `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Oracle Application Testing Suite Application Services`
 - `HKEY_LOCAL_MACHINE\Software\Oracle\Oracle Application Testing Suite`
 - `HKEY_LOCAL_MACHINE\Software\Oracle\Oracle Test Management`

If you do not find the keys in the Registry, they were successfully removed by the previous steps. Note: The keys may be found in the different location depends on your Operating System (search by the key to find the correct location).

5.3.6 Step 6: Restart the System (Optional)

While not required, it is a best practice to restart the system after uninstalling applications.

- Select **Shutdown** from the **Start** menu, then select **Restart**.

5.3.7 Step 7: Install Oracle Application Testing Suite

To install Oracle Application Testing Suite:

1. Make sure the installing user has administrator privilege on the system.
2. Unzip the `oats-plus-prereqs-version.zip` product download file in a temporary directory.
3. Using Windows Explorer, double-click the `setup.bat` to start the Oracle Universal Installer. See [Section 5.1, "Installing the Applications"](#) for additional information.

Note: Important: Windows Vista, 2008 or Windows 7 users, select **Run as Administrator** from the right-click shortcut menu. This is required process for the Operating Systems that have User Account Control (UAC) enabled.

4. Follow the setup instructions to install the Oracle Application Testing Suite.

5.4 Installing over beta versions or earlier releases of Oracle Application Testing Suite

If you have a 9.30 beta or Early Access version of the Oracle Application Testing Suite installed, you should un-install the earlier release of the Oracle Application Testing Suite before installing this version.

If you are installing over a previous version of Oracle Application Testing Suite, you may consider making backup copies of the following before installing this version:

- OpenScript scripts and script asset files in repositories or folders under the installation directory (in `install_dir\workspace!` directories or `install_dir\directoryname` directories).

- Script and script asset files in repositories under the installation directory (in *install_dir\workspace* directories). Scripts created in earlier versions of Oracle Application Testing Suite can be used in 9.30 without modification.
- Oracle Load Testing reports database.
- Oracle Test Manager database.

If you are installing or upgrading over a previous version of OpenScript, you should close any open scripts in the earlier version before upgrading.

5.5 Installing OLT/OTM after OpenScript Only Install

If you initially installed OpenScript only and later want to install Oracle Load Testing/Oracle Test Manager on the same machine, the setup only presents the option to upgrade the existing installation, which would be OpenScript only, and not allow the installation of Oracle Load Testing and Oracle Test Manager.

To be able to install Oracle Load Testing and Oracle Test Manager on the machine after an OpenScript only installation, the existing OpenScript only installation will need to be removed before the setup provides installation for the full Oracle Application Testing Suite.

To remove the OpenScript only installation:

1. Make backups of OpenScript scripts, script assets (for example, Databank files/Repositories), and any OATS database you wish to keep.
2. Uninstall the existing OpenScript installation.
3. Uninstall, if necessary, the existing Oracle XE instance. If you do not uninstall the Oracle XE instance you will need to manually configure it later. See [Section 5.1.1, "Manually Configuring the Installation"](#) for additional information.
4. Rename or delete the "OracleATS" directory (or the directory where the OpenScript only installation was installed).
5. Re-run the Oracle Application Testing Suite installation. The setup should now offer all installation options.

6 Backwards Compatibility and Upgrading Scripts

This section provides information about backwards compatibility of OpenScript scripts and upgrading OpenScript scripts.

6.1 Statement of Backwards Compatibility

Scripts created in older versions of OpenScript will always run in new versions of the product without modification from the command-line, Oracle Load Testing, and Oracle Test Manager.

Older OpenScript scripts may not be opened or played back in the newer version of the OpenScript User Interface without upgrading them first. See [Section 6.2, "Upgrading Scripts to the New Release"](#) below. The introduction of Script Assets (in Script Properties) requires pre-version 9.1 scripts to be migrated to the current version if they are to be edited in the OpenScript User Interface.

Previously published script API functions are supported in the latest release. Some published API may be marked as deprecated, but will still work in the new release in order to maintain backwards compatibility.

6.2 Upgrading Scripts to the New Release

OpenScript requires that scripts be upgraded to the latest release in order to open them in the OpenScript User Interface. You are not required to upgrade a script to the new version unless you want to open the script in the OpenScript User Interface. Older versions of OpenScript scripts can be run without modification from the command-line, Oracle Load Testing, and Oracle Test Manager.

Caution: Version 9.20 and higher scripts cannot be played back in earlier versions of OpenScript, Oracle Load Testing, and Oracle Test Manager. If you want to maintain pre-version 9.20 scripts, you should make a back up copy of your scripts *before* opening and saving them in version 9.20 or higher. OpenScript automatically migrates any pre-version 9.20 scripts when the script is opened and saved in OpenScript version 9.20 or higher.

6.2.1 Opening Older Scripts in OpenScript

OpenScript automatically prompts you to upgrade older version scripts to the current version whenever the script is opened in the OpenScript User Interface. When opening an older script, you can choose not to open the script and the script will not be upgraded.

When prompted to upgrade a script, if the script depends on any child scripts or function libraries, OpenScript provides an option to upgrade the child scripts or function libraries to the new version also.

Once a script is upgraded to a new release, the script cannot be opened or run using older versions of Oracle Application Testing Suite (OpenScript, Oracle Load Testing, or Oracle Test Manager).

6.2.2 Migrating Older Scripts in OpenScript

If you wish to upgrade scripts without opening them individually in OpenScript, you can use the **Migrate Scripts** upgrade option on the **Tools** menu. The Migrate Scripts tool lets you migrate pre-version 9.10 scripts to the current version without having to open scripts individually.

The Migrate Scripts tool provides options for migrating top-level scripts and locating all dependent child scripts. The Migrate Scripts tool lets you select which scripts to migrate to the current version and find any child scripts that also need to be migrated.

Since version 9.10, scripts that will be run in Oracle Load Testing may not specify absolute paths for their repositories or script assets. However, if your pre-9.10 scripts use absolute paths, you may continue to run the same scripts, unmodified, in the current version of Oracle Load Testing, without issue. As soon as you upgrade the pre-9.10 scripts to the current version using either the OpenScript User Interface or the Migrate Script tool, the script will not playback in Oracle Load Testing until the absolute paths are changed to relative paths. The Migrate Scripts tool does not migrate absolute paths to relative paths or to repository paths. The absolute paths must be changed in the scripts manually.

6.2.3 Copying Older Scripts to New Repositories

For scripts created in releases before 9.1, you should maintain the same rigid, legacy Repository/Workspace folder structure as repositoryLocation/workspace!/script. Changing the repository folder structure within which pre-9.1 scripts exist, such as by

adding multiple sub-folders within the repository, or by creating sub-folders without an exclamation mark "!" at the end, may prevent certain pre-9.1 scripts from playing back successfully.

6.3 Running Mixed Versions of Scripts

You are advised not to run mixed versions of "job" scripts where a parent script calls child scripts or function libraries. This may happen in cases where you may have 9.2x "parent" scripts that run pre-9.1 "child" scripts or function libraries. Although this configuration has been tested and is supported, the combination of mixed versions scripts may lead to unpredictable results and some confusion as to which scripts are the latest version. In addition, mixed version job scripts may not be able to take advantage of some newer features, such as:

- The ability to visually inspect and add child script functions into a parent script. If pre-9.1 child scripts are not upgraded to the current version, OpenScript will not display their available functions in the user interface options.
- Scripts upgraded to version 9.1 or later no longer require that parent scripts add all child script databanks as their own databanks. If pre-9.1 child scripts are not upgraded to the current version, then parent scripts still must have child script databanks added as their own databanks.

6.4 Upgrade Details

When an OpenScript script is upgraded from an older version to the current version, the following changes are applied:

- The modules.properties file is updated to reflect the new version numbers of the modules.
- The META-INF/MANIFEST.MF file may be updated to reflect new bundles required by the newer version of the product.
- If the script being upgraded were created in a pre-9.1 release, then a new assets.xml file is created containing similar data as in the script.xml file. The original script.xml file is now unused, but remains in the script folder for troubleshooting purposes.
- The versions.txt file is replaced by the script.properties file.
- The script .JWG file is updated with the new files.
- The script.java file is not modified.

7 Database Migration

A database migration utility is now available for users to enable migration of data from MS Access, SQL Server, and Oracle database into an Oracle database.

Documentation for the database migration utility can be found in
<installDir>/bin/DataMigration/help.

8 Tutorial and Documentation for the Oracle Application Testing Suite

The Oracle Application Testing Suite includes product documentation in Adobe Acrobat .PDF format and online help for each application and utility. The

documentation includes electronic versions of the Getting Started Guide, OpenScript User's Guide, Oracle Load Testing User's Guide, and Oracle Test Manager User's Guide. The PDF files are installed to the `<installDir>/docs` directory.

You need the Adobe® Acrobat® Reader v4 (or newer) to open and view the documents. You can download the reader from the Adobe web site at <http://get.adobe.com/reader/>.

All of the components of the Oracle Application Testing Suite include comprehensive online Help. You can access the online help using the Help menu options inside of each product.

9 Known Problems, Limitations and Workarounds

This section lists known issues and workaround solutions for the components in the Oracle Application Testing Suite.

9.1 Oracle Application Testing Suite

The following are known issues and workaround solutions for Oracle Application Testing Suite.

- **Problem:** If the Oracle Application Testing Suite Application Service does not start and the log file `<installDir>\oats\servers\AdminServer\logs\AdminServer.log` contains the following error:

```
weblogic.store.PersistentStoreException: [Store:280073]The file store "WLS_
DIAGNOSTICS" could not be opened because it contained a file with the invalid
version 1. A file of version 2 was expected.
```

Resolution: Delete the .DAT file in:

`<installDir>\oats\servers\AdminServer\data\store\diagnostics\` and then restart the server.

The behavior may occur when starting Oracle Application Testing Suite Application Service and the service stays in starting mode even after the restarting service command window disappears. This condition may happen when the Weblogic (WLS) service is stopped abruptly - either from a machine reboot or the process is stopped for some reason.

- **Problem:** In some cases, the Oracle Universal Installer (OUI) hangs after installing the Oracle Application Testing Suite. If this situation occurs, you can verify the installation by checking the installation log (typically `C:\Program Files\Oracle\inventory\logs\installActions-xxxx.log`) for a "OATS installed successfully." entry.

Resolution: Use the Windows Task Manager, Processes tab to end all running `cmd.exe` processes and, if necessary, end the OUI application process in Task Manager.

- **Problem:** After you install, you can't login to Oracle Load Testing, Oracle Test Manager, Oracle Administrator, etc.

Resolution: During install, you will be prompted for a default password to use in the various OATS products where passwords may be required. It's important that you remember or write down this password as it will be needed to login to these applications (username will typically be "default" or "administrator"). If you don't remember the password, you will have to re-run the installer and establish a new

default password. The passwords can be changed and new user accounts added through the Administrator after install.

9.2 Oracle Load Testing

The following are known issues and workaround solutions for Oracle Load Testing.

- **Problem:** Load tests on agent machines running Windows XP or Windows 2003 may experience TCP port exhaustion during load testing. When too many TCP ports are opened on the agent machine, virtual users may fail with errors such as:

```
java.net.SocketException: No buffer space available (maximum connections
reached?)
```

and

```
The attempt to connect to the server XXXXX on port NNNN failed. Comparable
WinInet error code: error 12029: ERROR_INTERNET_CANNOT_CONNECT. Caused by:
java.net.BindException occurred. Error Message: Address already in use: connect
```

Resolution: By default, Windows XP and Windows 2003 only allow 5000 TCP ports. This number should be increased according to the steps here:

[http://msdn.microsoft.com/en-us/library/aa560610\(v=bts.20\).aspx](http://msdn.microsoft.com/en-us/library/aa560610(v=bts.20).aspx)

In Windows Vista and Windows Server 2008, the default port range is increased from 5,000 to about 65,000 ports:

<http://support.microsoft.com/kb/929851/>

- **Problem:** If a Data Collector process (olt-dc-java-agent.exe) was running and you restart the Oracle Load Testing server and attempt to do something with ServerStats on the server (start a metric, for instance), it will start a second Data Collector process that will not function properly because of the lock established by the first process.

Resolution: To address this, end the Data Collector process(es) manually, delete the lock file(s) (*\$installDir\DataCollector\bin*.pid*), then repeat the ServerStats task attempted previously.

- **Problem:** If your script fails to playback successfully in Oracle Load Testing due to Windows authentication or other user permissions related issues with your application, this may be due to the login authentication of the Oracle Load Testing Agent Service. The Oracle Load Testing Agent Service which runs all the Virtual Users on a given Agent system will by default be installed to run under the Local System account. This may cause issues for certain applications if they block access to this account.

Resolution: To address this, open the Oracle Load Testing Agent Service in the Services panel and change the login to run under a specific user with appropriate application permissions.

- When using the SNMP data source, new SNMP MIBs that users specify are uploaded to the Oracle Load Testing Server by default and can be accessed only through the Local Oracle Load Testing Data Collector running on that Server. Remote Oracle Load Testing Data Collectors cannot access these MIBs and users need to copy those over manually.
- **Problem:** To use the JMX Data Source, you may need to manually copy the server-specific class files to the *<installDir>\DataCollector\classes* directory on the

Data Collector machine. These class files are required for each J2EE Application supported server. The jar files should be same version as the J2EE Application Server. You should get the class files from your Application Server installation. The list of required jar files is contained in the Oracle Load Testing "agents.properties" file located in `<installdir>\DataCollector\properties`.

Resolution: To do JMX Discovery on WebLogic 10.3.3, doing the following:

1. Copy `<installdir>\lib\wlfullclient.jar` to `<installdir>\DataCollector\classes\weblogic`
2. Log in to Oracle Load Testing.
3. Select **Metrics** from the **ServerStats** menu then select **New**.
4. Select the JMX Data Source then click **Discover Counters**.
5. Select the local system and click **Edit**.
6. Select Oracle WebLogic 9.1 as the server (port 8088), username `oats` and the password (the password specified when installing the Oracle Application Testing Suite product).
7. Click **OK**.
8. Click **OK** and the discovery process begins. After a few moments, you will see a full list of the MBeans on the server.

The ServerStats JMX discovery caches counter information. The side effect is that it also caches error messages. For example, failure to copy the correct jar files to data collector's classes directory prior to attempting the discovery would result in an error. When the discovery is attempted after copying the jar files, the discovery still may not work because of the cache. The recommended workaround is to re-start the Oracle Load Testing Server and retry the discovery.

- **Problem:** When bringing up Oracle Load Testing (or Oracle Test Manager) you get the following error reported by the browser: "Unable to connect" or "Can't establish a connection to the server at localhost:8088."

Resolution: This error indicates that the OATS Application Service is not running. Start (or restart) the OATS Application Service on the server machine where you installed OATS server. You will also want to make sure that the Oracle Database services are also running (this would be OracleServiceXE and OracleXETNSListener if you used the Oracle XE database).

- **Problem:** When bringing up OLT (or OTM) you get the following error reported by the browser: "Error 404--Not Found"

Resolution: This error indicates that the OATS Application Service is unable to connect to the Oracle Database. You will also want to make sure that the Oracle Database services are also running and start/restart them if necessary (this would be OracleServiceXE and OracleXETNSListener if you used the Oracle XE database). Then restart the OATS Application Service.

- The remote ServerStats Data Collector requires either all of ATS installed or the Remote Agent installed on the remote Data Collector machine.

9.3 Oracle Test Manager

The following are known issues and workaround solutions for Oracle Test Manager.

- The icons in the Tree View for Test Plans, Requirements, Tests, and Issues are automatically assigned and cannot currently be configured by the Administrator.
- After configuring a new database in the Oracle Test Manager Database Configuration dialog, users must restart the Oracle Application Testing Suite Application Service in order for that database to appear in the Database dropdown list on the Oracle Test Manager login page.
- **Problem:** Oracle Test Manager fails to playback certain OpenScript scripts completely.

Resolution: The following additional steps are required in order to run the following types of OpenScript scripts from Oracle Test Manager:

- Siebel Functional
- Oracle Forms Functional
- Web Functional scripts that rely on system input events, such as key press or mouse click
- Web Functional scripts that display modal dialog windows

It is necessary to run these scripts using an interactive desktop of a named Windows user account that is always logged in. See also [Section 9.6, "Command-Line Script Execution"](#) for additional information.

1. For Siebel and Oracle Forms, the named user's account must have visited the Siebel or Oracle Forms site at least once to ensure that all necessary ActiveX controls and plug-ins are installed in the named user's browser.
2. On the Oracle Test Manager agent machine that will run the scripts, stop the "Oracle Application Testing Suite Agent Service" and configure it to start manually.
3. On the Oracle Test Manager agent machine, login as the named Windows user account that will run the scripts. From a command prompt, run the following all as one command. The .conf file is an argument for the .exe.

```
C:\OracleATS\agentmanager\bin\AgentManagerService.exe -c
C:\OracleATS\agentmanager\bin\AgentManagerService.conf
```

where C:\OracleATS is the OATS installed folder.

Note: For Windows 7 and Vista systems, the command must be run using the elevated command line. From the Start menu, expand the Accessories, right click on the Command Prompt menu option and select **Run as administrator** from the shortcut menu.

4. The named user account must remain logged into the system at all times that scripts will be run.
- **Problem:** When bringing up Oracle Load Testing (or Oracle Test Manager) you get the following error reported by the browser: "Unable to connect" or "Can't establish a connection to the server at localhost:8088."

Resolution: This error indicates that the OATS Application Service is not running. Start (or restart) the OATS Application Service on the server machine where you installed OATS server. You will also want to make sure that the Oracle Database

services are also running (this would be OracleServiceXE and OracleXETNSListener if you used the Oracle XE database).

- **Problem:** When bringing up Oracle Load Testing (or Oracle Test Manager) you get the following error reported by the browser: "Error 404--Not Found"

Resolution: This error indicates that the OATS Application Service is unable to connect to the Oracle Database. You will also want to make sure that the Oracle Database services are also running and start/restart them if necessary (this would be OracleServiceXE and OracleXETNSListener if you used the Oracle XE database). Then restart the OATS Application Service.

9.4 Oracle Database 10g Express Edition

The following are known issues and workaround solutions for Oracle Database 10g Express Edition.

- **Problem:** In some cases, the Oracle Database 10g Express Edition service does not start completely.

Resolution: If you receive a 404 Not Found error when starting Oracle Load Testing or Oracle Test Manager, restart the Oracle database service and the Oracle Application testing service, as follows:

1. Open the Control panel and the Administrative Tools.
2. Open Services.
3. Select the Oracle Application Testing Suite Application Service and click **Stop the service**.
4. Select the OracleServiceXE service and click **Restart the service**.
5. Wait for the OracleServiceXE service Status to indicate "Started".
6. Select the Oracle Application Testing Suite Application Service and click **Start the service**.
7. Wait for the Oracle Application Testing Suite Application Service Status to indicate "Started".
8. Restart Oracle Load Testing or Oracle Test Manager.

9.5 Oracle Functional Testing - OpenScript

The following are known issues and workaround solutions for Oracle OpenScript.

- **Problem:** Adobe Flex controls do not record during Adobe Flex functional testing.

Note: The automation libraries/swc files are required for Flex Functional Testing only. This does not apply for Adobe Flex (AMF) load testing which records at the protocol level.

Resolution: The Flex application must include the Adobe Flex automation libraries either at compile time or at run time. You need at least `automation.swc` and `automation_agent.swc` from the Adobe <flex builder>\sdks\3.5.0\frameworks\libs folder (3.5.0 is an Adobe sdk version). Also, `automation_dmv.swc` is required for charts, advanceddatagrid and olapdatagrid support. See the Creating Applications for Testing section of the

Adobe Flex Data Visualization Developer's Guide for additional information about the tasks required to include the Flex automation libraries.

Creating Applications for Testing:

http://livedocs.adobe.com/flex/3/html/help.html?content=functest_components2_15.html#178953

Adobe Flex Data Visualization Developer's Guide:

http://livedocs.adobe.com/flex/3/html/help.html?content=functest_components2_15.html#178953

The Oracle OpenScript `openscript_agent.swc` file must be included when re-compiling Flex applications. The Flex application must be linked with the OpenScript Flex agent located in `<install_dir>\OpenScript\plugins\oracle.oats.scripting.modules.flexFT_version\flexagent\openscript_agent.swc` or equivalent.

- **Problem:** Automatic proxy configuration (**Preferences - OpenScript - Record - HTTP Module**) for Firefox may not correctly configure the browser proxy.

Resolution: To record through Firefox, you should configure the browser proxy settings manually (Default: host=localhost, port=7777).

- **Problem:** Certain systems may have trouble launching the OpenScript Help (**Help - Help Contents**).

Resolution: This can be resolved by configuring the help to open in an external browser window:

1. From the Tester Perspective, select **View - OpenScript Preferences**.
2. Click the "Clear" icon next to the filter text field in the upper left. Click the Help tree node and check the "Use external browser" box in the Help preferences.
3. Click **OK** and relaunch OpenScript Help.

- **Problem:** When recording a functional testing script you get the following error: "Cannot connect to browser".

Resolution: The browser did not come up in the required amount of time when you clicked the Record button. This could be because the machine was busy or the ATS OpenScript browser add-ons for IE or Firefox were not installed properly. You can try increasing the browser "Startup timeout" setting under OpenScript Preferences, General...Browser section. If that does not work, run the OpenScript Diagnosis Tool under OpenScript Help. The Diagnosis Tool will attempt to correct any browser add-on installation problems, and report any failures it encounters.

- **Problem:** When recording a functional testing script, you do not see any actions added to the script after recording.

Resolution: The browser add-on is not capturing events and sending them to OpenScript during recording. Run the OpenScript Diagnosis Tool under OpenScript Help. The Diagnosis Tool will attempt to correct any browser add-on installation problems, and report any failures it encounters. You can also try switching from IE to Firefox to see if that works better.

- **Problem:** When you record a Web load test script, you do not see any navigations added to the script after recording.

Resolution: OpenScript uses an HTTP proxy server between OpenScript and the target application when you record Web load test scripts. If your browser is accessing the Web via a proxy, you may need to chain that proxy through OpenScript's HTTP recording preferences. OpenScript will attempt to chain the proxy automatically for you using the browser's proxy settings. If you do still have problems recording HTTP navigations, check the "HTTP" Record preferences for network interface and proxy settings.

Also, if you are recording a load test script against a local Web application running on the same machine as OpenScript (like Weblogic Medical Records), you cannot use "localhost" as the server name in the http request. So in the browser, specify your starting URL as: `http://systemname:7011/medrec/index.action` instead of `http://localhost:7011/medrec/index.action`. This has to do with the fact that IE bypasses the proxy for localhost addresses and is not an issue for recording in Firefox.

- **Problem:** When recording an Oracle EBS/Forms functional testing or load testing script, the browser appears to hang when loading the Oracle Forms applications and you are not able to continue.

Resolution: The browser you are using to record your script may not have the proper JVM version downloaded/installed that is required to run the Oracle Forms applications. Before you start recording Oracle EBS/Forms functional testing or load testing scripts, step through the EBS/Forms transaction once in the browser stand-alone (i.e. while not recording) to make sure you have the proper JVM downloaded/installed and confirm that the Forms applications run properly – then try to re-record your script.

- **Problem:** When recording a Siebel functional testing or load testing script, the browser appears to hang when loading the Siebel High Interactivity applications and you are not able to continue.

Resolution: The browser you are using to record your script may not have the Siebel High Interactivity Framework Active-X components installed that are required to run the Siebel HI applications. Before you start recording Siebel functional testing or load testing scripts, step through the Siebel transaction once in the browser stand-alone (i.e. while not recording) to make sure you have the proper components downloaded/installed and confirm that the Siebel HI applications run properly – then try to re-record your script.

- **Problem:** When recording a Siebel functional testing script, you do not see any Siebel High Interactivity component actions recorded in your script.

Resolution: In order to record Siebel functional testing scripts in OpenScript, the Siebel Test Automation Component Automation Services (CAS) must be enabled on Siebel Server before recording. Please review the documentation for information on how to enable Siebel Test Automation for Siebel 7.7, 7.8 and 8.x versions. This is not required for Siebel load testing scripts.

- **Problem:** A database error occurs when trying to generate graphs in Oracle Load Testing.

Resolution: This may occur if the Oracle XE database was installed separately and not part of the Oracle Application Testing Suite installation. The default setting for allowed connections for the XE process is low and needs to be increased. From a command prompt, run the following command, then restart Oracle XE:

```
alter system set processes=200 scope=spfile;
```

9.5.1 Web Functional Test Recording with Firefox Troubleshooting

The following section describes Web Functional Test Recording with Firefox Troubleshooting techniques.

- When using the Firefox browser, you should disable or not install any add-ons into the OpenScript-created Firefox profiles.

9.6 Command-Line Script Execution

The following are tips, known issues, and workaround solutions for running OpenScript scripts from the Command-Line Interface (CLI).

- **Problem:** Playback does not recognize objects outside of the visible window area. (Note: this is also applicable to playback of scripts from the OpenScript UI.)
Resolution: When playing back scripts, make sure the browser window is the same size as when the script was recorded. One way to ensure that the browser is the same size is to record the script with the browser window maximized, then add a `web.window("path").maximize()` method to the script code before playing back the script. Also, make sure the machine used to play back the script is set to the same screen resolution as the machine used to record the script.
- **Problem:** Playback does not recognize recorded keyboard actions.
Resolution: When recording scripts for command-line execution, use mouse clicks instead of keyboard actions to interact with the application-under-test. For example, when filling in forms, click the mouse on the form fields before entering text rather than using the Tab key. Also, click the Submit button with the mouse rather than pressing the Enter key.
- **Problem:** Playback does not work with Remote Desktop minimized.
Resolution: Make sure the Remote Desktop is visible/maximized before playback. Alternatively, you can add the `RemoteDesktop_SuppressWhenMinimized` value to the Registry of the system from which you are running the command-line interface, as follows:

Caution: The following procedures modify your system Registry. Modifying the system Registry carries risk of causing serious problems that may affect the operation of your operating system software. Use the information provided at your own risk.

1. Close any currently open Remote Desktop connections.
2. Select **Run** from the **Start** menu.
3. Type `regedit` and click **OK**.
4. Expand one of the following Registry keys depending upon the system and which user account you want to use for the command-line execution:
 - for 32-bit current user account:
`HKEY_CURRENT_USER\Software\Microsoft\Terminal Server Client`
 - for 32-bit all user accounts:
`HKEY_LOCAL_MACHINE\Software\Microsoft\Terminal Server Client`

- for 64-bit current user account:

HKEY_CURRENT_USER\Software\Wow6432Node\Microsoft\Terminal Server Client

- for 64-bit all user accounts:

HKEY_LOCAL_MACHINE\Software\Wow6432Node\Microsoft\Terminal Server Client

5. Select **New** from the **Edit** menu, then select **DWORD (32-Bit) Value**.
6. Enter RemoteDesktop_SuppressWhenMinimized as the name and press Enter.
7. Double-click the RemoteDesktop_SuppressWhenMinimized registry entry to open the edit dialog box.
8. Specify 2 in the **Value Data** field and click **OK**.
9. Close the Registry Editor.

- **Problem:** Need to automatically initiate a Remote Desktop connection after a reboot.

Resolution: You can initiate a Remote Desktop connection after rebooting the test machine using a saved Remote Desktop Protocol (.rdp) file for a Remote Desktop connection.

To specify and save a Remote Desktop Protocol file:

1. Select **Accessories** from the **Start** menu, then select **Remote Desktop Connection**.
2. Click the **Options** button.
3. Specify the Logon settings in the **General** tab.
4. If you wish to be able to start the Remote Desktop Connection without being prompted for credentials (user and password), select **Allow me to save credentials**.
5. If you wish to automatically start a program on the Remote Desktop connection, click the **Programs** tab and specify the program to start.
6. Click the **Connect** button.
7. Enter the username and password and click **OK**.
8. Close the Remote Desktop connection.
9. Select **Accessories** from the **Start** menu, then select **Remote Desktop Connection**.
10. Click the **Options** button.
11. Select the **General** tab, if necessary, and click **Save As**.
12. Specify the directory and file name for the .rdp file and click **Save**.
13. If you wish to automatically scale the Remote Desktop when connecting, edit the saved .rdp file in a text editor and add the following setting to the end of the settings:

smart sizing:i:1

14. Schedule the .rdp file to launch automatically after a reboot/restart using Task Scheduler or create a batch file on the test machine using a text editor with the following command:

```
mstsc c:/myRdpFile.rdp
```

where *myRdpFile* is the name you used to save the Remote Desktop connection file.

15. If you use a batch file, schedule the batch file to run using a tool that is capable of launching the batch file automatically after a reboot/restart.

10 Documentation Accessibility

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

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

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.

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