

Oracle® Application Testing Suite

Getting Started Guide

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Preface

Welcome to Getting Started with Oracle Application Testing Suite. This guide explains how to get started using the features and options of Oracle OpenScript and Oracle Load Testing for testing Web pages or applications, and Oracle Test Manager for managing requirements, issues, and tests.

Audience

This guide is for Web test engineers who will be using the Oracle Application Testing Suite applications for regression testing, performance testing (load and scalability), and monitoring of a Web site or application.

Prerequisites

The tutorials in this guide assume an understanding of software or Web application testing concepts. Test engineers using the Oracle Application Testing Suite should be familiar with the concepts of regression testing, load testing, scalability testing, and test management.

Using This Guide

This guide is organized as follows:

[Chapter 1, "Introduction"](#) provides an overview of the major features of the tools included in the Oracle Application Testing Suite.

[Chapter 2, "Oracle Application Testing Suite Basics"](#) provides descriptions of the products in the Oracle Application Testing Suite and the main features of each.

[Chapter 3, "Oracle OpenScript Tutorial"](#) provides step-by-step instructions and explanations for building test scripts for testing Web pages or applications with Oracle OpenScript. The tutorial includes examples that highlight the script features, Databanks, and test cases.

[Chapter 4, "Oracle Load Testing Tutorial"](#) provides step-by-step instruction for using multiple OpenScript scripts to perform load and scalability testing of Web applications and back end systems. This chapter also explains how to configure ServerStats and generate reports from testing data.

[Chapter 5, "Oracle Test Manager Tutorial"](#) provides step-by-step instruction for using the main features of Oracle Test Manager. The tutorial includes examples for defining test plans, requirements and tests, running tests, and entering issues.

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Related Documents

For more information, see the following documents in the Oracle Application Testing Suite documentation set:

- *Oracle Application Testing Suite Release Notes*
- *Oracle Application Testing Suite Installation Guide*
- *Oracle Application Testing Suite Security Guide*
- *Oracle Application Testing Suite Getting Started Guide*
- *Oracle Functional Testing OpenScript User's Guide*
- *Oracle Functional Testing OpenScript Programmer's Reference*
- *Oracle Load Testing Load Testing User's Guide*
- *Oracle Test Manager Test Manager User's Guide*

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Introduction

Oracle Application Testing Suite is an integrated, comprehensive Web application testing solution that provides all the tools you need to ensure the scalability and reliability of your business-critical applications.

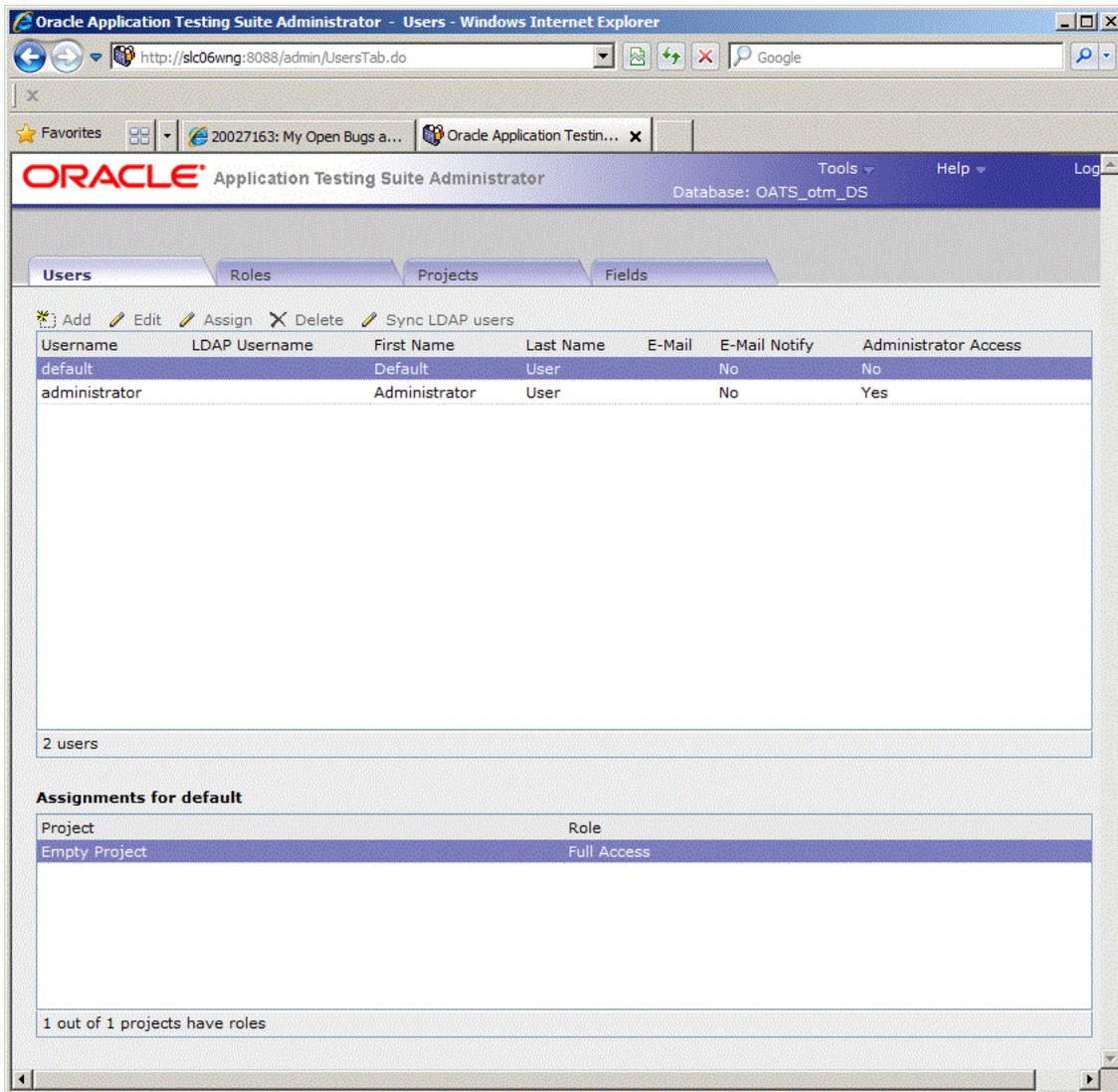
- Oracle OpenScript is an updated scripting platform for creating automated extensible test scripts in Java.
- Oracle Load Testing for load, scalability and stress testing. Oracle Load Testing also includes tools for server side monitoring and reporting
- Oracle Test Manager for organizing and managing your overall testing process.

This manual introduces you to the Oracle Application Testing Suite and provides step-by-step tutorials to help you get started using the tools.

1.1 About Oracle Application Testing Suite Administrator

The Administrator allows the Oracle Application Testing Suite system administrator to manage user accounts for Oracle Load Testing and Oracle Test Manager. For Oracle Load Testing, you define user accounts and the type of access allowed. For Oracle Test Manager, you define user accounts, roles, projects, and fields.

Figure 1–1 Administrator Main Window (Test Manager Database)



1.1.1 Administrator Feature Highlights

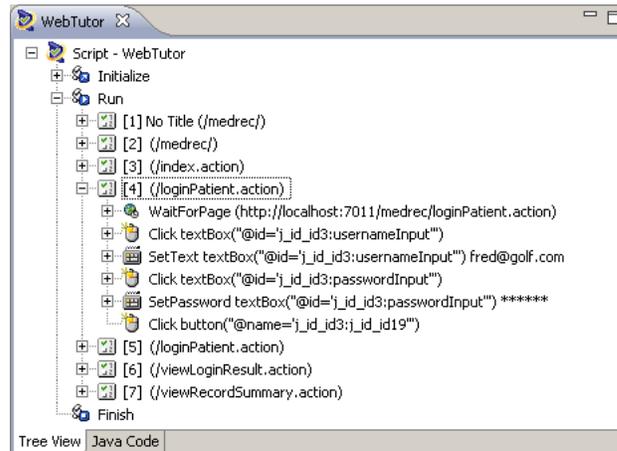
Oracle Application Testing Suite Administrator provides the following features:

- **User Accounts** - user accounts can be defined and customized for either Oracle Load Testing or Oracle Test Manager.
- **Roles** - roles with access permissions for read, write, delete, and execute can be defined and customized for Oracle Test Manager.
- **Projects** - projects can be defined and customized and assigned to specific user accounts for Oracle Test Manager. You can implement Lightweight Directory Access Protocol (LDAP) server authentication to allow Oracle Test Manager users authentication against the LDAP server providing users a single sign-on solution.
- **Fields** - fields can be defined and customized for requirements, issues, tests, and test runs for Oracle Test Manager.

1.2 About Oracle OpenScript

Oracle OpenScript is built on a standards-based platform and provides the foundation for OpenScript Modules and Application Programming Interfaces (APIs). Combining an intuitive graphical interface with the robust Java language, OpenScript serves needs ranging from novice testers to advanced QA automation experts.

Figure 1–2 OpenScript Tree View Hierarchy



OpenScript APIs are used to build scripts for testing Web applications. The OpenScript API consists of a set of procedures that can be used to customize the scripts within the development environment. The API can also be used by advanced technical users to enhance scripts for unique testing needs.

1.2.1 OpenScript Feature Highlights

OpenScript is the next generation environment for developing Oracle Application Testing Suite scripts for Web application testing. OpenScript offers the following advantages for Web-based application testing:

- Scripting Workbench** - OpenScript provides an Eclipse-based scripting Workbench where you can create and run your automated test scripts. Users can use the Tree View graphical scripting interface for creating and editing scripts through the UI. Users can also switch to the Java Code View programming interface and leverage the integrated Eclipse IDE for creating and editing their scripts programmatically.

Functional test scripts created in OpenScript can be played back to test and validate application functionality. Load test scripts created in OpenScript will run in Oracle Load Testing for application load testing, allowing users to simulate hundreds or thousands of users executing scripts at the same time.

- Test Modules** - The OpenScript Test Modules provide application-specific test automation capabilities. Each Test Module is custom built to test a specific application or protocol. OpenScript includes several functional and load testing modules for testing Web-based applications. Additional modules can be developed for the OpenScript platform.

OpenScript's Test Module interface is completely open and extendable by end-users. Users can leverage the Test Module API to build their own modules for testing specific applications or can extend an existing module to add custom functionality.

- **Graphical/Tree View Scripting Interface** - The OpenScript Tree View scripting interface provides a graphical representation of the test script. Multiple script windows can actually be open at the same time. Within each script window, the Tree View is broken down into three main script sections:

- Initialize: For script commands that only execute once on the first iteration
- Run: Main body of the script for commands that will run on every iteration
- Finish: For script commands that only execute once on the last iteration

Within each section, script Steps and Navigation nodes can be created automatically during script recording or manually through the Tree View user interface. Additional script commands will also be represented as nodes in Tree View including test cases, data inputs, log messages, etc. Each Tree View node has a corresponding representation in the Java Code View.

- **Programming/Code View Scripting Interface** - The OpenScript Java Code View scripting interface provides a Java representation of the test script. This view provides full access to Eclipse IDE for creating, editing & debugging script code. Script commands in Java are mapped to a corresponding representation in the Tree View. Users can edit their script in either the code or tree view and changes will be automatically reflected in both views.
- **Properties View & Results View** - The OpenScript Properties View allows users to view detailed properties for selected script nodes in the Tree View. The Results View shows detailed step-by-step results of script playback which are linked to the OpenScript display window.
- **Data Banking** - OpenScript allows users to parameterize script data inputs to perform data driven testing using Data Banking. Users can select any data inputs for their script and then substitute a variable to drive the input from an external file during playback. Multiple Data Bank files can be attached to a single script and users can specify how OpenScript assigns data during script playback.
- **Correlation** - The OpenScript Correlation interface allows users to create correlation libraries to automatically parameterize dynamic requests during playback. Correlation libraries contain rules for automatically handling dynamic request parameters such as urls, query strings and post data for the load testing modules.
- **OpenScript Preferences** - The OpenScript Preferences interface is where users specify settings to control script recording, script playback, correlation and general preferences for the OpenScript Workbench.
- **Multi-User Execution** - launch more than one OpenScript instance under separate named Windows user accounts. Playback for multiple scripts is supported using any of the following:
 - OpenScript Playback button
 - Command-Line Interface
 - Oracle Load Testing
 - Oracle Test Manager

1.3 About Oracle Load Testing

Oracle Load Testing provides an easy and accurate way to test the scalability of your e-Business applications. Oracle Load Testing emulates thousands of virtual users

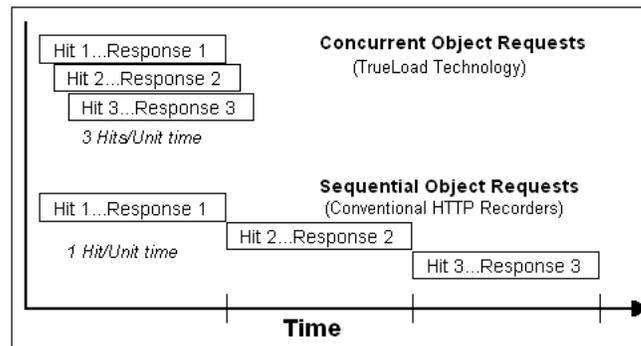
accessing your site simultaneously, and measures the effect of the load on application performance.

Figure 1–3 Oracle Load Testing Virtual Users View

VUID	Profile	Status	Iterations	Failed	Last Run Time	Current Step	System	Databank	LastError	Previous Error
1	HTTPTutor1	Think tim...	14	0	39.693	[2] MedRe...	OLT Server			
2	HTTPTutor1	Think tim...	14	0	39.71	[2] MedRe...	OLT Server			
3	HTTPTutor2	Think tim...	11	0	50.271	[2] MedRe...	OLT Server	avitek: [fred@golf.c...		
4	HTTPTutor1	Think tim...	8	0	39.577	[1] Welco...	OLT Server			
5	HTTPTutor1	Think tim...	8	0	39.588	[1] Welco...	OLT Server			
6	HTTPTutor2	Think tim...	6	0	50.244	[2] MedRe...	OLT Server	avitek: [volley@ball...		
7	HTTPTutor1	Think tim...	1	0	39.653	[4] View P...	OLT Server			
8	HTTPTutor1	Think tim...	1	0	39.682	[4] View P...	OLT Server			
9	HTTPTutor2	Think tim...	1	0	50.311	[2] MedRe...	OLT Server	avitek: [page@fish...		

Oracle Application Testing Suite TrueLoad Technology ensures that your tests will closely correlate with real user-load so you can confidently use results from Oracle Load Testing to help make key decisions about your system's architecture, tuning, and hosting alternatives.

Figure 1–4 Concurrent Object Requests vs. Sequential Object Requests



1.3.1 Oracle Load Testing Feature Highlights

Oracle Load Testing offers the following advantages for Web-based application load testing:

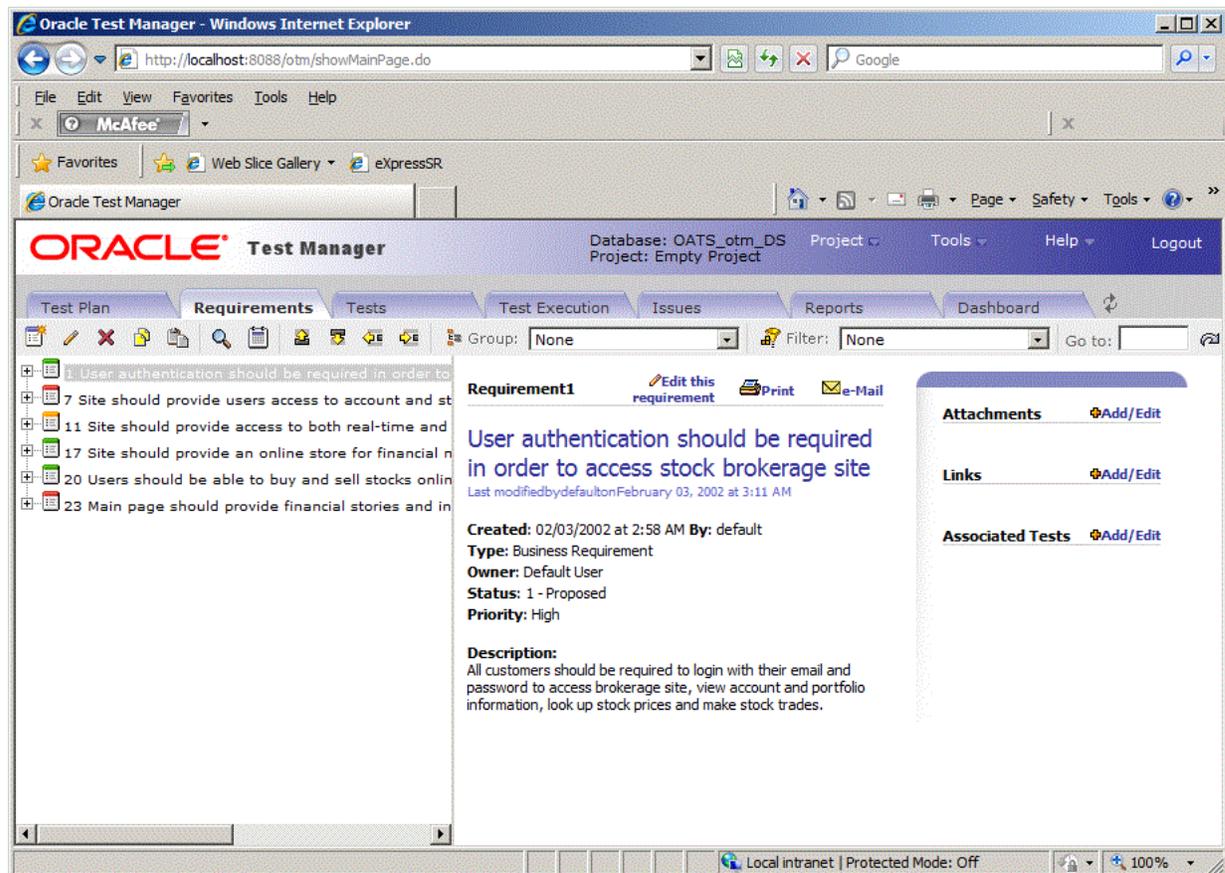
- **Trueload Technology** - accurately emulates multi-threaded browser requests and automatically validates server responses for test results that closely correlate with real user testing.
- **Reusable Scripts** - uses the scripts created with Oracle OpenScript to emulate hundreds or thousands of virtual users.

- **Interactive What-If Analysis and Virtual User Display** - you can change the number and type of user on-the-fly to try "what-if" scenarios as you vary the loading conditions or application settings. You can even view the actual pages seen by virtual users to aid in debugging.
- **Real-Time Graphs and Reports** - you can view real-time reports and graphs that include response time, error rates, number of users, and statistics such as hits per second, pages per second, etc.
- **Single Point of Control with Distributed Agents** - virtual users can be simulated by a single server or distributed amongst multiple servers located anywhere on a LAN or WAN.
- **Scenario Composer** - define any number of custom load scenarios by simply pointing and clicking on the names of the pre-recorded scripts and then specifying how many virtual users of each type you wish to run, and how you would like them to ramp up. You can also specify ramp-up criteria for each script in the scenario using the Advanced ramp-up options.
- **Post-run Analysis** - performance data can be accumulated at varying levels of granularity including profiles, scripts, groups of pages, individual pages, and objects on pages. Oracle Load Testing provides a comprehensive set of graphs and reports, and can also export data to external programs such as Microsoft Excel for further analysis.
- **Server-side monitoring with ServerStats** - server performance can be monitored for a variety of server-side application, database, system, and Web server statistics. You can configure ServerStats to display real-time performance statistics for the various hosts and services available from the server such as, percentage of CPU usage, memory usage, Web server statistics, etc.

1.4 About Oracle Test Manager

Oracle Test Manager is an easy to use tool that allows you to organize and manage your overall testing process. It provides a single unified platform for sharing information among team members.

Figure 1–5 Oracle Test Manager Main Window



Oracle Test Manager lets you create projects that group together and organize test scripts, requirements that need to be tested, and issues resulting from the tests. Once created, you can indicate the relationships among these items, allowing you to quickly and easily find all information pertaining to a particular test script, requirement, or issue.

1.4.1 Oracle Test Manager Feature Highlights

Oracle Test Manager offers the following features and advantages for integrated requirements management and defect tracking for both manual and automated tests:

Requirements Management - provides the ability to define and manage requirements for a specific project. You can specify details for each requirement, track the status of each requirement, and associate requirements with test cases to ensure testing coverage.

Test Planning and Management - provides the ability to define and manage a test plan that incorporates both manual and automated test cases. You can store Oracle Application Testing Suite scripts in the database, automatically execute scripts in Oracle OpenScript from the test plan interface, and automatically store the test results. You can also associate requirements to test cases to ensure testing coverage, and associate test cases with issues so they can be reproduced and to keep track of how the issues were identified.

Defect Tracking - provides the ability to create and manage defects, referred to as issues, for a specific project. You can associate test cases with issues so they can be reproduced and to keep track of how the issues were identified.

Integration with Oracle Application Testing Suite - seamlessly integrates with Oracle Application Testing Suite test solutions, providing the ability to automatically launch and execute Oracle OpenScript scripts for functional and regression testing as well as retrieve and archive the results. You can also launch third party products.

Reporting - generates reports in standard HTML format for managing the overall testing process. You can report on requirements, tests, and issues.

Administration - provides an administration tool for entering and managing user accounts, project permissions, and general tool preferences.

Custom Fields - provides the ability to add custom fields to the database for recording data specific to your projects.

Database Repository - provides the ability to store test assets including test scripts, results, attachments, requirements, test plans, and defects in a common database.

1.5 Oracle Application Testing Suite Database Configuration

The Oracle Application Testing Suite Database Configuration utility lets you add database connections for Oracle Load Testing and Oracle Test Manager. The Oracle Application Testing Suite installation includes a WebLogic web server and the Oracle 10g Express Edition Database by default. The Oracle Application Testing Suite Database Configuration utility can be used to set the current database or to connect to databases other than the default.

1.5.1 Database Configuration Feature Highlights

The Database configuration utility provides the following features:

- **Add, Update, Delete Database Connections** - provides a convenient way to manage database connections for Oracle Load Testing and Oracle Test Manager.
- **Create Schemas and Tables** - automatically uses existing schemas or creates schemas and tables for additional databases.

Oracle Application Testing Suite Basics

This chapter explains how to get started using Oracle Application Testing Suite. It explains how to install and start the applications, and the features of the main windows.

2.1 Installing and Starting Oracle Application Testing Suite

To install Oracle Application Testing Suite:

1. Go to:
<http://www.oracle.com/technetwork/oem/downloads/index-084446.html>.

Note: See the *Oracle Application Testing Suite Installation Guide* for additional information about the download files and the installation procedure.

2. Download the Oracle Application Testing Suite product from the Oracle Web site and save it to a temporary directory on your hard disk.
3. Unzip the download file and then run setup.bat to install Oracle Application Testing Suite.
4. Follow the setup instructions to install the Oracle Application Testing Suite and OpenScript.

During the Oracle Application Testing Suite installation, you will be required to enter a default password to be used with Oracle Application Testing Suite products. *Remember this password.* It will be required to log in to the Administrator, Oracle Load Testing, and Oracle Test Manager.

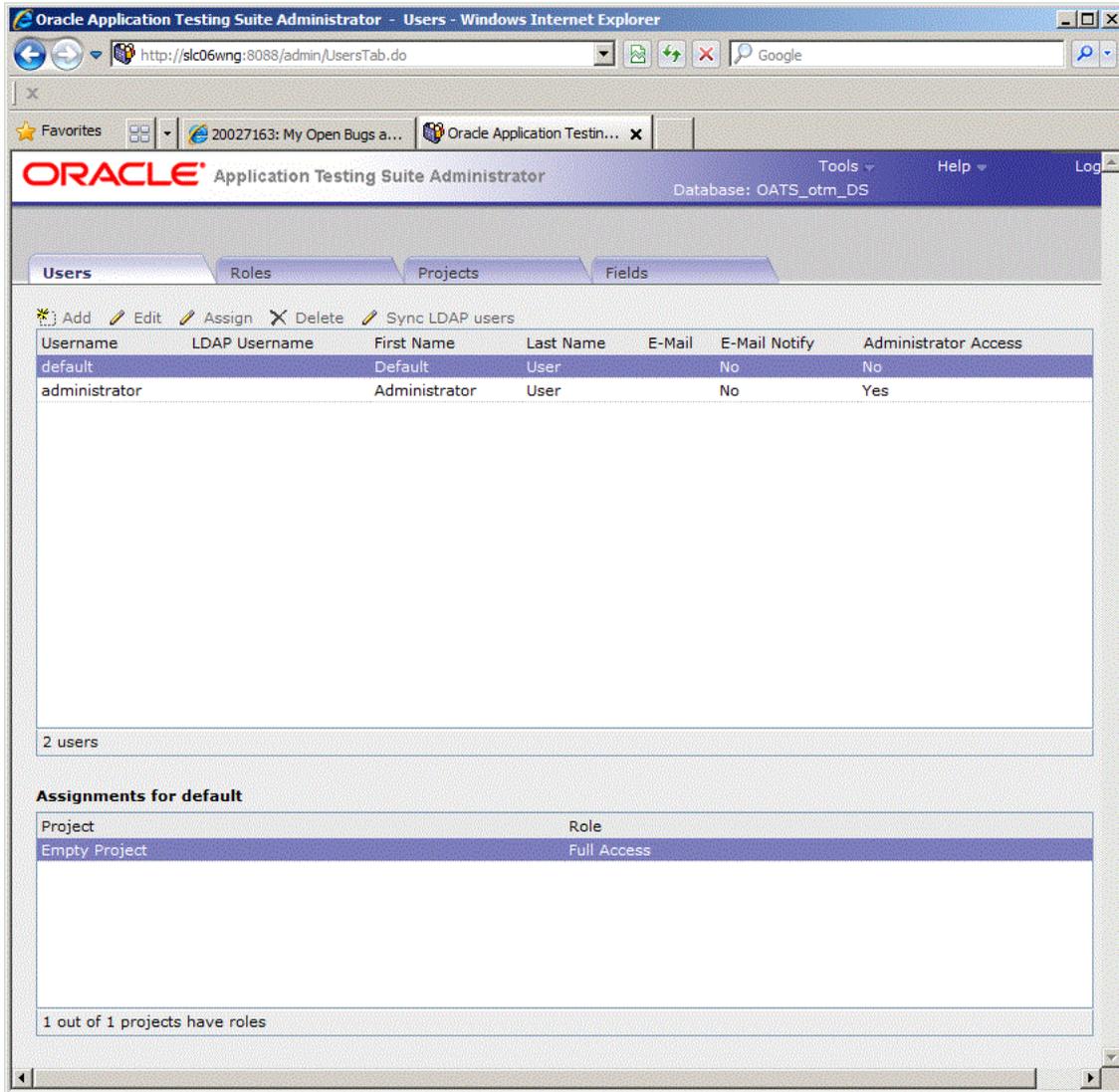
5. Select applications from the **Oracle Application Testing Suite** start menu to start the user interface for specific products.

The installation creates a default Administrator user name in the Oracle Application Testing Suite database. The first time you log into the Administrator, Oracle Load Testing, or Oracle Test Manager, enter the username **administrator** and the password you defined during the installation. You can use the Oracle Application Testing Suite Administrator to change the default users and customize the usernames and passwords for Oracle Application Testing Suite users.

2.2 Oracle Application Testing Suite Administrator Main Window Features

The Oracle Application Testing Suite Administrator is where you customize user access for Oracle Load Testing and Oracle Test Manager. For Oracle Test Manager, you can also customize roles, projects, and fields.

Figure 2-1 Oracle Application Testing Suite Administrator Main Window

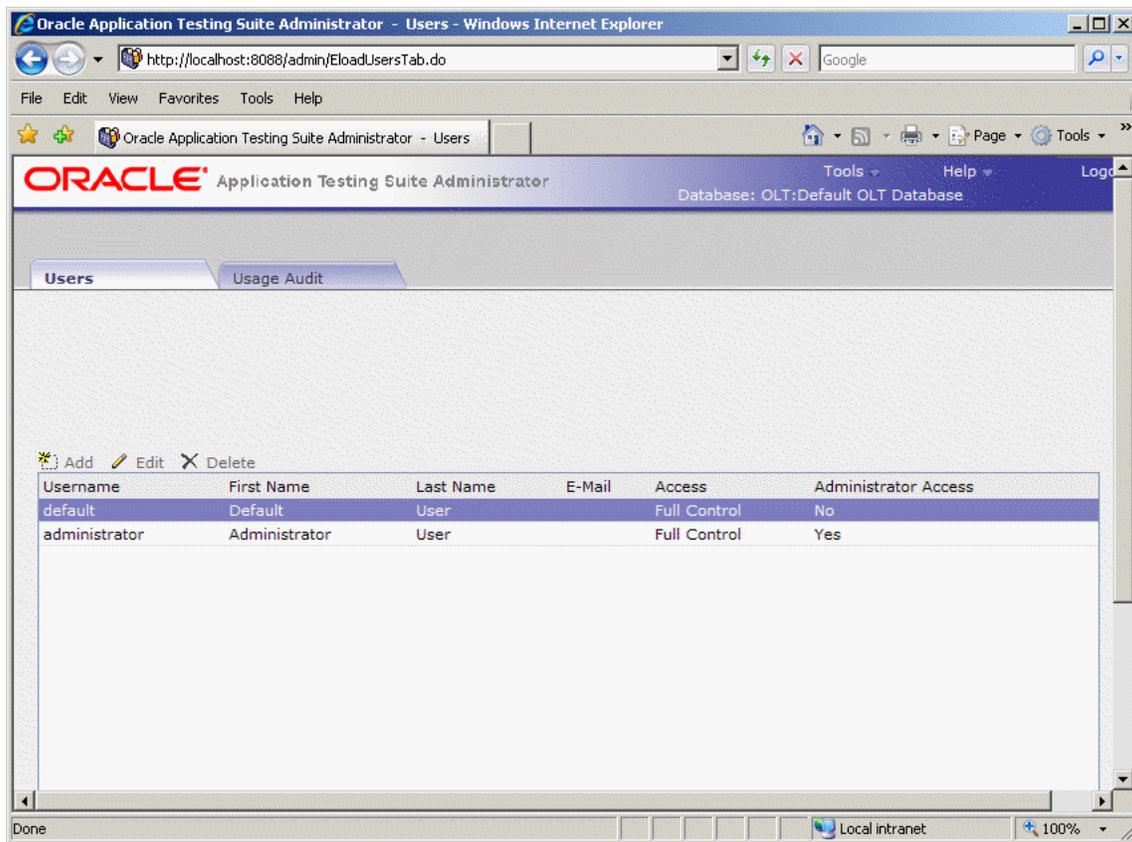


When you log into the Administrator and select an Oracle Load Testing database, only the **Users** and **Usage Audit** tabs appear. When you log into the Administrator and select an Oracle Test Manager database, the **Users**, **Roles**, **Projects**, and **Fields** tabs appear.

2.2.1 Users Tab

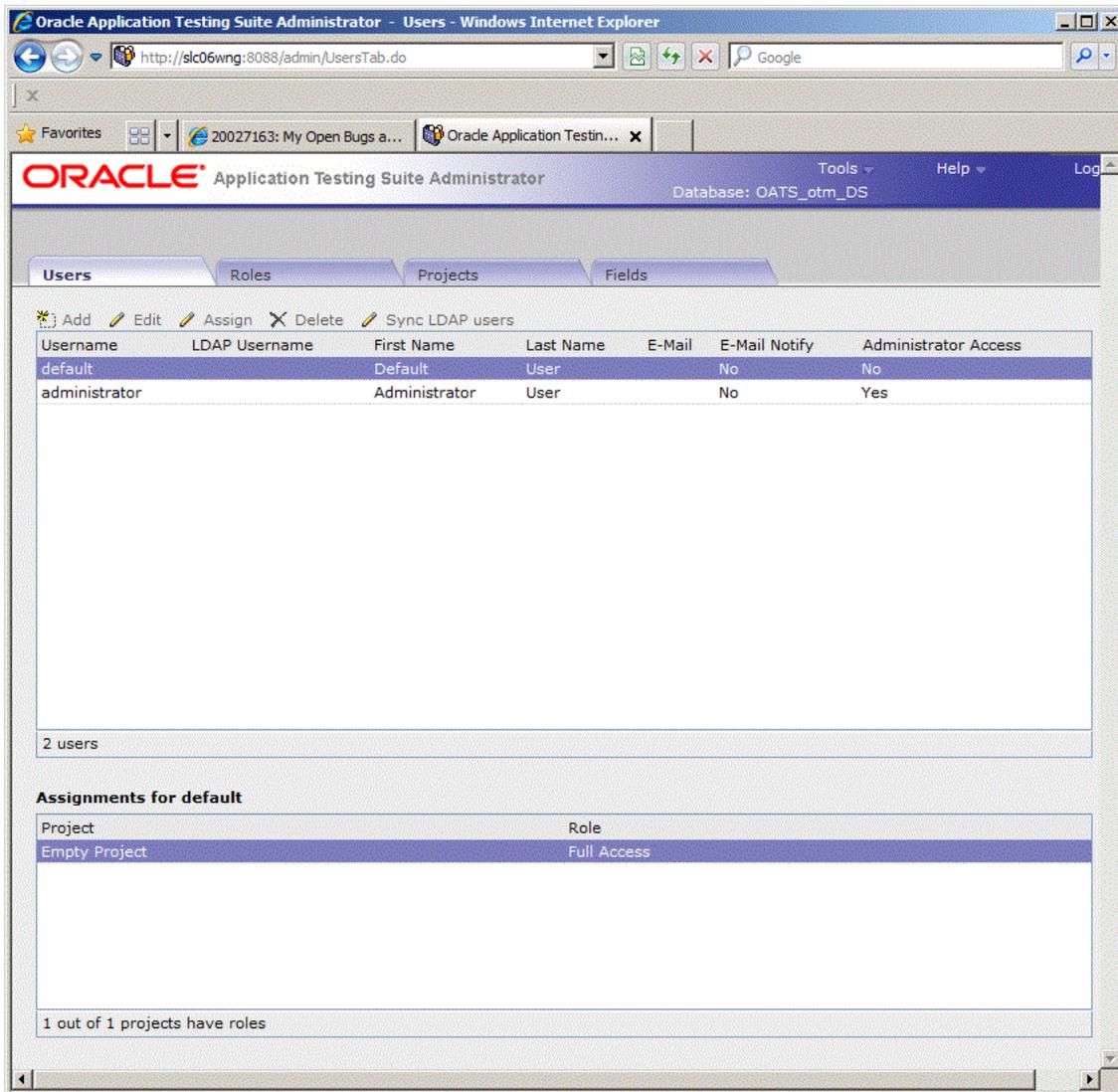
The Users tab is where you add, delete, and configure users for Oracle Load Testing and Oracle Test Manager for Applications.

For Oracle Load Testing databases, the Users tab lets you add, edit, and delete users.

Figure 2–2 Users Tab for Oracle Load Testing Users

For Oracle Test Manager databases, the Users tab lets you add, edit, and delete users, and assign specific projects to users.

Figure 2-3 Users Tab for Oracle Test Manager Users



The Users tabs can have the following options:

Add - displays the Add User dialog box for adding a new user.

Edit - displays the Edit User dialog box for the selected user. You can change the user's name, username, or password.

Assign - displays the Edit Role dialog box for assigning roles to the selected user for the selected projects.

Delete - deletes the selected user.

Sync LDAP users - synchronizes users with the LDAP server. Use this option to keep Oracle Test Manager authentication in sync with the LDAP server updates. This option is only used when using LDAP authentication.

Username - displays the name the Oracle Application Testing Suite user will use to log on. Click the column header to sort users in ascending order by this field.

LDAP Username - displays the Lightweight Directory Access Protocol (LDAP) server authentication name the user will use to log into Oracle Test Manager if LDAP Server

authentication is configured. Click the column header to sort users in ascending order by this field.

First Name - displays the user's first name. Click the column header to sort users in ascending order by this field.

Last Name - displays the user's last name. Click the column header to sort users in ascending order by this field.

E-mail - displays the user's email address. When **Enable E-mail notification** is selected for the user, the user will receive email notifications when items are created, or when the owner or assigned to field is changed for issues. Click the column header to sort users in ascending order by this field.

E-mail Notify - indicates whether the user will receive email notifications. Click the column header to sort users in ascending order by this field.

Administrator Access - indicates whether the user can access the Oracle Test Manager Administrator.

Active - this column is only displayed when named user licenses are being used. Indicates whether the user is active, that is, allowed to log in using a named user license.

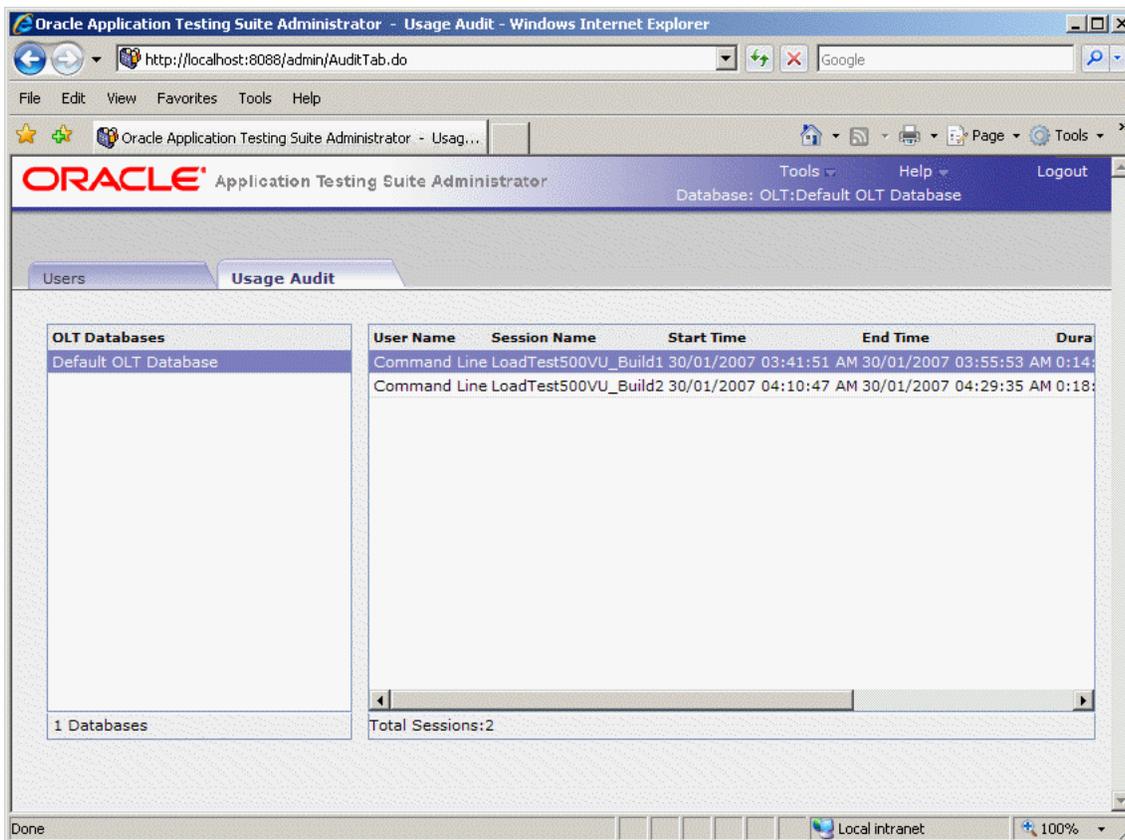
Assignments for <user> - displays the roles assigned to the selected user for each project in the database.

- **Project** - displays a list of the projects in the database.
- **Role** - displays the role of the selected user for the project.

2.2.2 Usage Audit Tab

The Usage Audit tab is where you review and audit the load testing sessions stored in the Oracle Load Testing database.

Figure 2–4 Usage Audit Tab for Oracle Load Testing Users



The Usage Audit tab has the following options:

OLT Databases - lists the installed Oracle Load Testing Databases available for auditing.

User Name -shows the name of the user who ran the load test. "Anonymous" indicates the login feature was disabled for the instance of Oracle Load Testing that ran the test and there is no username associated with the test. "Command Line" indicates the load test ran from the command line interface.

Session Name - shows the name of the load testing session.

Start Time - shows the start date and time for the load testing session.

End Time - shows the end date and time for the load testing session.

Duration (HH:MM:SS) - shows the duration of the load testing session in hours, minutes, and seconds.

Machine Name - shows the name of the machine on which the load testing session was run.

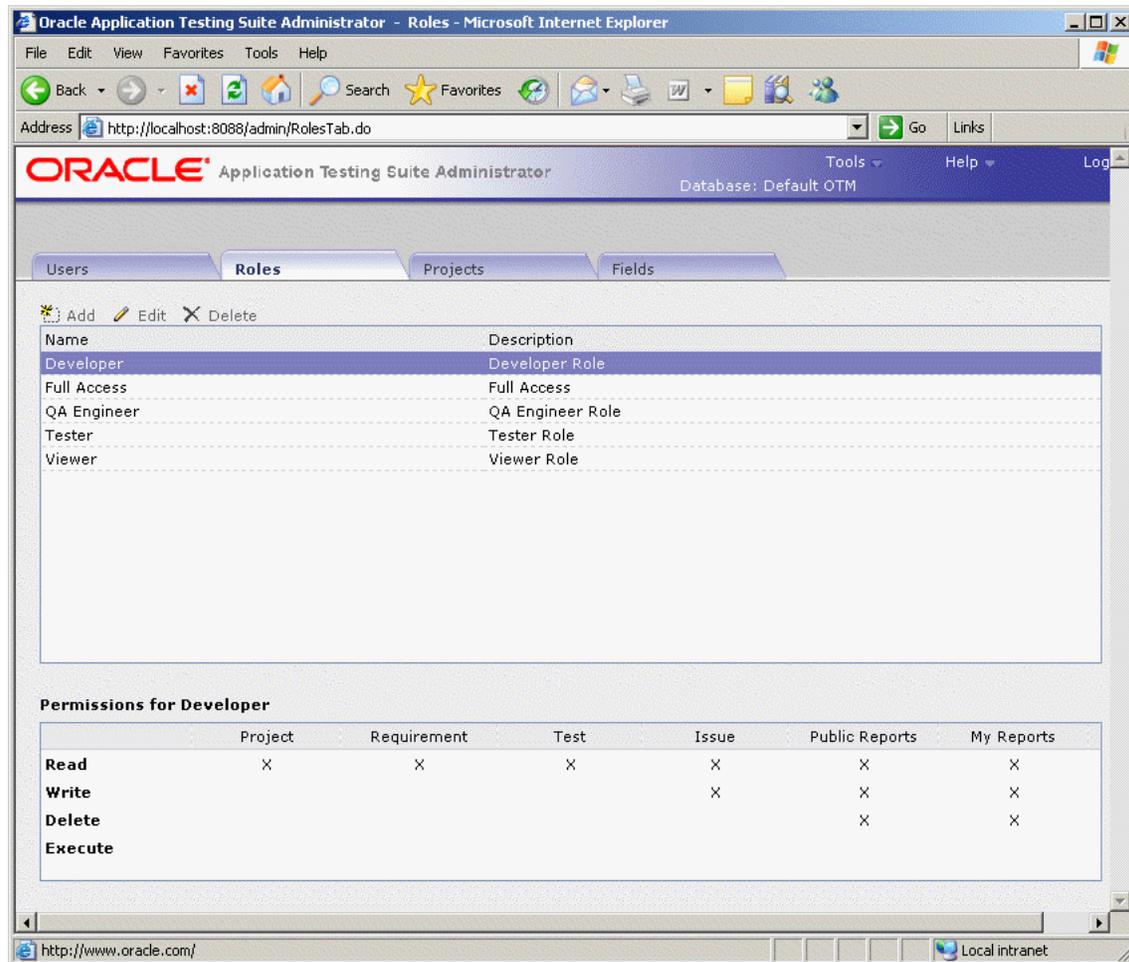
Max VU Count - shows the maximum count of Virtual Users that were run for the load testing session.

2.2.3 Roles Tab

The Roles tab is where you configure roles. Roles determine the read, write, delete, and execute permissions for users in projects. Once roles are created, you assign them to users for each project that you want them to have access to. A user's role can differ

from project to project. Click **Assign** on either the Projects tab or Users tab to assign roles.

Figure 2–5 Roles Tab for Oracle Test Manager Users



The Roles tab has the following options:

Add - displays the Add Role dialog box for adding a role.

Edit - displays the Edit Role dialog box for editing the selected role.

Delete - deletes the selected role. If a role is in use, you will be asked to assign another role to users assigned to this role.

Permissions for <role> - displays the read, write, delete, and execute permissions for this role for projects, requirements, tests, and issues.

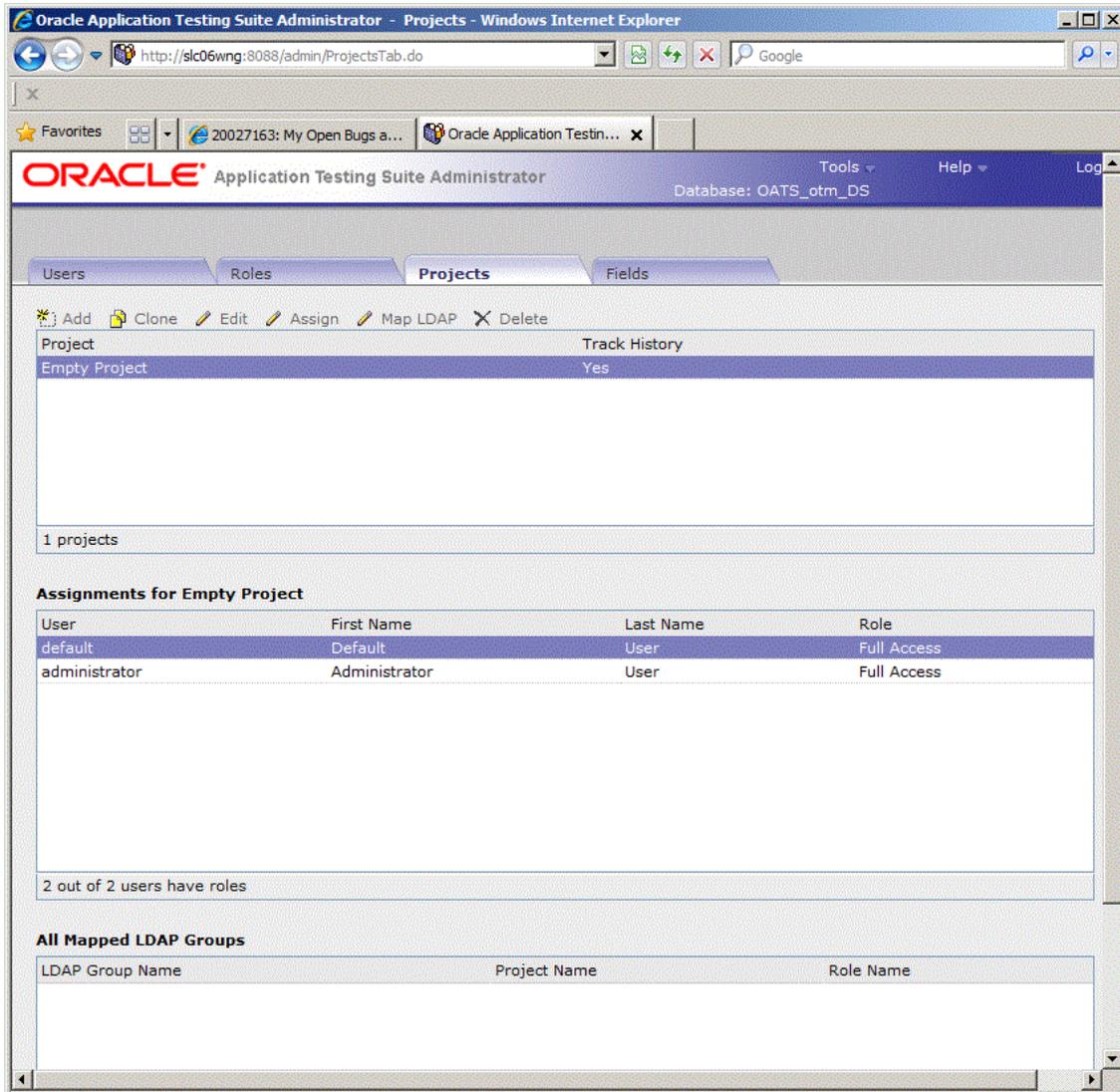
- **Project** - displays the read, write, and delete permissions for projects for users assigned to this role.
- **Requirement** - displays the read, write, and delete permissions for requirements for users assigned to this role.
- **Test** - displays the read, write, delete, and execute permissions for tests for users assigned to this role.
- **Issue** - displays the read, write, and delete permissions for issues for users assigned to this role.

- **Public Reports** - displays the read, write, and delete permissions for public reports assigned to this role.
- **My Reports** - displays the read, write, and delete permissions for reports assigned to this role.

2.2.4 Projects Tab

The Projects tab is where you maintain projects.

Figure 2–6 Projects Tab for Oracle Test Manager Users



The Projects tab has the following options:

Add- displays the Add Project dialog box for adding a new project.

Clone - displays the Clone Project dialog box for duplicating the selected project. When you clone a project, user roles are the same as the original project.

Edit - displays the Edit Project dialog box for changing the name of the selected project.

Assign - displays the Edit Role dialog box for assigning roles to users for the selected project(s).

Map LDAP - displays the LDAP Group Mapping Details dialog box for mapping LDAP Groups to Oracle test Manager Projects and Roles.

Delete - deletes the selected project.

[project list] - lists the projects and tracking status in the Oracle Test Manager database.

- **Project** - displays a list of projects in the database.
- **Track History** - displays if history tracking is enabled or not for the project.

Assignments for [selected project] - shows the users and role assignments for the project selected in the project list.

- **User** - displays the users in the database.
- **First Name** - displays the user's first name.
- **Last Name** - displays the user's last name.
- **Role** - displays the users' roles in the selected database.

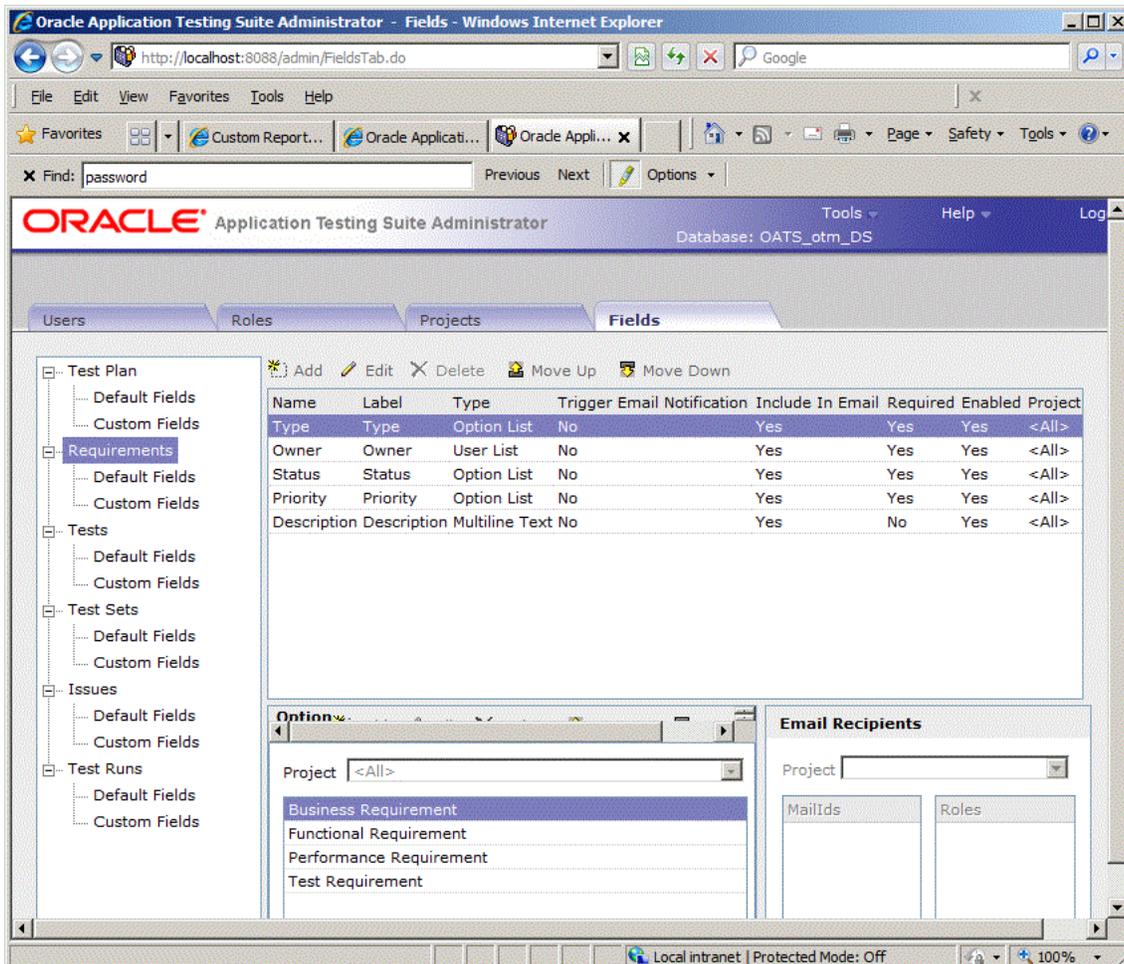
All Mapped LDAP Groups - shows the selected LDAP Groups, projects, and roles for the project selected in the project list.

- **LDAP Group Name** - lists the LDAP Group names in the selected project.
- **Project Name** - displays the Oracle Test Manager Project mapped to the LDAP Group.
- **Role Name** - displays the Oracle Test Manager Role mapped to the LDAP Group.

2.2.5 Fields Tab

The Fields tab is where you customize both default and custom fields. These fields are used in Oracle Test Manager for maintaining details about requirements, tests, issues, and test runs.

Figure 2-7 Fields Tab for Oracle Test Manager Users



The Fields tab has the following options:

<Field List> - lists the categories and types of fields that you can customize. The categories are:

- **Test Plans** - fields that pertain to test plans that appear in the Add/Edit Test Plans dialog boxes and are displayed in the right pane.
- **Requirements** - fields that pertain to requirements that appear in the Add/Edit Requirements dialog boxes and are displayed in the right pane.
- **Tests** - fields that pertain to tests that appear in the Add/Edit Tests dialog boxes and are displayed in the right pane.
- **Test Sets** - fields that pertain to tests that appear in the Add/Edit Test Execution dialog boxes and are displayed in the right pane.
- **Issues** - fields that pertain to issues that appear in the Add/Edit Issues dialog boxes and are displayed in the right pane.
- **Test Runs** - fields that pertain to test runs that appear in the Run Test dialog box and are displayed in the Result Parameters section of the right pane when you click the run date of a test in the Run History section.

Each category has two types of fields:

- **Default Fields** - these are the fields that are shipped with the product. You can add and delete options and change the labels.
- **Custom Fields** - these are user-created fields. These fields are used for entering information in Oracle Test Manager. They are added to the input and edit dialog boxes for requirements, tests, and issues. They are displayed in the right pane with the default fields, and they can be used for grouping and reporting.

Name - displays the field name.

Label - displays the label displayed in Oracle Test Manager.

Type - displays the type of field. The options are:

- **Option List** - lets you select an option from a list.
- **Option List/Text** - lets you select an option from a list or enter text.
- **User List** - creates a list of the users in the database and lets you select one.
- **Text** - lets you enter one line of text.
- **Multiline Text** - lets you enter multiple lines of text.
- **Multiline/Append** - creates a multiline text field and when editing, lets you choose to append new text to existing text. If you choose to append, the date and user name are automatically added.
- **Heading** - lets you create a heading for grouping custom fields. The heading is for display purposes only in the right-hand pane of Oracle Test Manager.

Trigger Email Notification - indicates whether an email will be sent to the configured recipients when this field changes.

Include In Email - indicates whether the field should be included in email.

Required - indicates whether the field is required, that is, data must be entered when the requirement, test, or issue is created.

Enabled - indicates whether the field is being used in Oracle Test Manager.

Project - indicates the project to which this field applies.

Add - displays the Add Field dialog box for adding a custom field.

Edit - displays the Edit Field dialog box for the selected custom field.

Delete - deletes the selected custom field.

Move Up - moves the selected field up one place.

Move Down - moves the selected field down one place.

Option Lists - lets you maintain the options for the selected field if the field is an option list type of field.

- **Add** - displays the Add Option dialog box for adding an option to the selected field.
- **Edit** - displays the Edit Option dialog box for renaming the selected option.
- **Delete** - deletes the selected option.
- **Move Up** - moves the selected option up one place.
- **Move Down** - moves the selected option down one place.
- **Project** - lets you select the project to which the options apply. This field is only available when you select the **Project Specific Options** check box in the Add

Custom field dialog box for this field. When this check box is selected you can add options specific to each project; otherwise, all projects will have the same options.

Email Recipients - lists the roles and/or email addresses of the people that will receive an email when the selected field changes.

- **Project** - select the project for which you want to display the email recipients.
- **MailIds** - lists the email addresses to which email will be sent when the field changes.
- **Roles** - lists the roles of the email recipients to which email will be sent when the field changes.

When you select the category in the left pane, the associated fields are displayed in the top right pane. When you select the field in the top right pane, its associated options are displayed in the Option List.

2.3 Oracle OpenScript Main Window Features

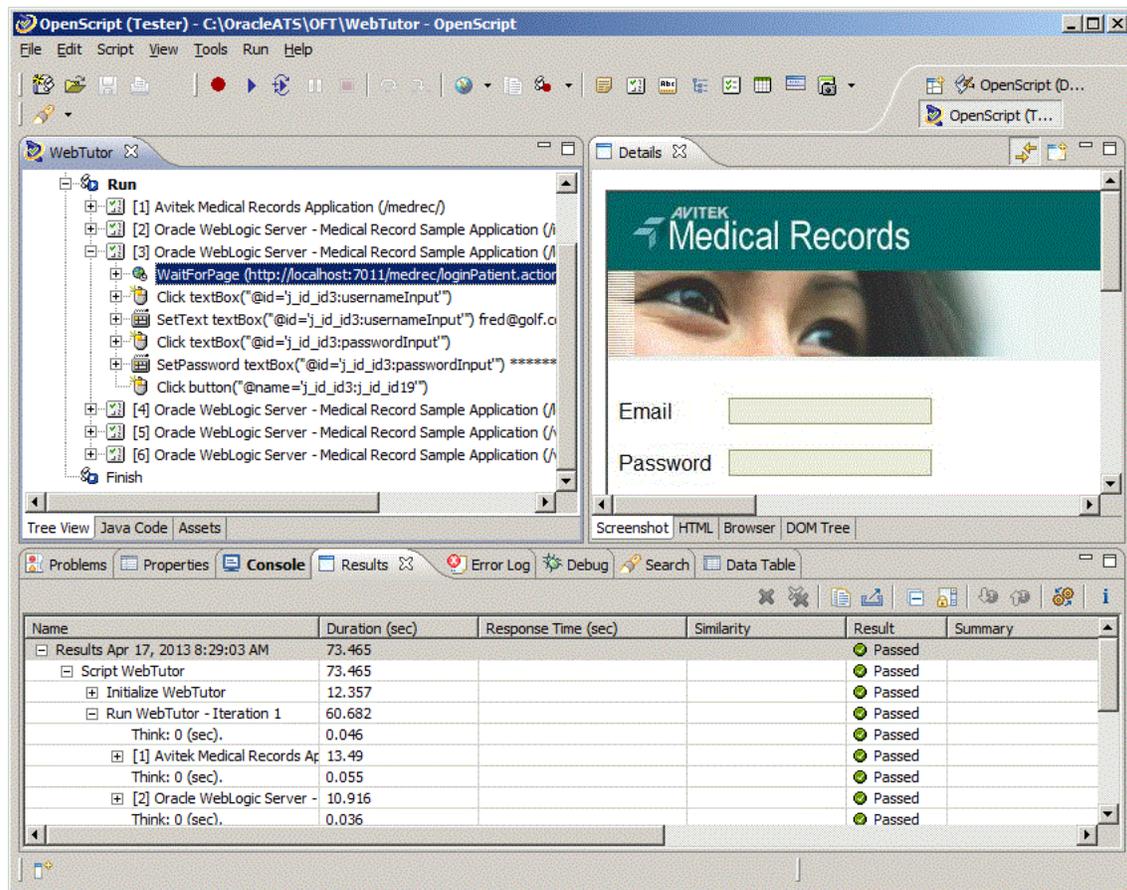
The Oracle OpenScript main window is where you develop the scripts used for functional/regression testing and load/performance testing of your Web site or application. Specific types of scripts you develop using Oracle OpenScript can also be used by Oracle Load Testing or Oracle Test Manager.

Scripts represent a sequence of actions and tests performed on a Web site or application. Scripts are used by Oracle OpenScript for regression testing and Oracle Load Testing for performance (load and scalability) testing.

The Oracle OpenScript main window consists of the menu bar, toolbar, and the scripting workbench in the Eclipse Integrated Development Environment (IDE). The Workbench provides an Eclipse-based scripting platform where you can create and run your automated test scripts. Users can use the Tree View graphical scripting interface for creating and editing scripts through the UI. Users can also switch to the Java Code view programming interface and leverage the integrated Eclipse IDE for creating and editing their scripts programmatically.

The workbench includes a Tester Perspective and a Developer Perspective. The Tester Perspective provides a convenient way to record and edit scripts and view the playback results. The Developer Perspective provides advanced options for developers when creating and editing scripts using the advanced features of OpenScript and the Eclipse development platform.

Figure 2–8 Oracle OpenScript Main Window



The OpenScript Test Modules provide application-specific test automation capabilities. Each Test Module is custom built to test a specific application or protocol. OpenScript includes several functional and load testing modules for testing Web-based applications.

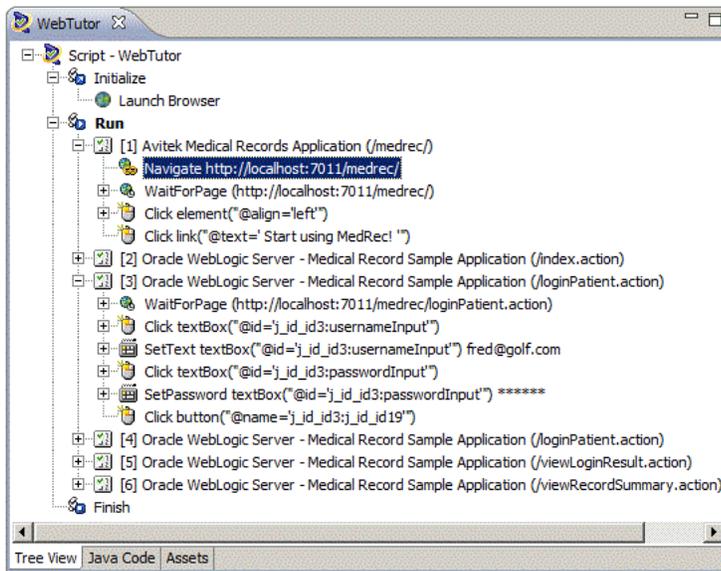
2.3.1 Script View

Shows the recorded script in two tabs: Tree View and Java Code. The Tree View tab shows the steps and pages and the Initialize, Run, and Finish nodes of each step using a graphical tree view. The Java Code tab shows the underlying Java code used for the script.

The script view is where you perform the majority of script editing actions. The Script view has the following tab views:

2.3.1.1 Tree View

The Tree View shows the script navigations and data as nodes in a collapsible tree view. The Tree View corresponds to the Java Code view. Any changes in the Tree View will be automatically updated in the Java Code view.

Figure 2–9 Script Tree View

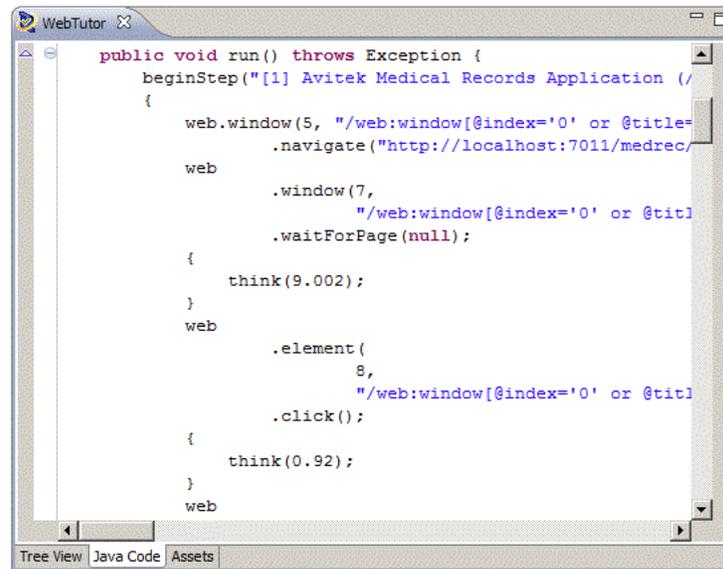
The Tree View has the following standard nodes:

- Initialize - specifies script actions to perform once at the beginning of script playback.
- Run - specifies script actions to perform one or more times during script playback depending upon databanks or other custom programming.
- Finish - specifies script actions to perform once at the end of script playback.

Use the Record options and right-click shortcut menu to add options to script nodes or modify the properties of script nodes in the Tree View.

2.3.1.2 Java Code

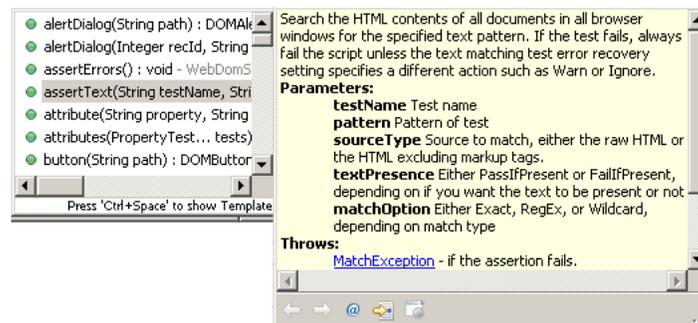
The Java Code view shows the script navigations and data as Java programming code. The Java Code view corresponds to the Tree View. Any changes in the Code View will be automatically updated in the Tree View.

Figure 2–10 Script Java Code View

The Java Code view has the following standard procedures:

- `initialize()` - corresponds to the Initialize node of the Tree View and executes any custom code added once at the beginning of script playback.
- `run()` - corresponds to the Run node of the Tree View and executes recorded and custom code one or more times during script playback depending upon databanks or other custom programming.
- `finish()` - corresponds to the Finish node of the Tree View and executes any custom code added once at the end of script playback.

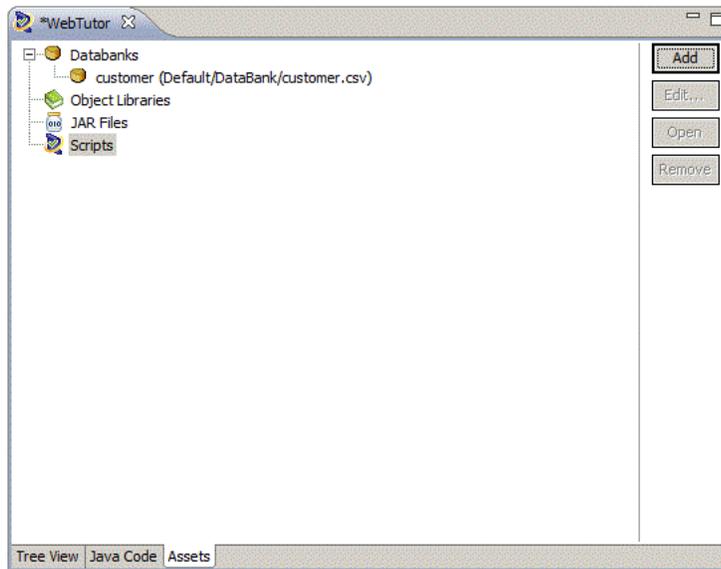
Use Ctrl-space to open an Intellisense window listing available procedures.

Figure 2–11 Java Code View Intellisense Window

See the API Reference in the OpenScript Platform Reference help for additional programming information.

2.3.1.3 Assets View

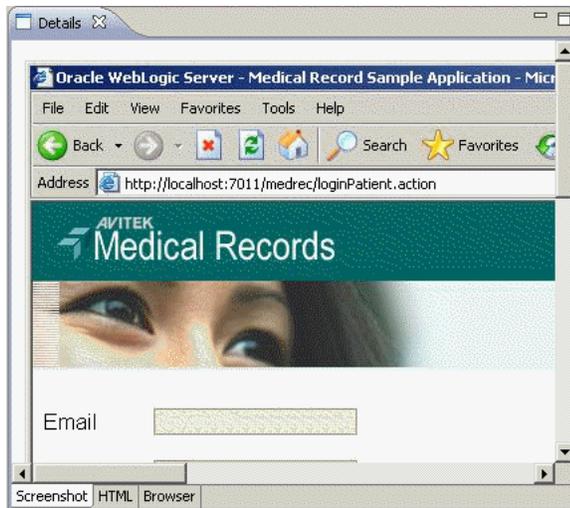
The Assets view shows the external script assets that have been added to the script. Script assets include Databanks, Object Libraries, Jar files, and child scripts.

Figure 2–12 Script Assets View

Script assets include Databanks, Object Libraries, Jar files, and child scripts.

2.3.2 Details View

The Details view shows the content details for URL navigations added to the script.

Figure 2–13 Details View Showing Screenshot Tab View

The Details view may have the following tab views depending upon the selected script node and type of script:

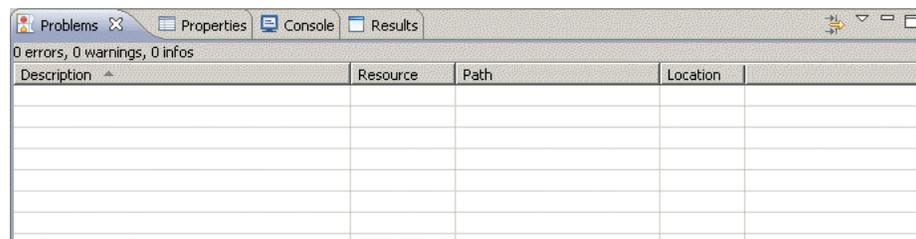
- Screenshot - shows a screen capture of the web page.
- Browser - shows the Browser rendered page for the script navigation selected in the tree view.
- HTML - shows the HTML source for the script navigation selected in the tree view.
- Headers - shows the Request Header and Response Header source for the script navigation selected in the tree view.

- Comparison - shows the recorded and playback text for the Content, Request Header, or Response Header selected in the Compare list. The Comparison tab appears only after a script is played back and a navigation is selected in the Results View.
- Results Report - shows the results report for the script playback. The Results Report tab appears only after a script is played back and a navigation is selected in the Results View.

2.3.3 Problems View

The Problems view shows any problems in the script code that may produce errors or prevent compiling the script.

Figure 2–14 Problems View



The Problems view shows the following information:

- # error, # warnings, # infos - shows the number of errors, warning messages, and information messages in the problems view.
- Description - shows a description of the errors, warning messages, and information messages.
- Resource - shows the name of the resource file where the error, warning, or information message was generated.
- Path - shows the script name, workspace, and repository path where the resource file is located.
- Location - shows the location/line number where the error, warning, or information message was generated.

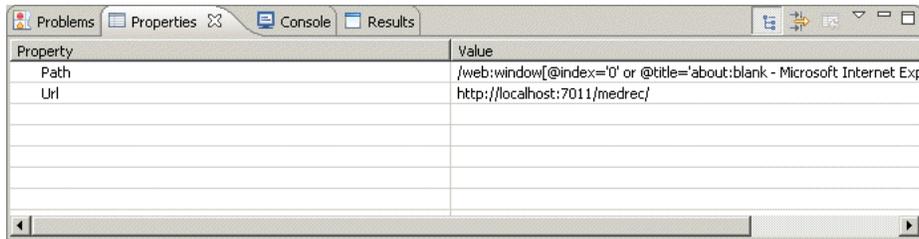
The following toolbar button is available in the Problems View:

- Configure the filters to be applied to this view - opens a dialog box for configuring the filters to apply to the Problems View.

2.3.4 Properties View

The Properties view shows the properties for the selected node in the script.

Figure 2–15 Properties View



The Properties view shows the following information:

- Property - shows the names of the properties for the script node. The properties vary depending upon which type of script node is selected.
- Value - shows the value of the script node properties. Property values can be edited in the properties view.

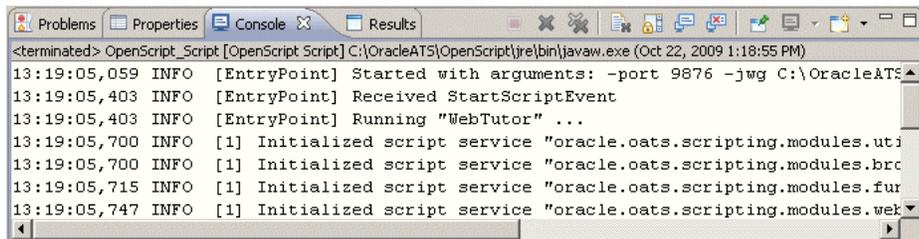
The following toolbar buttons are available in the Properties View:

- Show Categories - toggles the property categories.
- Show Advanced Properties - toggles the advanced properties.
- Restore Default Value - restores any changed property values to the default values.

2.3.5 Console View

The Console view shows the playback command output and status information for the script. Script log message also appear in the Console.

Figure 2–16 Console View

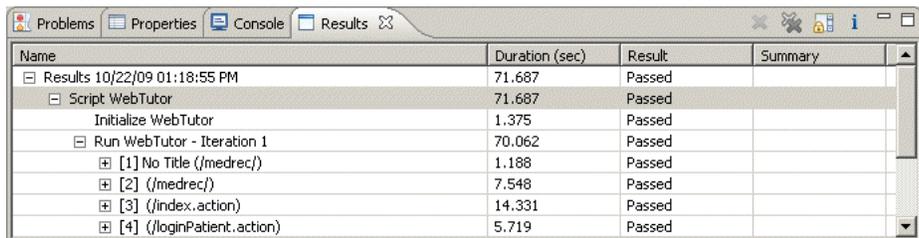


See the Process Console View topics in the reference section of the Java development user guide online help for additional information about console toolbar options.

2.3.6 Results View

The Results view shows the playback results for the script.

Figure 2–17 Results View



The Results view shows the following information:

- Name - shows the test date or navigation name.
- Duration - shows the playback time for the page navigations.
- Result - shows the playback result: Passed or Failed.
- Summary - shows the data values from the Data Bank that are passed to parameters or it shows failure descriptions.

The following toolbar buttons are available in the Result View:

- Delete Result - deletes the selected result row.
- Delete All Results - deletes all rows from the Results View.
- Scroll Lock - toggles scroll lock on and off for the Result View.
- Properties - opens the Properties for the selected result.

2.3.7 Other Views

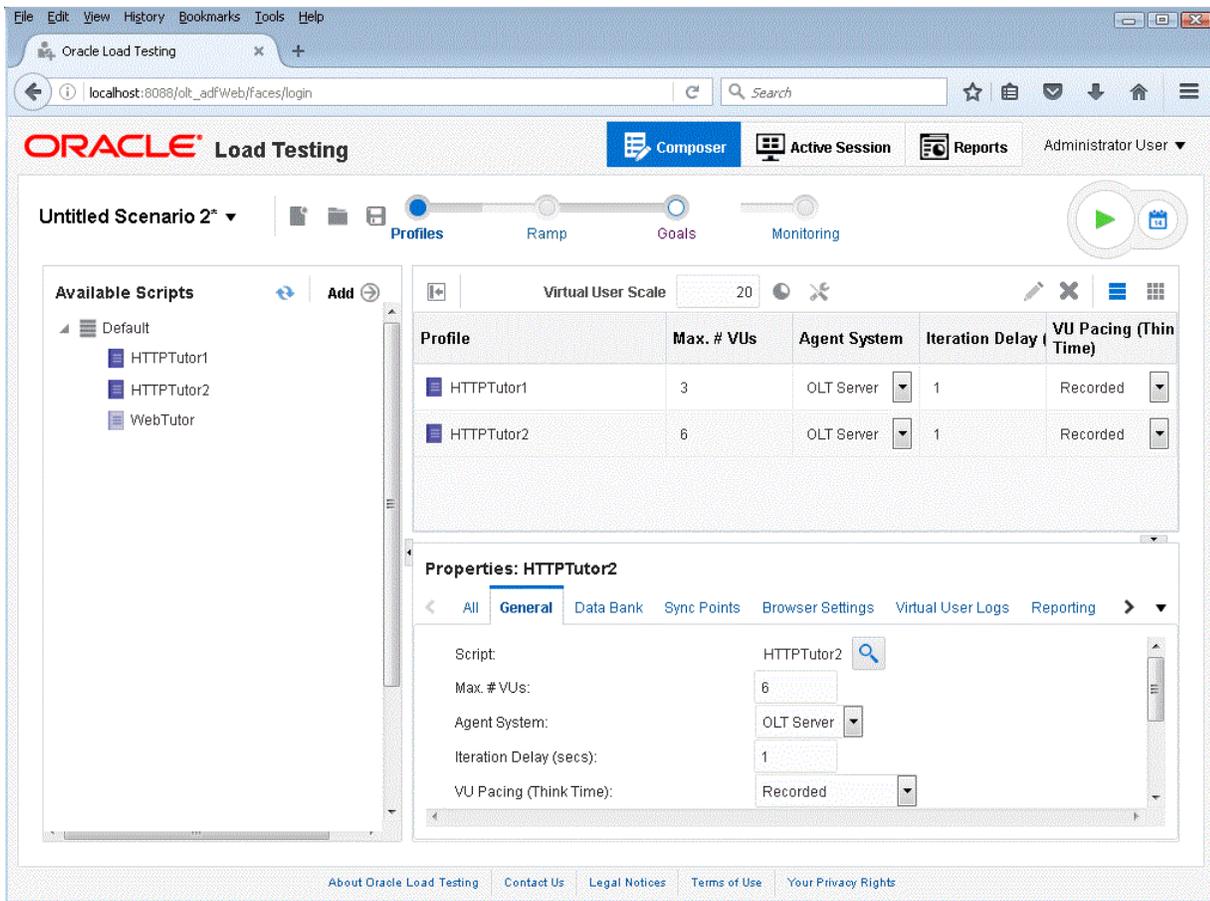
The OpenScript Developer Perspective includes several other views, such as Debug, Breakpoints, Navigator, and Package, that can be used by advanced users for specific testing and debugging purposes. See the *OpenScript User's Guide* for additional information.

2.4 Oracle Load Testing Main Window Features

The Oracle Load Testing main window is where you perform the majority of your load/performance testing activities. Oracle Load Testing uses scripts that you develop using Oracle OpenScript.

The main window consists of the menu bar, toolbar, and the controller tab dialogs.

Figure 2–18 Oracle Load Testing Main Window



You can open the Oracle Load Testing application from the **Start** menu.

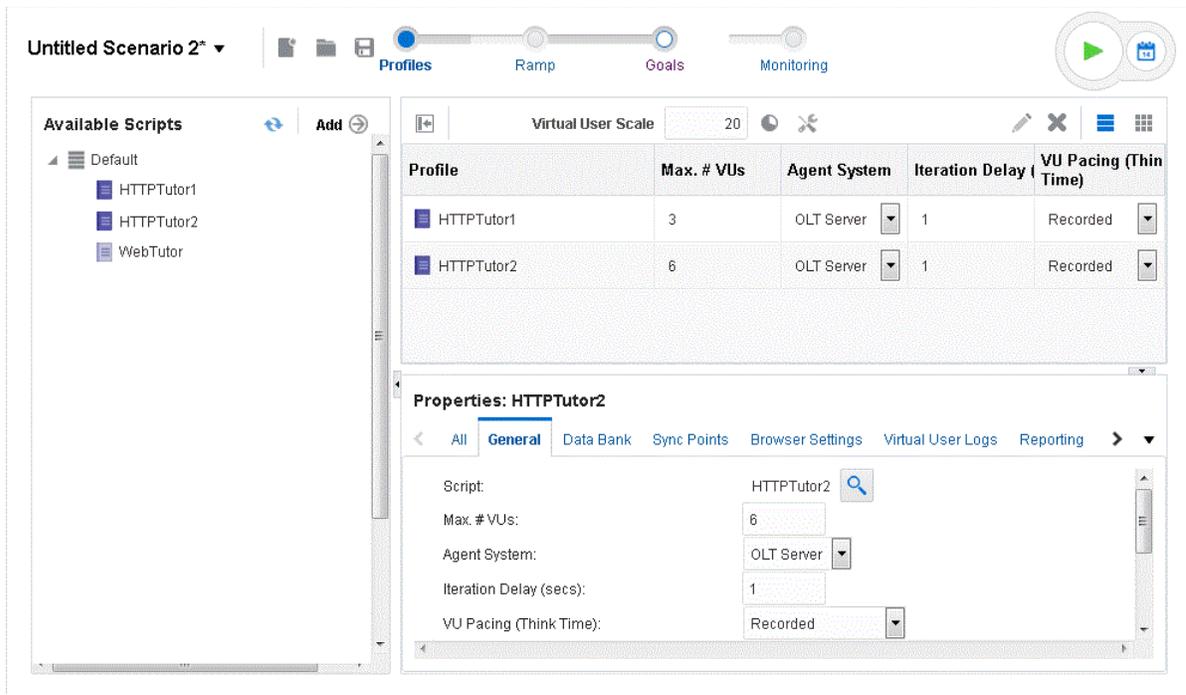
2.4.1 Composer Tab

The Composer tab is where you specify information about the virtual users to include in the load test and the attributes for each set of virtual users.

2.4.1.1 Profiles Section

The Profiles section is where you add OpenScript scripts to define Virtual User profiles and the Properties to use for a Load Testing Scenario.

Figure 2–19 Profile Section of Composer Tab

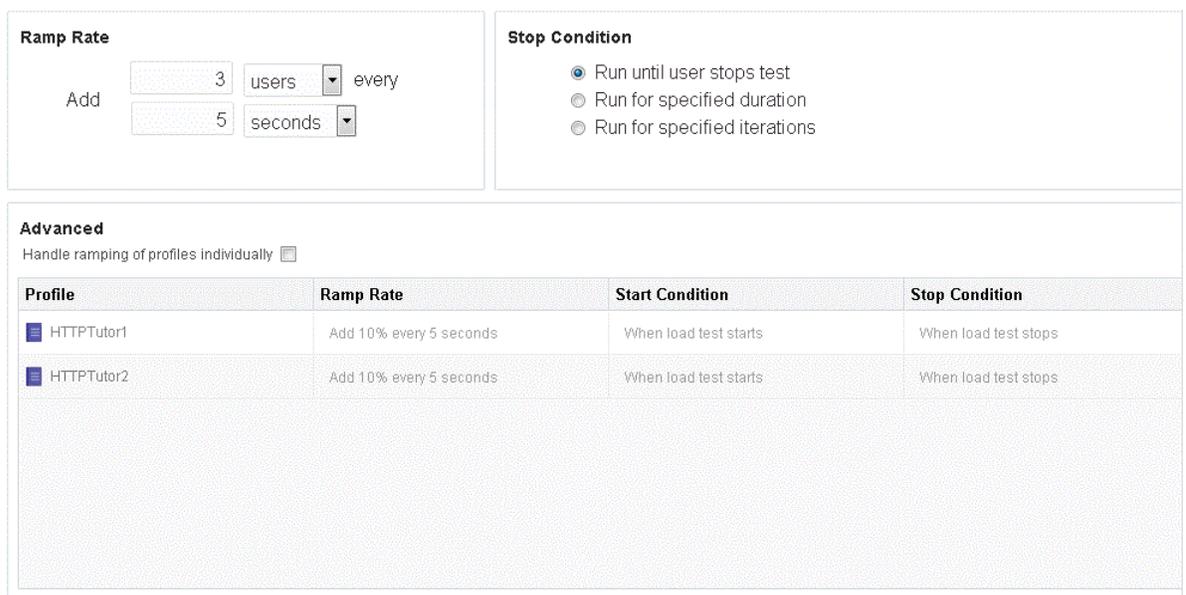


You can define user profiles that specify which scripts the users playback to emulate real users and how many virtual users to emulate.

2.4.1.2 Ramp Section

The Ramp section lets you specify the Virtual User rampup for the current Oracle Load Testing scenario. You can specify the ramp conditions for the entire scenario or for each Virtual User profile individually.

Figure 2–20 Ramp Section of Composer Tab



2.4.1.3 Goals Section

The Goals section of the Composer tab lets you set test goals that specify conditions for specific counter and script parameters. You can specify one or more goals and set the results based upon to test reaching any one of the goals or all of the goals.

Figure 2–21 Goals Section with Multiple Goals and Conditions

The screenshot displays the 'Goals' configuration section. At the top, there is a 'Goals' header with an 'Add Goal' button and a dropdown menu set to 'any of these goals are met'. Below this, two goal configurations are shown:

- Goal 1:**
 - Goal is met when: all of these conditions apply
 - Number of VUs: equals 500.0
 - Total - Avg Performance (sec): is less than 2.0
- Goal 2:**
 - Goal is met when: any of these conditions apply
 - VUs with Errors: is less than 3.0

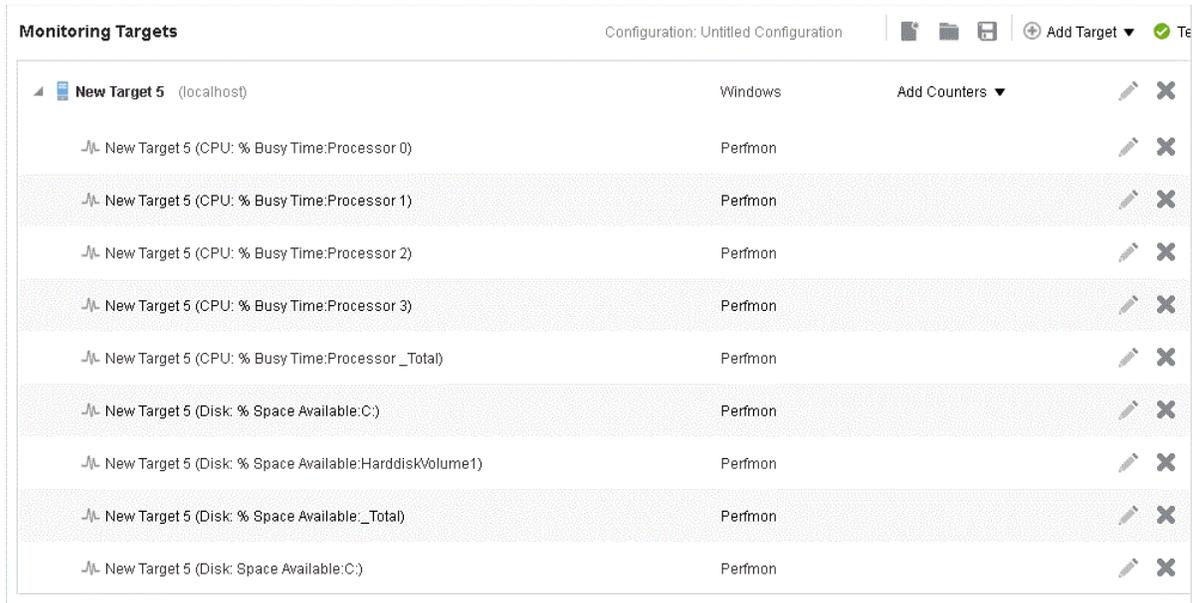
Each condition row includes a star icon, a dropdown for the comparison operator, a text input for the value, and a close button (X). Below the goals section is the 'Results' section, which includes a link 'Edit results values...' and two dropdown menus:

- When goals are met, mark load session: Passed
- When goals are not met, mark load session: Failed

2.4.1.4 Monitoring Section

The Monitoring sub-tab lets you specify ServerStats configurations for monitoring statistics from a variety of systems and server types. You can add target systems and the specific counters to monitor during the load test on each target system. ServerStats monitoring configurations can be saved to a configuration file for use with other Load Testing Scenarios.

Figure 2–22 Monitoring Section of Composer Tab



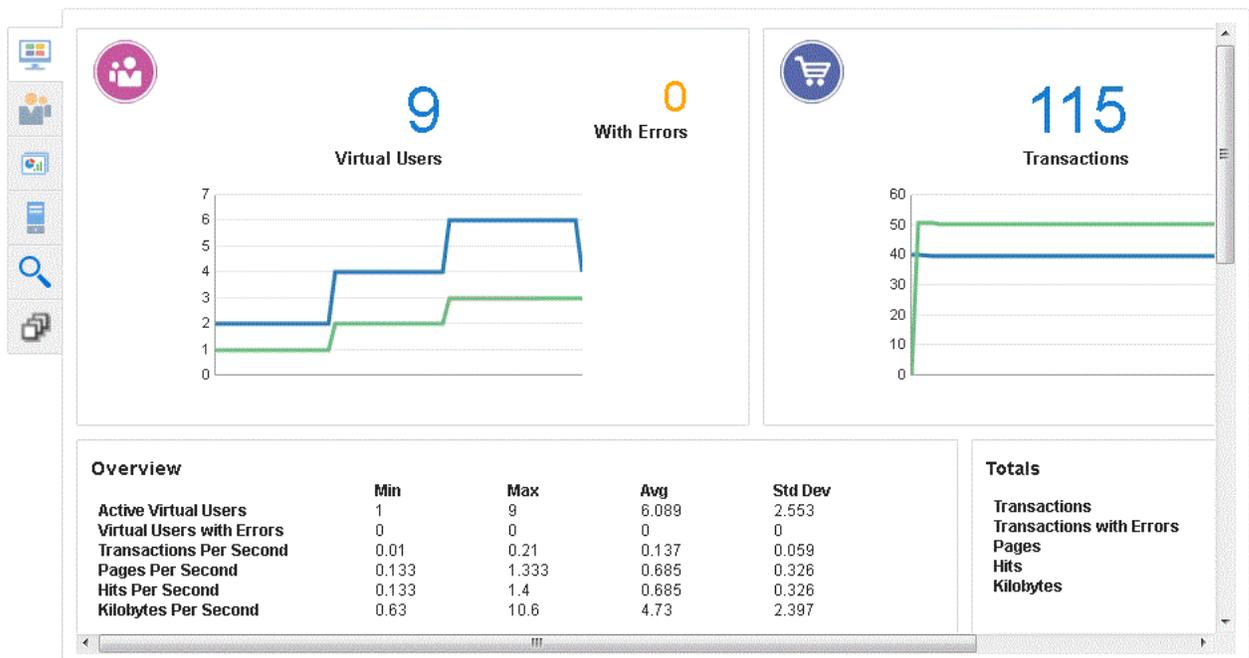
2.4.2 Active Session Tab

The Active Session tab shows information about the currently running virtual users and the profile and playback details associated with each. The Active Session tab has the following sub-tabs.

2.4.2.1 Session Overview Sub-Tab

The Session Overview sub-tab shows the performance statistics for the currently active session.

Figure 2–23 Session Overview Tab Showing Performance Statistics



2.4.2.2 Virtual User Status Sub-Tab

The Virtual User Status grid shows the status of running Virtual Users.

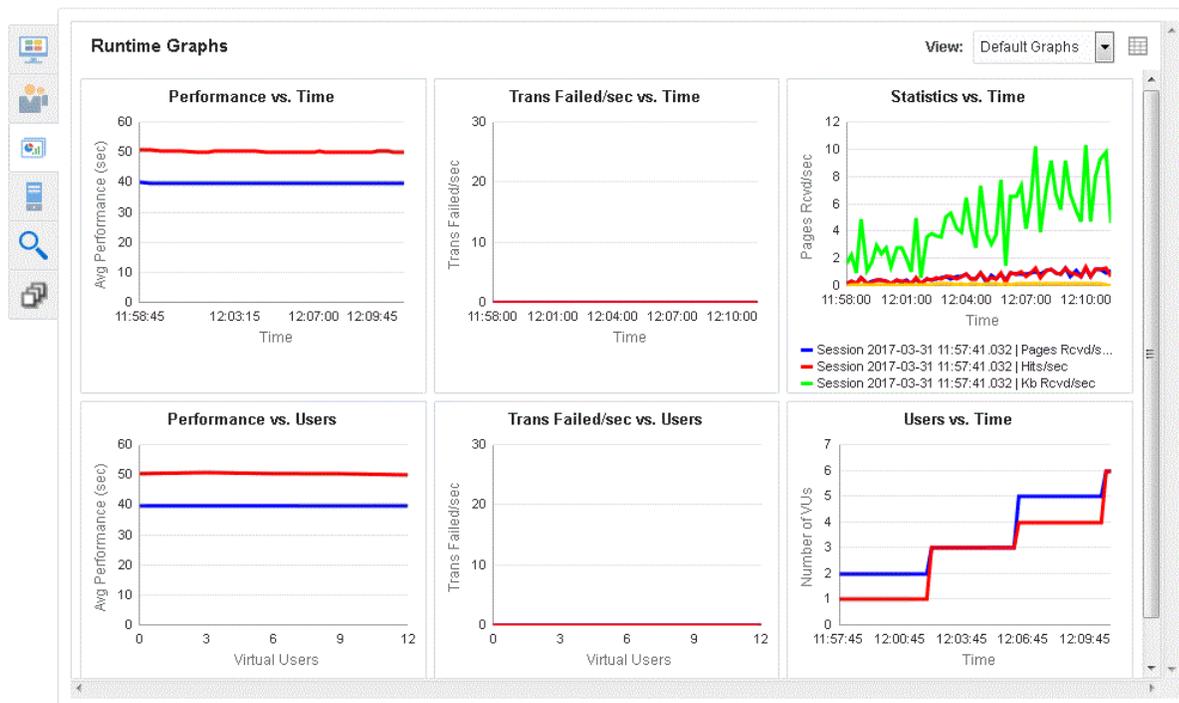
Figure 2–24 Virtual User Status Grid

VUID	Profile	Status	Iterations	Failed	Last Run Time	Current Step	System	Databank	LastError	Previous Error
1	HTTP Tutor1	Think tim...	14	0	39.693	[2] MedRe...	OLT Server			
2	HTTP Tutor1	Think tim...	14	0	39.71	[2] MedRe...	OLT Server			
3	HTTP Tutor2	Think tim...	11	0	50.271	[2] MedRe...	OLT Server	avitek: [fred@golf.c...		
4	HTTP Tutor1	Think tim...	8	0	39.577	[1] Welco...	OLT Server			
5	HTTP Tutor1	Think tim...	8	0	39.588	[1] Welco...	OLT Server			
6	HTTP Tutor2	Think tim...	6	0	50.244	[2] MedRe...	OLT Server	avitek: [volley@ball...		
7	HTTP Tutor1	Think tim...	1	0	39.653	[4] View P...	OLT Server			
8	HTTP Tutor1	Think tim...	1	0	39.682	[4] View P...	OLT Server			
9	HTTP Tutor2	Think tim...	1	0	50.311	[2] MedRe...	OLT Server	avitek: [page@fish...		

2.4.2.3 Runtime Graphs Sub-Tab

The Runtime Graphs tab lets you view the graphs at run-time and define custom graphs to monitor runtime data.

Figure 2–25 Runtime Graphs Tab - Default Graphs



2.4.2.4 ServerStats Sub-Tab

The ServerStats sub-tab lets you monitor server statistics for target systems and counters defined as configurations in the Monitoring section of the Composer tab.

Figure 2–26 ServerStats Sub-Tab Showing Monitoring Configuration Targets and Counters



2.4.2.5 Virtual User Logs Sub-Tab

The Virtual User Logs sub-tab lets you view log information saved during a scenario run.

2.4.2.6 Sync Point Status Sub-Tab

The Sync Point Status sub-tab lets you view and control sync point that have been configured for the Virtual User scripts in OpenScript.

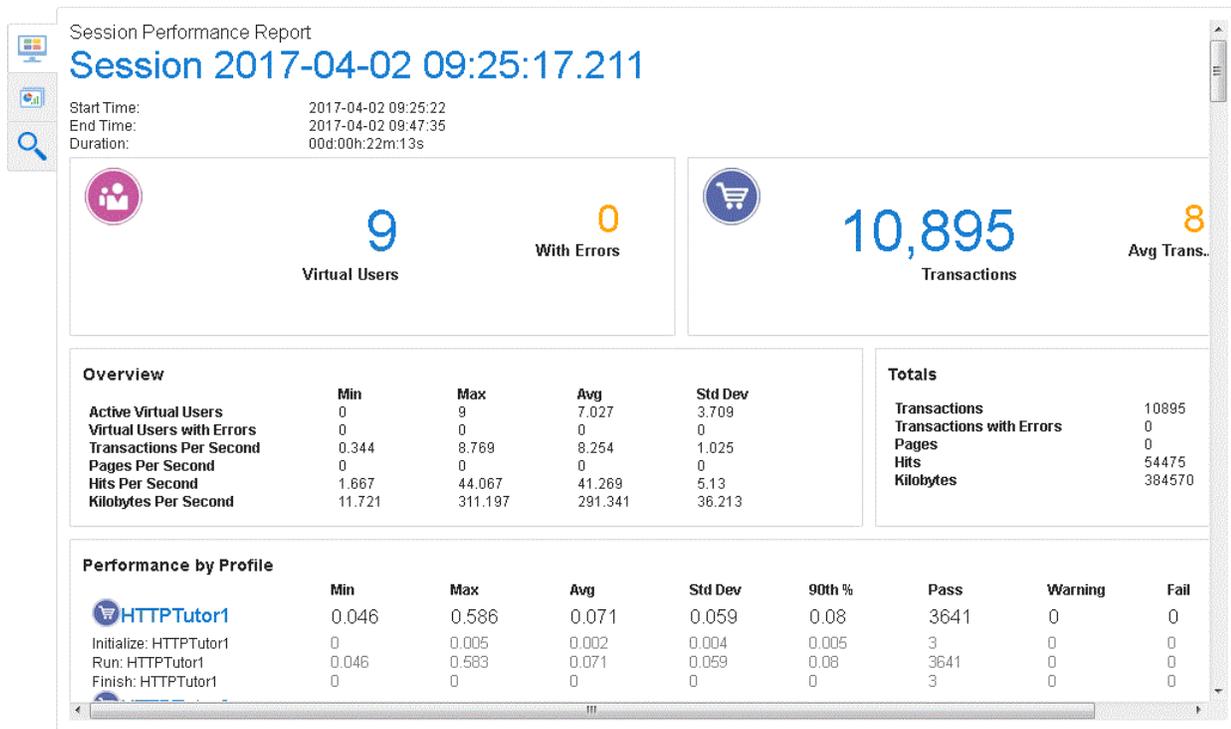
2.4.3 Reports Tab

The Create Reports tab lets you create post-session reports and graphs.

2.4.3.1 Session Overview Sub-Tab

The Session Overview sub-tab shows the Performance Statistics report for the saved session data.

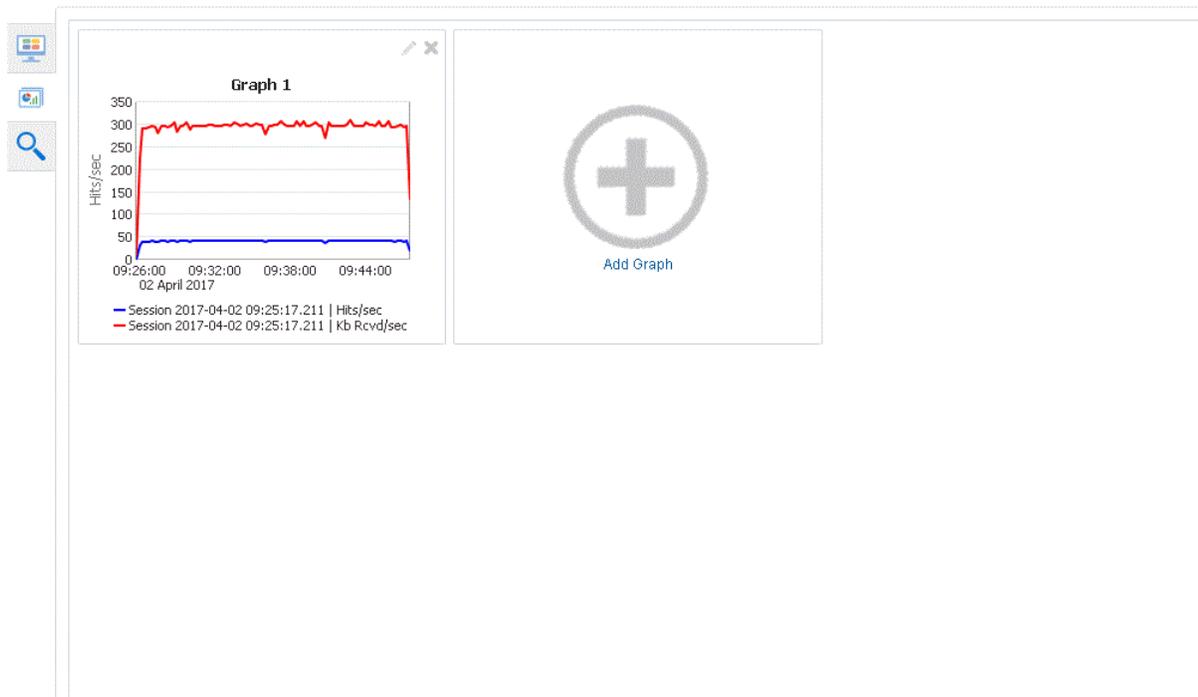
Figure 2-27 Session Overview Showing the Performance Statistics Session Report



2.4.3.2 Graph Sub-Tab

The Reports dashboard lets you add custom graphs.

Figure 2-28 Reports Dashboard with Custom Graph Added



2.4.3.3 Virtual User Logs Sub-Tab

The Virtual User Logs sub-tab lets you view log information saved during a scenario run.

2.5 Oracle Test Manager Main Window Features

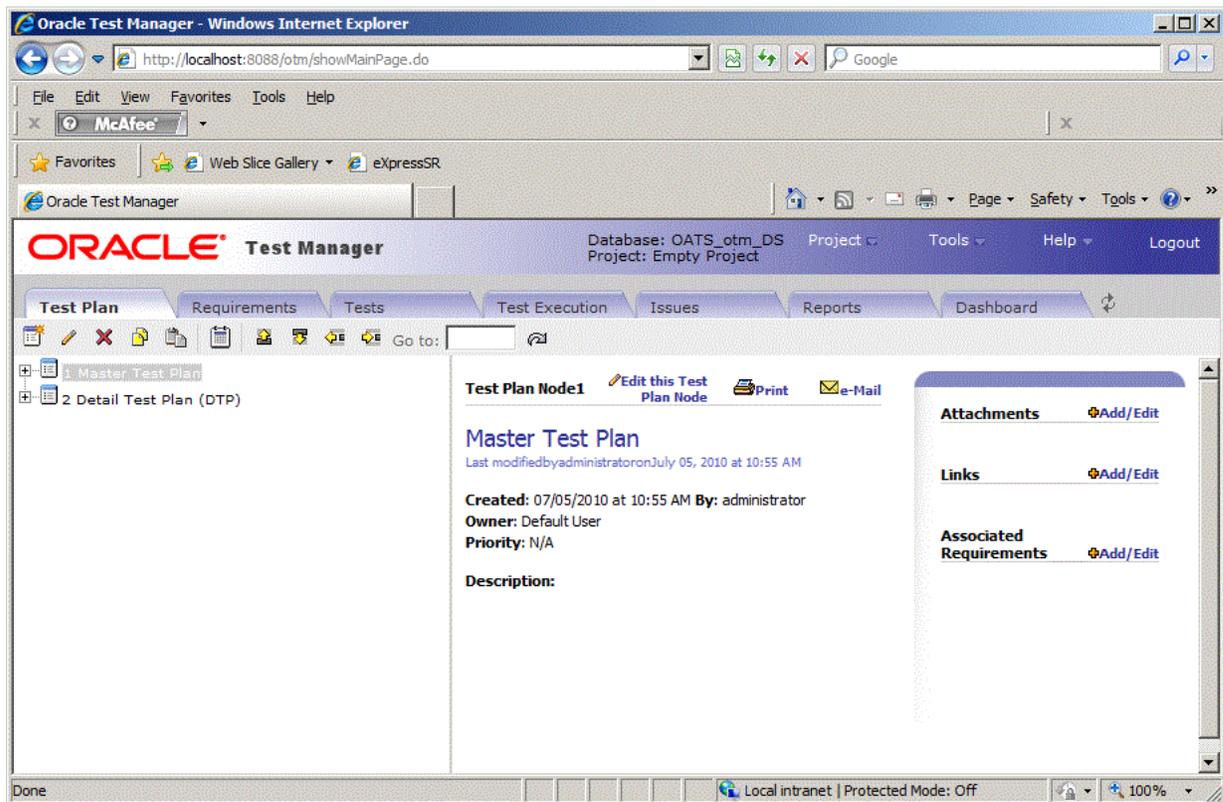
Oracle Test Manager lets you create projects that group together and organize test scripts, requirements that need to be tested, and issues resulting from the tests. Once created, you can indicate the relationships among these items, allowing you to quickly and easily find all information pertaining to a particular test script, requirement, or issue.

The main window consists of the menu bar, toolbar, and the tab views.

2.5.1 Test Plan Tab

The test plan tab lets you work with test plans.

Figure 2–29 Test Plan Tab



The number of test plans displayed is determined by the number you enter in the Maximum Tree Nodes field in options. You can:

- Expand and collapse the tree view by clicking on the plus and minus signs.
- View the next or previous group of test plans by clicking the **Next** or **Previous** button.
- Move test plan by selecting a test plan and using the move buttons.

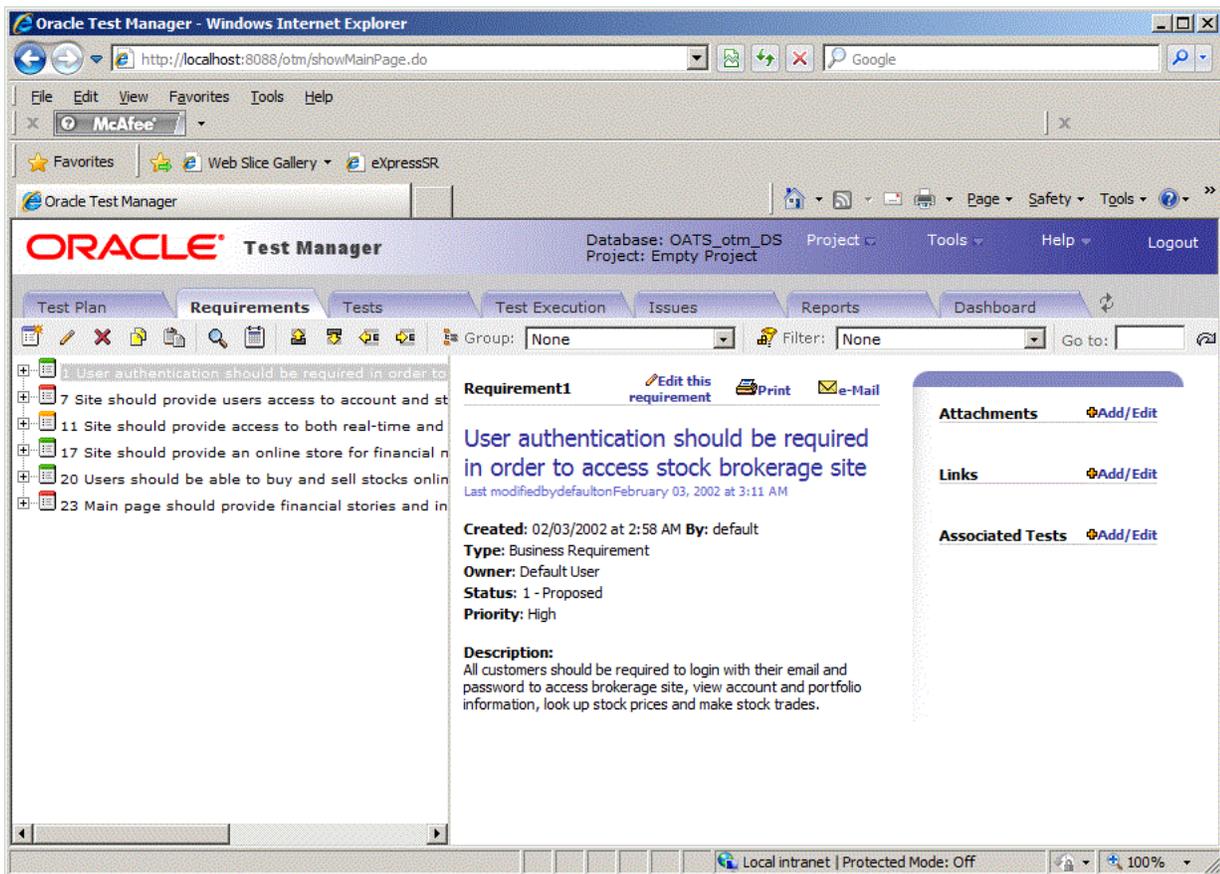
The right pane lists the selected test plan's details. In the upper right corner, associated requirements are listed as well as attachments and links. You can:

- Click **Edit this Test Plan** to open the Edit Requirement dialog box.
- Click **Print** to print the right pane.
- Click **e-Mail** to e-mail the test plan. The title and description are automatically copied to the e-mail.
- Click on an associated requirement to view its details.
- Click on an attachment to open it in the appropriate application.
- Click on a link to view the URL in a separate browser window.
- Select **Add/Edit** to add or edit attachments, links, or associated items.

2.5.2 Requirements Tab

The requirements tab lets you work with requirements.

Figure 2–30 Requirements Tab



The number of requirements displayed is determined by the number you enter in the Maximum Tree Nodes field in options. You can:

- Expand and collapse the tree view by clicking on the plus and minus signs.
- View the next or previous group of requirements by clicking the **Next** or **Previous** button.

- Hold the mouse over a node to view a count of its child nodes.
- Move requirements by selecting a requirement and using the move buttons.
- Search requirements by clicking the **Find** button.
- Group requirements by clicking **Group**.
- Filter requirements by clicking **Filter**.

The color of the icon in front of the requirement indicates its priority. The default colors are as follows and can be changed by changing the order of the Requirement Priorities in the Administrator.

- Red, high priority
- Yellow, medium priority
- Green, low priority

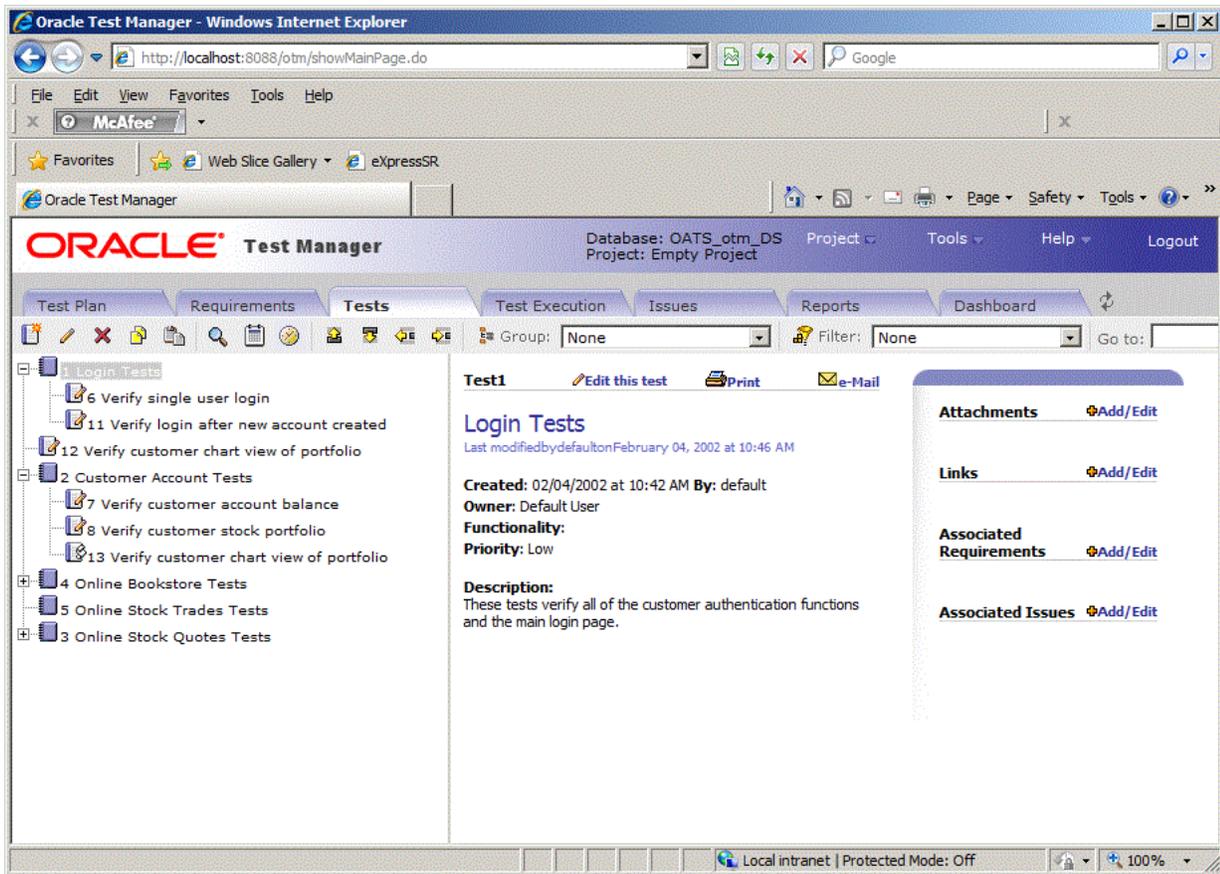
The right pane lists the selected requirement's details. In the upper right corner, associated tests and issues are listed as well as attachments and links. You can:

- Click **Edit this requirement** to open the Edit Requirement dialog box.
- Click **Print** to print the right pane.
- Click **e-Mail** to e-mail the requirement. The title and description are automatically copied to the e-mail.
- Click on an associated test or issue to view its details.
- Click on an attachment to open it in the appropriate application.
- Click on a link to view the URL in a separate browser window.
- Select **Add/Edit** to add or edit attachments, links, or associated items.

2.5.3 Tests Tab

The tests tab lets you work with tests.

Figure 2–31 Tests Tab



The number of tests displayed is determined by the Maximum Tree Nodes setting in options. You can:

- Expand and collapse the tree view using the plus and minus signs.
- View the next or previous group of tests by clicking the **Next** or **Previous** button.
- Hold the mouse over a node to view a count of its child nodes.
- Move tests by selecting the test and using the **Move** buttons.
- Search tests by clicking the **Find** button.
- Group tests by clicking the **Group** button.
- Filter tests by clicking the **Filter** button.
- Schedule when to run tests by clicking the **Schedule** button.

The icon in front of the test indicates the type of test as follows:

- Manual test - blue with a pencil.
- Oracle OpenScript - blue with a pencil.
- 3rd Party test - blue with two stars

The right pane lists the selected test's details. Test steps and run history are displayed. You can:

- Click **Edit this test** to open the Edit Test dialog box.
- Click **Print** to print the right pane.

- Click **e-Mail** to e-mail the test. The title and description are automatically copied to the e-mail.

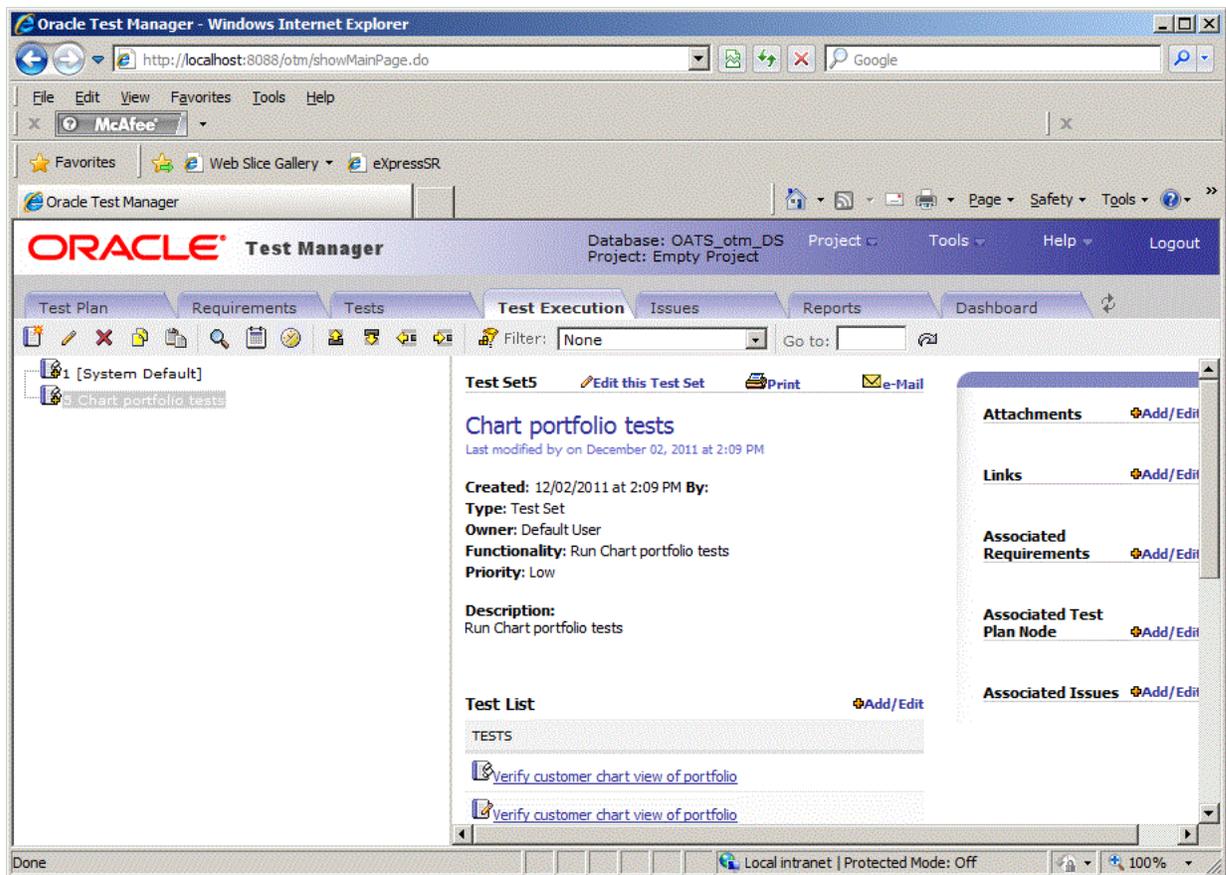
In the upper right corner of the right pane, associated requirements and issues are listed as well as attachments and links. You can:

- Click on an associated requirement or issue to view its details.
- Click on an attachment to open it in the appropriate application.
- Click on a link to view the URL in a separate browser window.
- Select **Add/Edit** to add or edit attachments, links, or associated items.

2.5.4 Test Execution Tab

The test execution tab lets you execute tests in test sets.

Figure 2–32 Test Execution Tab



The number of test sets or test folders displayed is determined by the Maximum Tree Nodes setting in options. You can:

- Expand and collapse the tree view using the plus and minus signs.
- View the next or previous group of tests by clicking the **Next** or **Previous** button.
- Hold the mouse over a node to view a count of its child nodes.
- Move tests by selecting the test and using the **Move** buttons.
- Search tests by clicking the **Find** button.

- Filter tests by clicking the **Filter** button.
- Schedule when to run tests by clicking the **Schedule** button.

The icon in front of the test indicates the type of test as follows:

- Test folder - blue with a spiral.
- Test group - blue with a plus sign.

The right pane lists the selected test's details. Test steps and run history are displayed. You can:

- Click **Edit this test** to open the Edit Test dialog box.
- Click **Print** to print the right pane.
- Click **e-Mail** to e-mail the test. The title and description are automatically copied to the e-mail.
- Click **Run this test** to start the Run Test wizard.
- Click **Delete Results** to display the Delete Results dialog box for deleting results from particular test runs.
- Click the date in the **Run History** section to display result details for a particular run.

The color of the icon in front of the test indicates the last result from running the test, as follows:

- Green, passed
- Red, failed
- Yellow, warning
- Blue, not run
- Silver, currently running

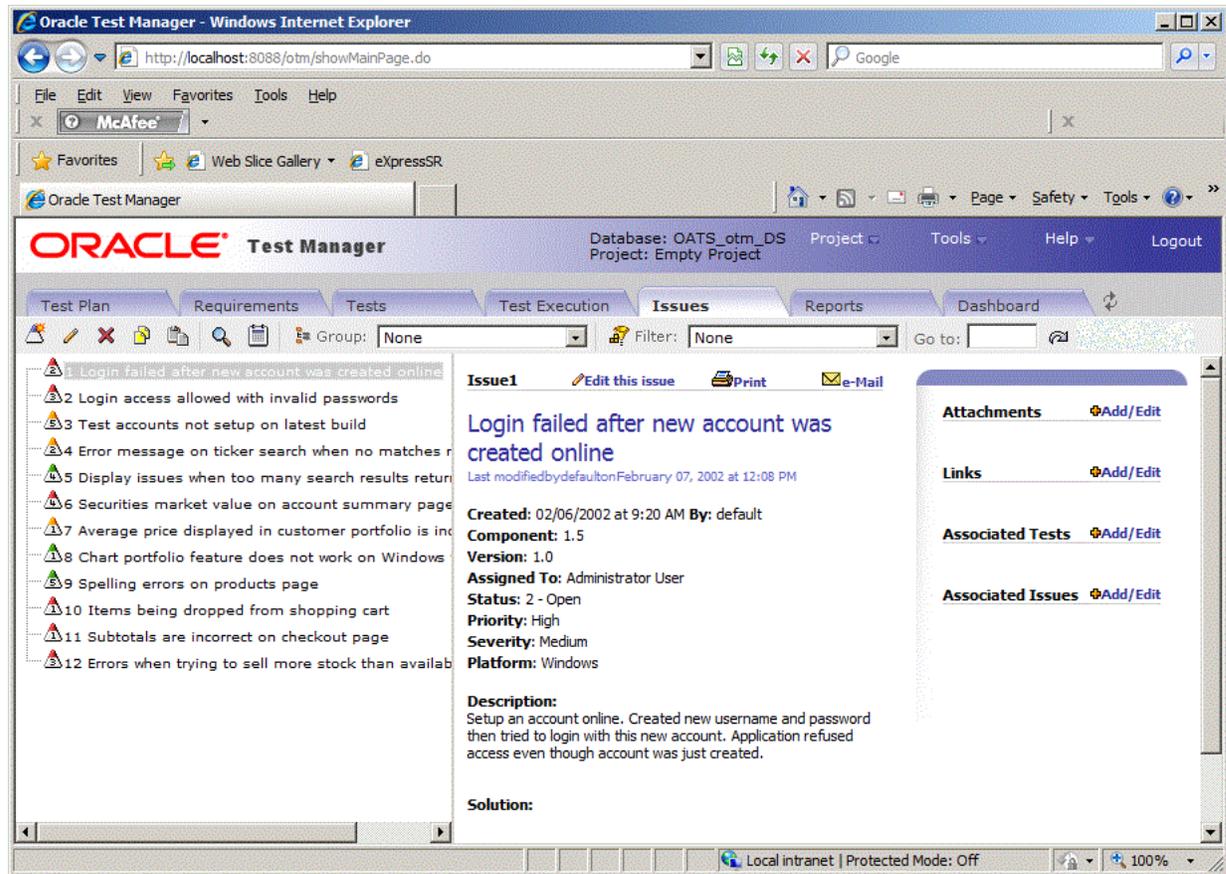
In the upper right corner of the right pane, associated requirements and issues are listed as well as attachments and links. You can:

- Click on an associated requirement or issue to view its details.
- Click on an attachment to open it in the appropriate application.
- Click on a link to view the URL in a separate browser window.
- Select **Add/Edit** to add or edit attachments, links, or associated items.

2.5.5 Issues Tab

The issues tab lets you work with issues.

Figure 2-33 Issues Tab



The number of issues displayed is determined by the Maximum Tree Nodes setting in options. You can:

- View the next or previous group of issues by clicking the **Next** or **Previous** button.
- Group issues by clicking the **Group** button.
- Filter issues by clicking the **Filter** button.
- Hold the mouse over a node to view a count of its child nodes.
- Search issues by clicking the **Find** button.
- Display a particular issue by entering the issue number in the **Goto** field and clicking the **Goto** button.

The color of the icon in front of the issue indicates its priority. The default colors are as follows and can be changed by changing the order of the Issue Priorities in Oracle Test Manager Administrator:

- Red, high priority
- Yellow, medium priority
- Green, low priority

The number inside the icon corresponds to the status number.

The right pane lists information about the selected issue including the issue's details, solution, priority, and status. You can:

- Click **Edit this issue** to open the Edit Issue dialog box.

- Click **Print** to print the right pane.
- Click **e-Mail** to e-mail the issue. The title and description are automatically copied to the e-mail.

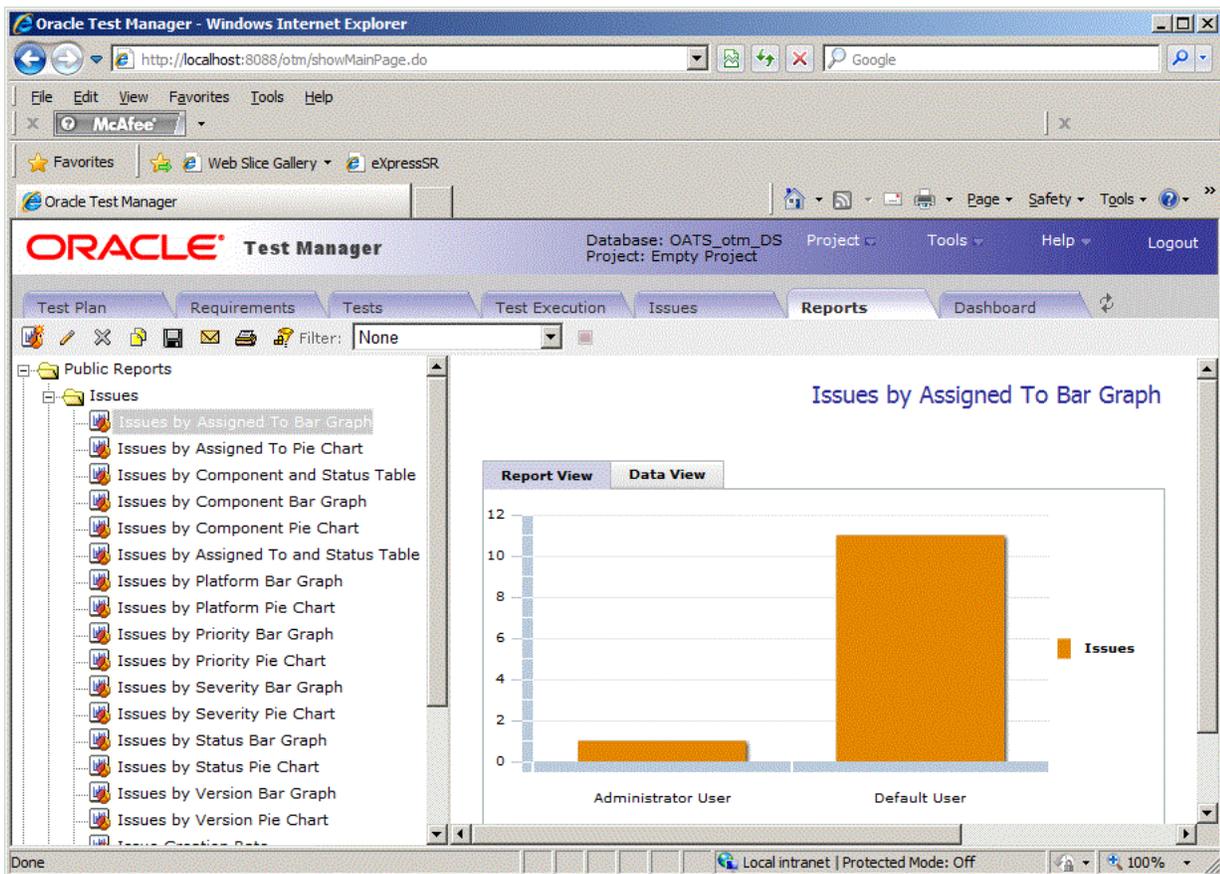
In the upper right corner of the right pane, associated requirements, tests, and issues are listed as well as attachments and links. You can:

- Click on an associated test, requirement, or issue to view its details.
- Click on an attachment to open it in the appropriate application.
- Click on a link to view the URL in a separate browser window.
- Select **Add/Edit** to add or edit attachments or links.

2.5.6 Reports Tab

The Reports tab lets you work with both standard and custom reports.

Figure 2–34 Reports Tab



Oracle Test Manager comes with a standard set of reports that can be viewed as either a graphic or as data. In addition, you can create custom reports to display only the data that you are interested in. You can:

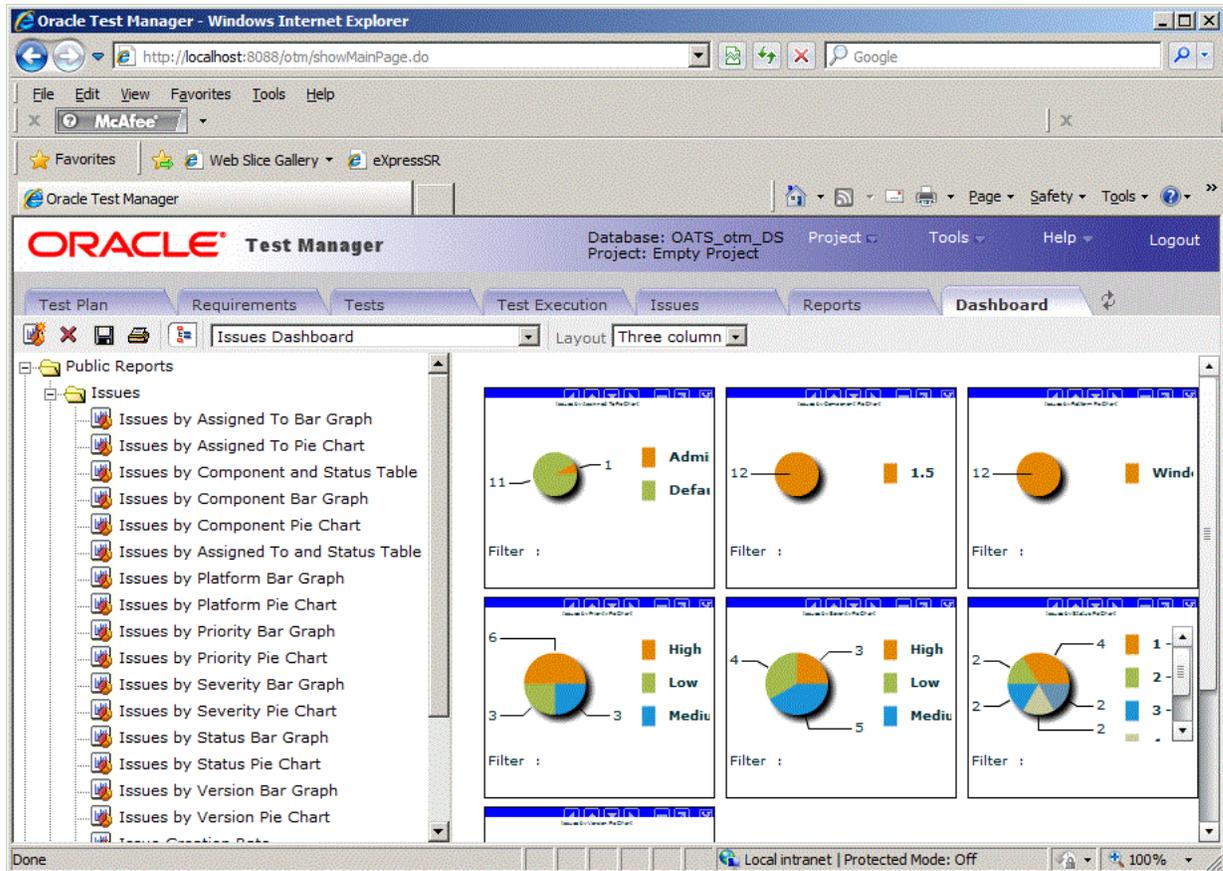
- View a standard or custom report by selecting it from the left tree.
- Add a custom report by clicking **Add**.
- Edit a custom report by clicking **Edit**.

- Delete a custom report by clicking **Delete**.
- Clone an existing report to create a copy of it that you can then edit by clicking **Clone**.
- Save custom reports by clicking **Save**.
- Email reports by clicking **Email**.
- Print reports by clicking **Print**.
- **Filter** the fields in the report to display only the data in which you are interested.
- Export reports to jpg, and xls formats.

2.5.7 Dashboard Tab

The Dashboard tab lets you view an overview of reports.

Figure 2–35 Dashboard Tab



One Dashboard report is available for requirements, tests, and issues. You can customize which reports are displayed for each and then save the view. In addition, you can select the number of columns to use for the display.

You can:

- Add reports to the view by clicking **Add**.
- Remove the selected dashboard report by clicking **Delete**.
- Save the customized view by clicking **Save**.

- Print dashboard reports by clicking **Print**.
- Toggle the display of the report tree by clicking **Toggle**.

Each report has the following toolbar with the following options, described from left to right.

Move Left - moves the report one space to the left.

Move Up - moves the report up one space.

Move Down - moves the report down one space.

Move Right - moves the report one space to the right.

Minimize - minimizes the report.

Maximize - displays the report in a separate window. From there you can toggle between report and data views, and export the report.

Delete - removes the report from the display.

Oracle OpenScript Tutorial

This tutorial walks you through the main features of Oracle OpenScript. The tutorial consists of the following examples:

- **Starting the Avitek Medical Records Sample Application** - explains how to start the sample Avitek Medical Records Server for use with this tutorial.
- **Starting Oracle OpenScript** - describes how to start OpenScript.
- **Creating a Web Functional Test Script** - describes how to create a Web Functional test script project and record a script.
- **Working with Scripts** - explains the features of the OpenScript script tree and how to examine the structure and content of a recorded script.
- **Playing Back a Web Functional Test Script** - explains the procedure for playing back Web Functional Test scripts that you have recorded and viewing the results.
- **Adding Tests to the Script** - explains how to add tests to your OpenScript scripts.
- **Creating an HTTP Test Script** - describe how to create an HTTP protocol load test script project and record a load test script.
- **Creating an HTTP Test Script with Databanks** - describe how to create an HTTP protocol load test script project and explains how to configure and use Databanks to run iterative tests on a login form using data from an external file.
- **Stopping the Avitek Medical Records Server** - explains how to stop the sample Avitek Medical Records Server used with this tutorial.

The tutorial is designed to be followed sequentially from beginning to end. Many of the examples are interrelated and build upon the steps in previous examples.

3.1 Starting the Avitek Medical Records Sample Application

The tutorial uses the Avitek Medical Records Sample Application to record and playback OpenScript scripts. The WebLogic server and Avitek Medical Records Sample Application need to be started on the system before creating OpenScript script projects and recording scripts.

To start the Weblogic Server and Avitek Medical Records Sample Application:

1. Select **Programs** from the **Start** menu and then select **Sample** from the **Oracle Application Testing Suite** menu.
2. Select **Start MedRec Application**.
3. Wait until the Avitek Medical Records Sample Application starts in the Weblogic server.

4. Close the browser window after the server and sample application are started. When recording OpenScript scripts, the browser window will automatically open again to specify the Web address to record.

3.2 Starting Oracle OpenScript

To start OpenScript:

1. Select **Programs** from the **Start** menu, then expand the **Oracle Application Testing Suite** folder.
2. Right-click **OpenScript** and select **Run as administrator**.

3.3 Example 1: Creating a Web Functional Test Script

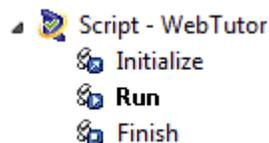
This example illustrates the creation of an OpenScript Web Functional test script project and recording a script. A script project creates the basic structure of an OpenScript script. Initially, the script project includes only the Initialize, Run, and Finish script nodes with the underlying Java code. You use the recording capabilities of OpenScript to record page navigations and generate the Java code for the script.

3.3.1 Creating a Web Functional Test Script Project

To create a Web Functional Test Script Project:

1. Select **New** from the **File** menu.
2. Select **Web** under the **Functional Testing (Browser/GUI Automation)** folder.
3. Click **Next**.
4. Make sure the Repository is set to Default.
5. Enter WebTutor as the script name.
6. Click **Finish**. OpenScript creates the script project and shows the Initialize, Run, and Finish nodes in the Script View as follows:

Figure 3–1 OpenScript Script Project Tree



3.3.2 Recording a Web Functional Test Script

Recording scripts captures the page navigations and generates the Java code that will be used to drive script playback for testing purposes. Web Functional test scripts record and playback actions performed on browser objects.

In this example, we will open the Avitek Medical Records sample application and log in as a patient. During recording, we will add a Text Matching test to verify that the log in was successful.

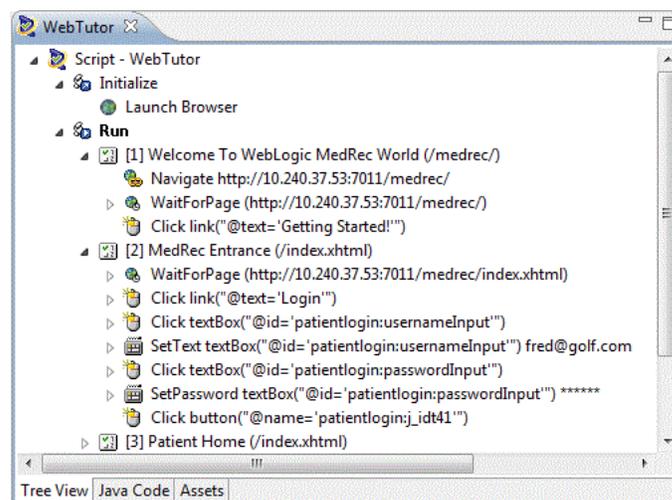
To record a Web Functional Test Script:

1. Select **Record** from the **Script** menu or click the Record toolbar button. OpenScript opens a browser window and the OpenScript toolbar window.

2. Enter `http://<machineName or IP>:7011/medrec/` into the browser Address line and press **Enter**.
3. When the application loads, click **Getting Started!**. A second browser window opens with Avitek Medical Records Sample Application.
4. Click Login under the Patient section.
5. Enter `fred@golf.com` as the Email address.
6. Enter `weblogic` as the password.
7. Click **Sign In**.
8. Click the Text Matching Test button on the OpenScript floating toolbar.
9. Enter `WebText1` as the Test name.
10. Enter `Successful Login` as the Text to Match.
11. Make sure **Source** is set to **HTML Display Contents**.
12. Make sure **Pass when** is set to **Pass if present**.
13. Make sure **Match** is set to **Exact**.
14. Make sure **Verify only, never fail** is selected.
15. Click **OK**.
16. Click **Go** under **View Record Summary**.
17. Click Logout in the Avitek Medical Records application.
18. Click Logout in the Patient log out popup.
19. Close the Avitek Medical Records application browser window.
20. Close the Weblogic Server Avitek Medical Records Sample Application browser window.

Recording automatically stops when you close the second browser window. The script tree view includes plus icons to indicate additional nodes have been added to the script as follows:

Figure 3–2 OpenScript Script Tree After Recording



21. Save the script.

3.4 Example 2: Working with Scripts

This example explains the features of the OpenScript Script tree and how to examine the structure and content of a recorded script.

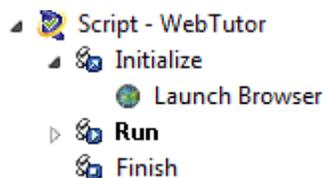
After recording a script, you can expand the Tree View to view the page navigations, actions, and parameters recorded to the script. Before starting this example, make sure the script that you recorded in Example 1 is still displayed.

3.4.1 Viewing Information About Script Items

To view information about script items:

1. Expand the Initialize section to expand the tree as follows:

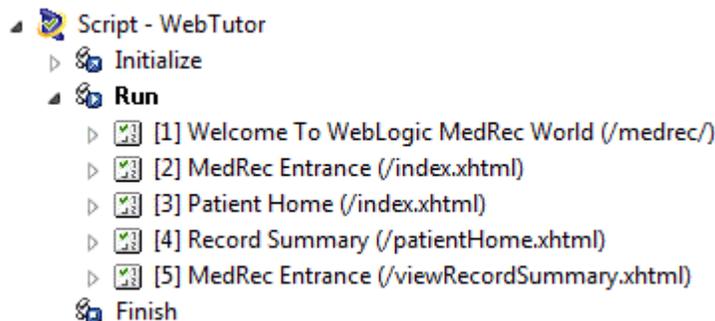
Figure 3–3 Script Tree with Expanded Initialize Section



The Initialize section executes commands that will be run only once at the beginning of script playback. In our recorded script, Launch Browser is the only action in the Initialize section.

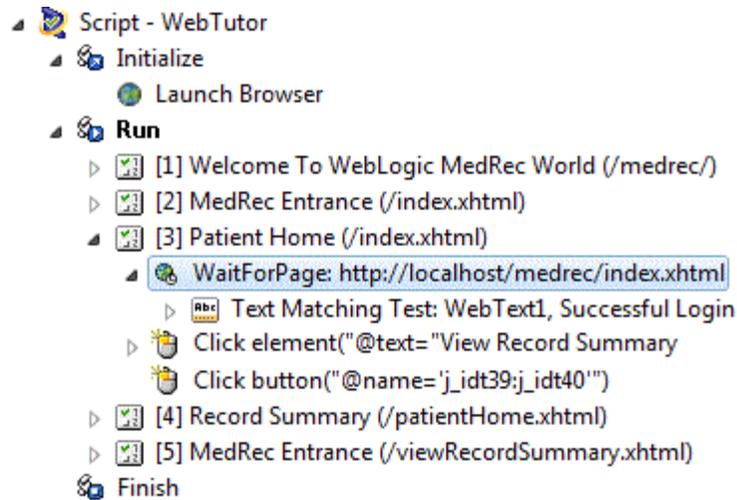
2. Expand the Run section to expand the tree as follows:

Figure 3–4 Script Tree with Expanded Run Section



The Run node contains the navigations recorded to the script as Step Groups. By default, OpenScript Web Functional test scripts create Step Group nodes based on web page navigations. Step Group preferences can be changed in the OpenScript Preferences.

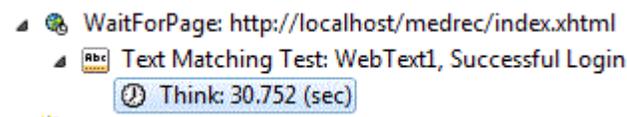
3. Expand the [3] Patient Home (/index.xhtml) Step Group and select the WaitForPage (<http://systemName:7011/medrec/lindex.xhtml>) node as follows:

Figure 3–5 Script Tree with Expanded Step Group Node

The Step Group node shows the actions and parameters recorded for specific navigations and actions on a Web page.

The Details View tabs show the details for a specific navigation including a screen shot of the recorded page, the HTML source, and the browser rendering of the page.

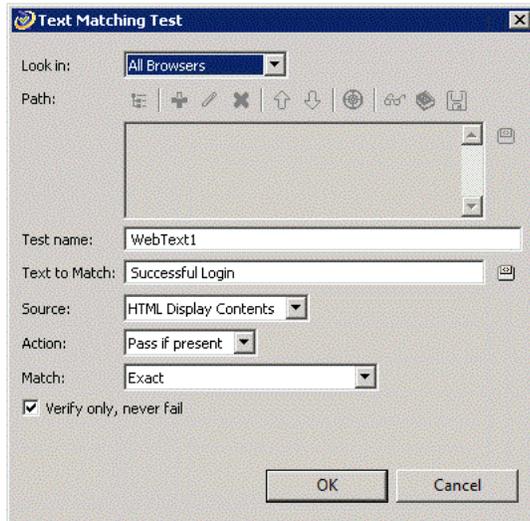
4. Click the Screenshot, HTML, and Browser tabs to view the script details.
5. Expand the WaitForPage (`http://systemName:7011/medrec/index.xhtml`) and Text Matching Test node. The script records Think time nodes to include the amount of user delay that occurred during recording as follows:

Figure 3–6 Script Think Node

6. Select the Think node, click the right mouse button and select **Properties**. The Think time properties lets you edit the delay recorded to a script as follows:

Figure 3–7 Script Think Node Properties

7. Change the Think time value and click **OK**. This is useful if you want to reduce long a delay time that may have occurred during recording of script.
8. Right-click the Text Matching Test: Web Text node and select **Properties**. You can view or change the Text Matching test properties as follows:

Figure 3–8 Text Matching Test Properties

9. Click **Cancel** to leave the Text Matching test properties unchanged.
10. Open and view the properties of other script nodes.

3.4.2 Using the Java Code View

When you create a script project and record a script, the Java code is automatically generated. The Java Code view shows the script navigations and data as Java programming code. The Java Code view corresponds to the Tree View. Any changes in the Code View will be automatically updated in the Tree View. The Java Code view has the following standard procedures:

- `initialize()` - corresponds to the Initialize node of the Tree View and executes any custom code added once at the beginning of script playback.
- `run()` - corresponds to the Run node of the Tree View and executes recorded and custom code one or more times during script playback depending upon databanks or other custom programming.
- `finish()` - corresponds to the Finish node of the Tree View and executes any custom code added once at the end of script playback.

Use Ctrl-space to open an Intellisense window listing available procedures. See the API Reference in the OpenScript Platform Reference help for additional programming information.

3.5 Example 3: Playing Back a Web Functional Test Script

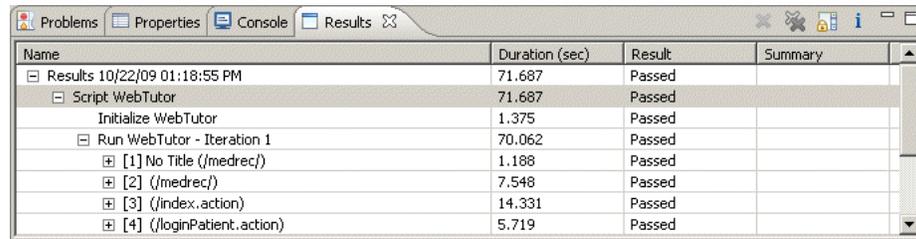
This example explains the procedure for playing back Web Functional Test scripts that you have recorded. It also shows the results log. Web Functional Test scripts perform actions on browser objects. During playback, the browser will open and you will be able to watch as script actions occur.

To play back an OpenScript script:

1. Select **Playback** from the **Script** menu or click the Playback toolbar button to play back the recorded script. The navigations and actions in the script Step Groups will be played back in the order recorded. The Browser navigates to each page, executes the any tests for each page, and shows the results in the Result view.

- When playback finishes, expand the Results tree to view the results for each Step Group as follows:

Figure 3–9 Script Playback Results in the Results View

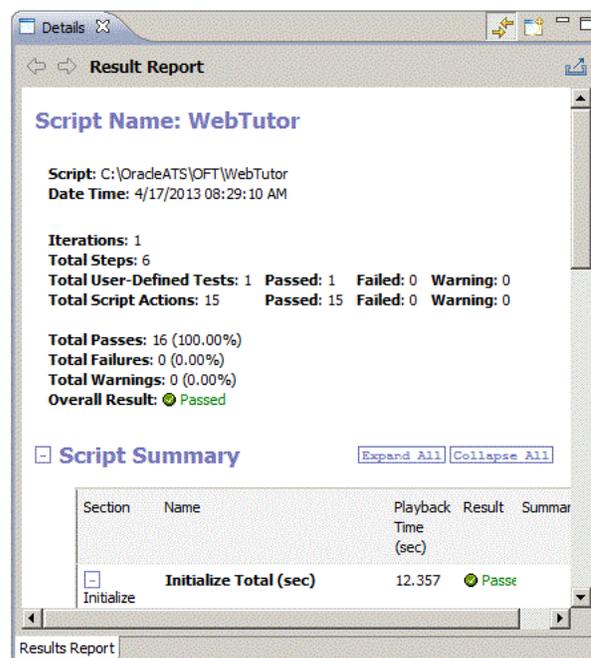


Name	Duration (sec)	Result	Summary
Results 10/22/09 01:18:55 PM	71.687	Passed	
Script WebTutor	71.687	Passed	
Initialize WebTutor	1.375	Passed	
Run WebTutor - Iteration 1	70.062	Passed	
[1] No Title (/medrec/)	1.188	Passed	
[2] (/medrec/)	7.546	Passed	
[3] (/index.action)	14.331	Passed	
[4] (/loginPatient.action)	5.719	Passed	

The "passed" results indicate that all referenced resources are available. Oracle OpenScript automatically generates a results report and opens the report in the Details view.

- Select the top-level Result node or the script name in the Results view to view the results report in the Details view as follows:

Figure 3–10 Results Report in the Details View



Script Name: WebTutor

Script: C:\OracleATS\OFT\WebTutor
Date Time: 4/17/2013 08:29:10 AM

Iterations: 1
Total Steps: 6
Total User-Defined Tests: 1 Passed: 1 Failed: 0 Warning: 0
Total Script Actions: 15 Passed: 15 Failed: 0 Warning: 0

Total Passes: 16 (100.00%)
Total Failures: 0 (0.00%)
Total Warnings: 0 (0.00%)
Overall Result: ● Passed

Script Summary Expand All Collapse All

Section	Name	Playback Time (sec)	Result	Summary
Initialize	Initialize Total (sec)	12.357	● Pass	

Notice that all tests passed. This is because you played back the script using the same version of the Web pages that was used to record the script. This establishes a baseline of tests for the Web application or Web site's content and structure.

- Expand the Run node in the Results view then expand the results for Step Group [1] Welcome To WebLogic MedRec World (/medrec/).
- Select the WaitForPage node under [1] Welcome To WebLogic MedRec World (/medrec/). The Details view shows the results for the specific Step Group.
- Click the Comparison tab in the Details view. The Comparison tab lets you compare the recorded HTML content, screenshots, and browser renderings of page navigations to the play back values as follows:

Figure 3–11 Details View Showing the Web Functional Test Comparison Tab

7. Select the Content and Browser options in the **Compare** list to compare the recorded and playback HTML source and browser renderings of the page.

3.6 Example 4: Adding Tests to the Script

This example explains how to add tests to your OpenScript scripts. Make sure the script you recorded in the previous example is open in OpenScript.

OpenScript provides the ability to add the following test types to the pages in your Web Functional test script:

- Text Matching Test
- Server Response Test
- Object Test
- Table Test

Other OpenScript test modules provide test types specific to the type of module.

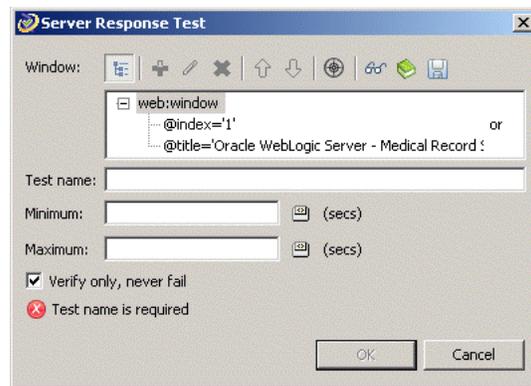
3.6.1 Inserting a Server Response Test Case

Server Response test cases measure the response time of a server access for a page in the script.

To add a Server Response test:

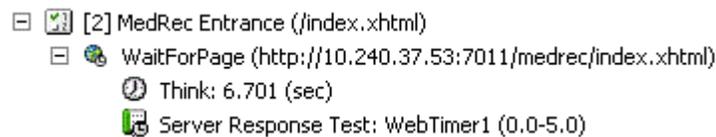
1. Expand the [2] MedRec Entrance (/index.xhtml) Step Group in the script tree.
2. Select the WaitForPage (http://systemName:7011/medrec/index.xhtml) node.
3. Select **Add** from the **Script** menu, then select **Other**.
4. Expand the Web Tests folder, select **Server Response Test**, and click **OK**.
OpenScript opens the Server Response Test properties dialog box as follows:

Figure 3–12 Server Response Test Properties Dialog Box



5. Type WebTimer1 as the test case name.
6. Set the **Minimum** time to 0 seconds.
7. Set the **Maximum** time to 5 seconds.
8. Click **OK** and view the test in the script. OpenScript adds the test to the Step Group as follows:

Figure 3–13 Server Response Test Added to the Script Tree



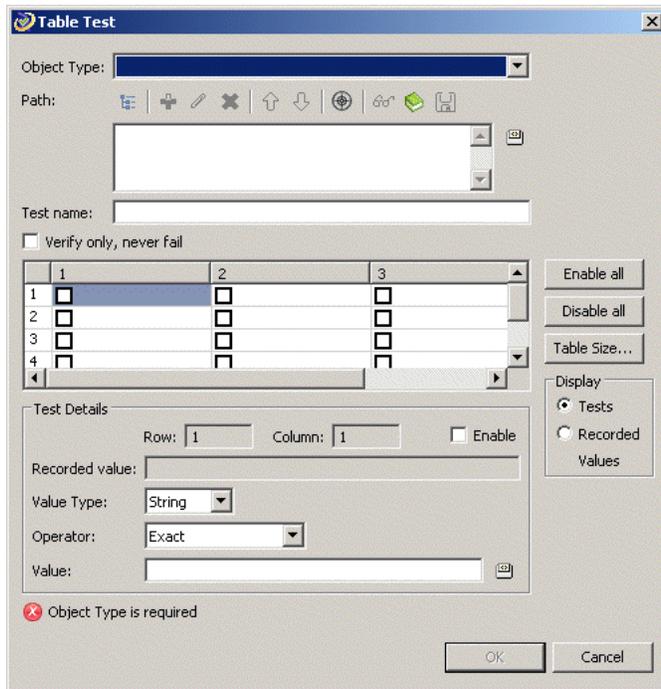
3.6.2 Inserting a Table Test

Table test cases let you define a custom test on a Web page table object. The Table Test properties lets you select the table object directly from the Web page by highlighting it with the mouse. The properties also let you specify the table object property to test and the type of test to perform.

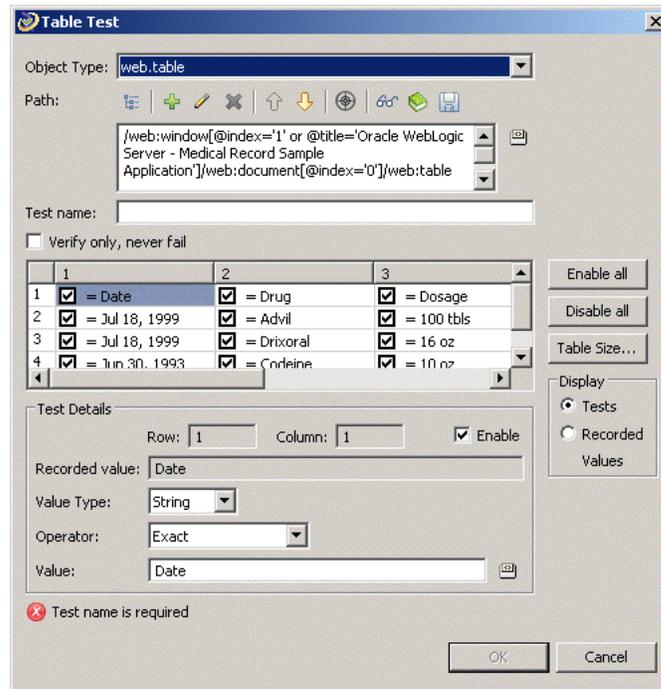
To add a Table test:

1. Expand the [4] Record Summary (/patientHome.xhtml) Step Group in the script tree.
2. Select the WaitForPage (<http://systemName:7011/medrec/patient/patientHome.xhtml>) node.
3. Select **Add** from the **Script** menu, then select **Other**.
4. Expand the Web Tests folder, select **Table Test**, and click **OK**. OpenScript opens the Table Test properties dialog box as follows:

Figure 3–14 Table Test Properties Dialog Box

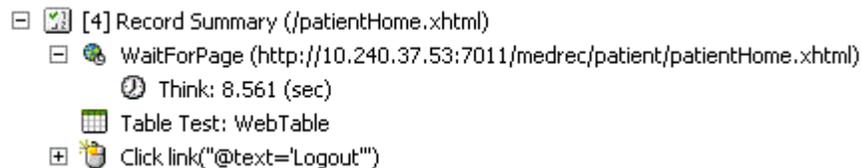


5. Click the select **Capture object in browser** button next to the **Path** field and select **Capture Object** from the menu. The capture mode starts.
6. Open the Medical Records Sample Application (<http://systemName:7011/medrec/>) in the browser window.
7. Click **Getting Started!** to navigate to the page with the table data.
8. Click Login under the Patient section.
9. Enter `fred@golf.com` as the Email address.
10. Enter `weblogic` as the password.
11. Click **Sign In**.
12. Click **Go** under View Record Summary.
13. Move the mouse over the Visit Records table so that the table is highlighted.
14. Press F10 to capture the object path in the Select Object dialog box.
15. Click **OK**. The object path for the Medical Records Sample Application web page table is added to the Table Test properties as follows:

Figure 3–15 Table Test Properties Dialog Box with Captured Data

The Table Test properties lets you enable or disable testing for each table cell individually. The Test Details section shows the details for the currently selected table cell.

16. Clear the check boxes for all of the data items in rows 2, 3, and 4 (scroll the table as necessary). This will perform the testing on heading rows but not the data rows.
17. Enter WebTable as the Test name.
18. Click **OK** and view the test in the script. OpenScript adds the test to the script [[4] Record Summary (/patientHome.xhtml) Step Group as follows:

Figure 3–16 Table Test Added to the Script Tree

19. Save the script.
20. Close the Medical Records Sample Application browser windows.
21. Playback the script and verify that all tests pass.
22. Close the WebTutor script when finished.

3.7 Example 5: Creating an HTTP Test Script

This example explains how to create an HTTP test script project to use for load testing an application. HTTP test scripts record and playback navigations performed using

the HTTP protocol. HTTP scripts are typically used for performing load tests on an application using the Oracle Load Testing application.

3.7.1 Creating an HTTP Script Project

To create an HTTP script project:

1. Select **New** from the **File** menu.
2. Select **Web/HTTP** under the **Load Testing (Protocol Automation)** folder.
3. Click **Next**.
4. Make sure the Repository is set to Default.
5. Enter HTTPtutor1 as the script name.
6. Click **Finish**. OpenScript creates the script project and shows the Initialize, Run, and Finish nodes in the Script view.

3.7.2 Recording an HTTP Script

To record an HTTP script:

1. Select **Record** from the **Script** menu or click the Record toolbar button. OpenScript opens a browser window and the OpenScript toolbar window.
2. If asked if you want to clear the cache, click **Yes**.
3. Enter `http://<machineName>:7011/medrec/` into the browser Address line and press **Enter**.
4. When the application loads, click **Getting Started!**. A second browser window opens with Avitek Medical Records Sample Application.
5. Click Login under the Administrator section.
6. Enter `admin@avitek.com` as the Email address.
7. Enter `weblogic` as the password.
8. Click **Sign In**.
9. Click **Go** under View Pending patients.
10. Click Logout in the Avitek Medical Records application.
11. Click Logout in the popup window.
12. Close the Avitek Medical Records application browser window.
13. Close the Weblogic Server Avitek Medical Records Sample Application browser window. Recording automatically stops.
14. Save the script.
15. Playback the script and verify there are no errors.

3.8 Example 6: Creating an HTTP Test Script with Databanks

This example explains how to create an HTTP test script and use a databank to drive testing. This example also explains one way to use the Databanks with the Text Matching test case to verify Login results pages. The Databanks provides the capability to run iterative tests using data from a Databank file.

3.8.1 Creating an HTTP Script Project

To create an HTTP script project:

1. Select **New** from the **File** menu.
2. Select **Web/HTTP** under the **Load Testing (Protocol Automation)** folder.
3. Click **Next**.
4. Make sure the Repository is set to Default.
5. Enter HTTP Tutor2 as the script name.
6. Click **Finish**. OpenScript creates the script project and shows the Initialize, Run, and Finish nodes in the Script view.

3.8.2 Recording an HTTP Script

To record an HTTP script:

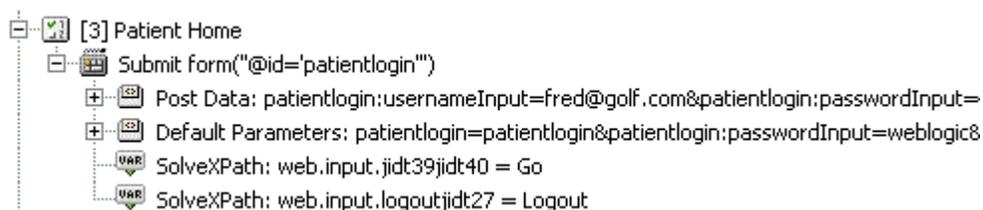
1. Select **Record** from the **Script** menu or click the Record toolbar button. OpenScript opens a browser window and the OpenScript toolbar window.
2. Reload the Medical Records Sample Application (<http://systemName:7011/medrec/>) in the browser window.
3. When the application loads, click **Getting Started!**. A second browser window opens with Avitek Medical Records Sample Application.
4. Click Login under the Patient section.
5. Enter `fred@golf.com` as the Email address.
6. Enter `weblogic` as the password.
7. Click **Sign In**.
8. Click **Go** under View Record Summary.
9. Click Logout in the Avitek Medical Records application.
10. Close the Avitek Medical Records application browser window.
11. Close the Weblogic Server Avitek Medical Records Sample Application browser window. Recording automatically stops.

3.8.3 Viewing the Parameters in the Script

To view the script parameters:

1. Expand the [4] Oracle WebLogic Server - Medical Record Sample Application Step Group in the script tree. Notice the parameters under the Post Data node of the tree as follows:

Figure 3–17 Script Parameter Values for HTTP Post Data



The `usernameInput` and `passwordInput` parameters can be mapped to a databank file to pass data from an external file.

3.8.4 Configuring Databanks with OpenScript Scripts

Before you can map parameters to databank, you must configure the script with the databank file.

To configure a databank in OpenScript scripts:

1. Open or create a Script project.
2. Select the **Assets** tab.
3. Select **Databanks**.
4. Click **Add**.
5. Select **CSV file**.
6. Select the Default Repository from the **My Repositories** tree.

Note: If necessary, copy the sample databank files from `C:\<installdir>\openScript\SampleFiles\DataBank` to the default repository (`C:\<installdir>\OFT`).

7. Select the `avitek.csv` databank file from the DataBank repository folder.
8. Enter an alias name to use for the Databank or leave the default alias name. The default alias name is the name of the `.CSV` Databank file.
9. Click **OK** to add the Databank file.
10. Click the Tree View tab.

Databank files are comma-separated value files. The field names are on the first line of the file separated by commas (no spaces). The field data is on subsequent lines separated by commas (different line for each record, no spaces around commas). The following shows an example:

```
FirstName,LastName,Mail,Phone
John,Smith,JohnS@company.com,x993
Mary,Ellen,MaryE@company.com,x742
```

If a data value contains a comma, place quotation marks around the value, as follows:

```
John,Smith,"Anytown, MA","(603) 993-0000"
```

3.8.5 Getting Databank Records

To get Databank records to use with a script:

1. Open or create a script project.
2. Configure the Databank to use with a script in the Assets tab.
3. Select the Initialize node.
4. Select the **Script** menu and then select **Other** from the **Add** sub menu.
5. Expand the General node and select Get Next Databank Record.
6. Click **OK**.

7. Select the Databank `avitek` alias to specify the Databank file to get the record from.
8. Click **OK**. A `GetNextDatabankRecord: databank alias` node will be added to the script.

In the Java Code view, the `getDatabank("databank alias").getNextDataBankRecord()` method will be added to the script code:

```
getDatabank("avitek").getNextDatabankRecord();
```

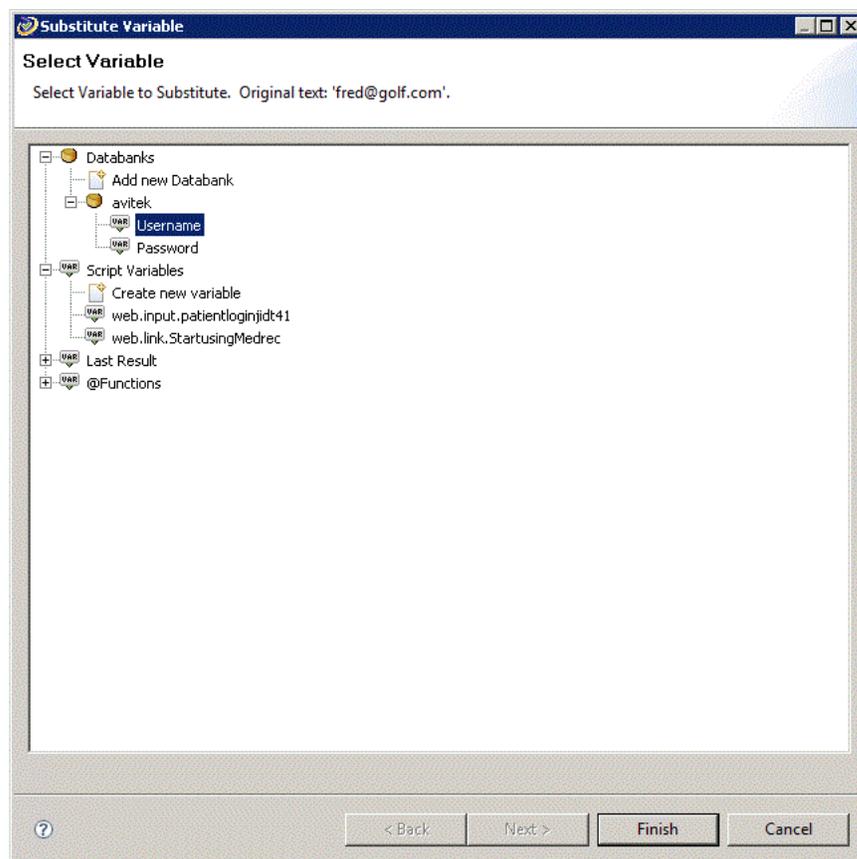
3.8.6 Mapping Script Parameters to Databank Fields

After configuring a databank in a script, you can map the databank fields to specific script parameters.

To map databank fields to script parameters:

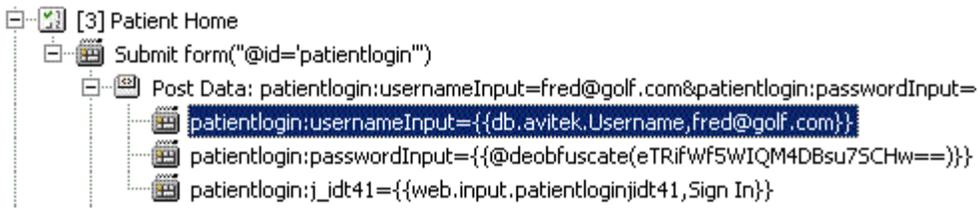
1. Expand the [3] Patient Home script tree node.
2. Right-click the `usernameInput` parameter and select **Substitute Variable**. The Substitute Variable window opens with the databank field names listed as follows:

Figure 3–18 Substitute Variable Window



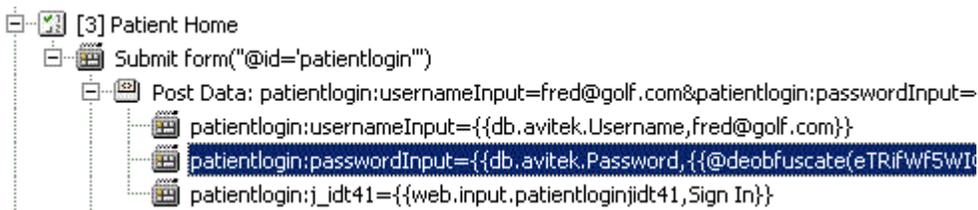
3. Select the `Username` field and click **Finish**. The parameter value changes to a databank variable in double braces `{{db.avitek.Username,fred#@golf.com}}` as follows:

Figure 3–19 Script Parameter with a Mapped Databank Variable



4. Right-click the passwordInput parameter and select **Substitute Variable**. The Substitute Variable window opens with the databank field names listed.
5. Select the Password field and click **Finish**. The parameter value changes to a databank variable in double braces
`{{db.avitek.Password,{{@deobfuscate(eTRifWf5WlQM4DBsu7SCHw==)}}}}` as follows:

Figure 3–20 Script Parameters with Multiple Mapped Databank Variables



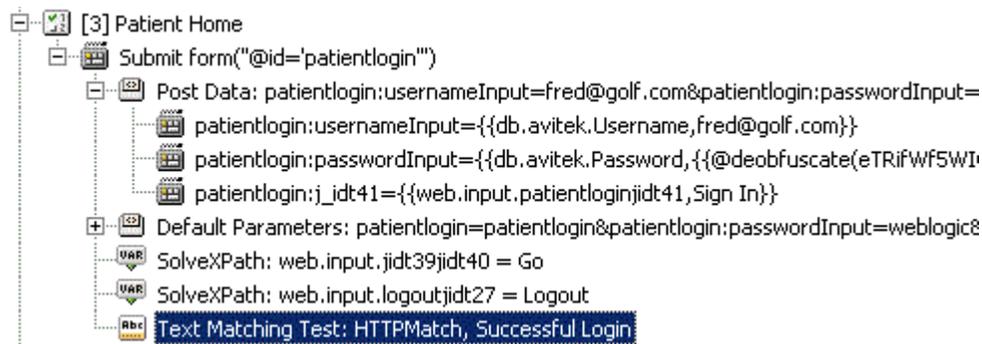
6. Save the script.

3.8.7 Inserting a Text Matching Test

Now we want to insert a Text Matching text case that verifies that the login results were successful.

1. Select the Submit form ("@id='patientlogin'") node under the [3] Patient Home script tree node. The page appears in the Details view.
2. Select **Add** from the **Script** menu then select **Other**.
3. Select **Text Matching Test** in the HTTP Tests folder and click **OK**.
4. Enter HTTPMatch as the test name.
5. Enter Successful Login as the Text to Match.
6. Make sure the **Source** options is **HTML Display Contents**.
7. Make sure the **Pass When** option is **Pass if Present**.
8. Make sure the **Match** option is **Exact**.
9. Click **OK**. The Text Matching test node appears in the script tree at the end of the Step Group as follows:

Figure 3–21 Script Tree with a Text Matching Test Node



10. Save the script.

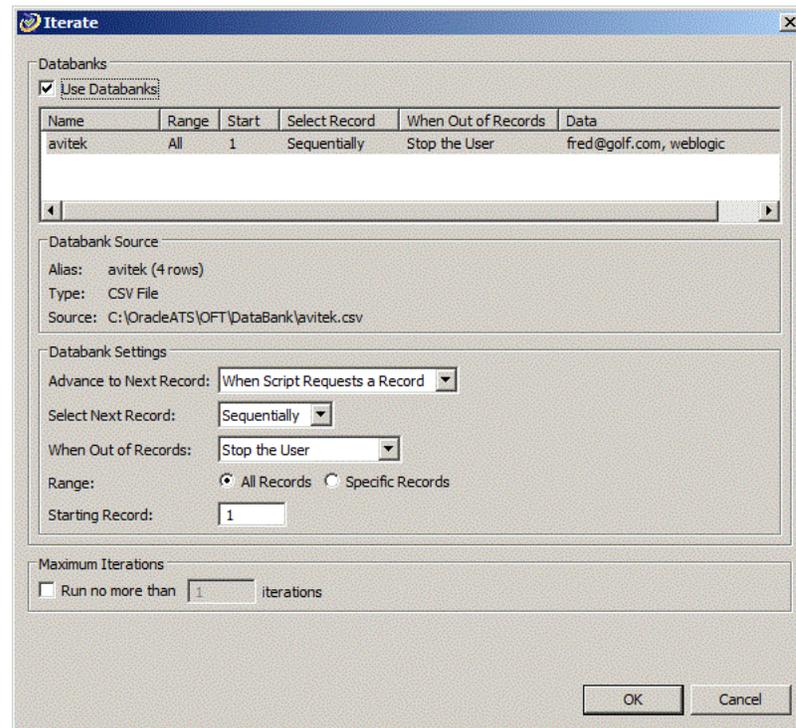
3.8.8 Playing Back the Script with Iterations

Now that the script has a databank mapped to the Post Data parameters, we can play back the script with multiple iterations to use all of the values in the databank file.

To play back the script with iterations:

1. Select **Iterate** from the **Script** menu. The Iterations dialog box opens as follows:

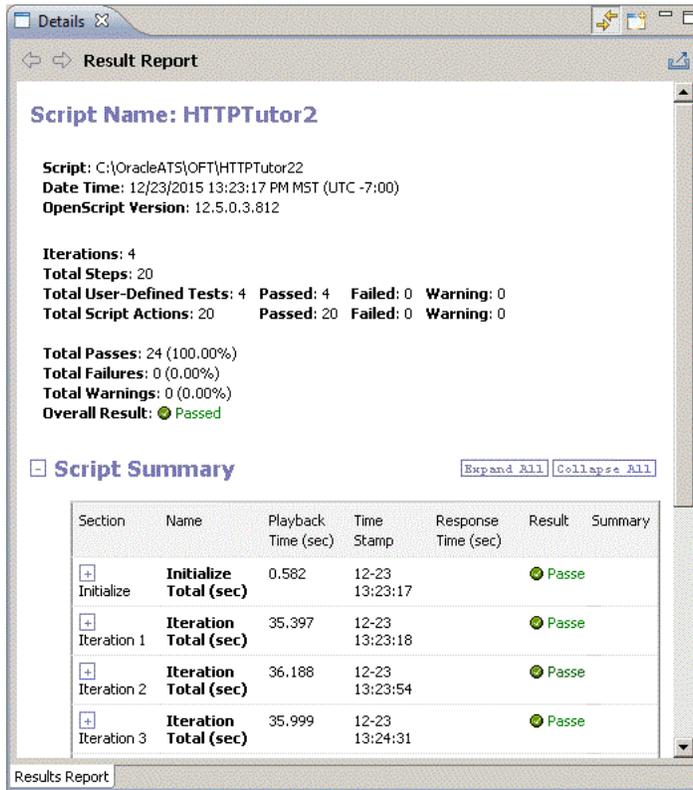
Figure 3–22 Iterations Dialog Box



2. Make sure **Use Databanks** is selected.
3. Make sure **Advance to Next Record** is set to **Each Iteration of Script**.
4. Make sure **Range** is set to **All Records**.
5. Make sure the **Starting Record** is set to 1.

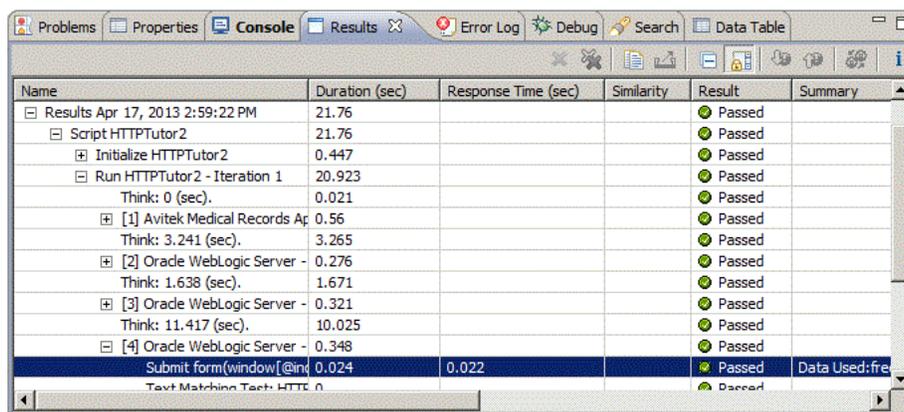
6. Click the **OK** button to playback the script with multiple iterations.
7. Watch the Details view as the script plays back the script several times using a different data value for the login each time.
8. View the playback results in the Results view. At the end of playback the Details view shows the results report similar to the following:

Figure 3–23 Results Report for Multiple Iterations



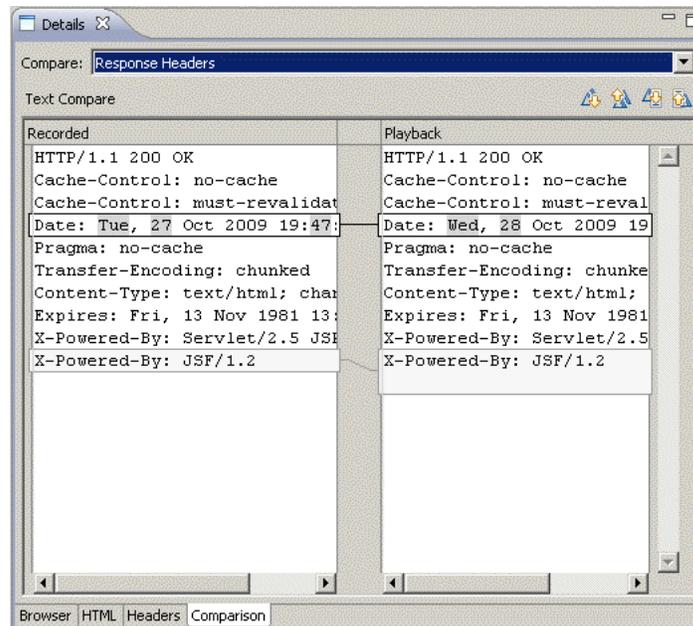
9. Scroll the Results view and select one of the HTTP navigation nodes such as Submit form(window[@index='1']/ //form[[@id='j_id_id3' and @name='j_id_id3')][...].

Figure 3–24 Results View with Navigation Node Selected



- Click the tabs in the Details view. The Comparison tab for HTTP scripts lets you compare the recorded HTML content, Request Headers, Response Headers, and Cookies to the playback values as follows:

Figure 3–25 Details View Showing the HTTP Test Comparison Tab



- This completes the OpenScript tutorial. Save the script and close the OpenScript application.

3.9 Stopping the Avitek Medical Records Server

When finished with the tutorial be sure to stop the sample Medical Records Server. If you want to try using scripts recorded against the sample Medical Records Server application in Oracle Load Testing or Oracle Test Manager tutorials, leave the Avitek Medical Records Server running until after completing those trials.

To stop the Weblogic Server and Avitek Medical Records Server:

- Select **Programs** from the **Start** menu and then select **Sample** from the **Oracle Application Testing Suite** menu.
- Select **Stop MedRec Application**.
- Wait until the Weblogic server stops.
- Close the command windows after the server stops.

Oracle Load Testing Tutorial

This tutorial walks you through the main features of Oracle Load Testing. Oracle Load Testing is a separate product in the Oracle Application Testing Suite, which you may or may not have purchased. If you have the Oracle Load Testing version of the Oracle Application Testing Suite, you can follow the examples in this chapter to become familiar with the features and use of Oracle Load Testing.

The tutorial consists of the following examples:

- **Performing a Simple Load Test** - shows how to use Oracle Load Testing to run virtual users to simulate load on a Web application.
- **Adding Data Sources** - shows how to add data sources to the Oracle Load Testing ServerStats configuration to monitor server-side statistics, such as CPU usage, and available memory.
- **Editing Data Sources** - shows how to edit existing Oracle Load Testing ServerStats configurations to modify specific counters.
- **Creating a Scenario with Multiple Profiles** - shows how to add a new script to the Oracle Load Testing Scenario. This example also shows how to set the Reporting options and Session Start/Stop options to save data for use in post-run analysis.
- **Running Multiple Profiles** - shows how to use Oracle Load Testing to run multiple Scenario profiles with different amounts of virtual users and how to view statistical and performance information.
- **Controlling Virtual Users** - shows how to modify individual virtual user attributes, view actions, and stop and abort virtual users.
- **Generating Reports** - explains how to view the default reports and generate reports for post-run analysis.

The tutorial is designed to be followed sequentially from beginning to end and assumes you have completed the Oracle OpenScript tutorial in Chapter 3. The examples in this tutorial refer to scripts recorded in the previous tutorials.

4.1 Example 1: Performing a Simple Load Test

This example shows how to use Oracle Load Testing to run virtual users to simulate load on a Web application. The example illustrates how to run a previously recorded script to simulate multiple users accessing a Web application.

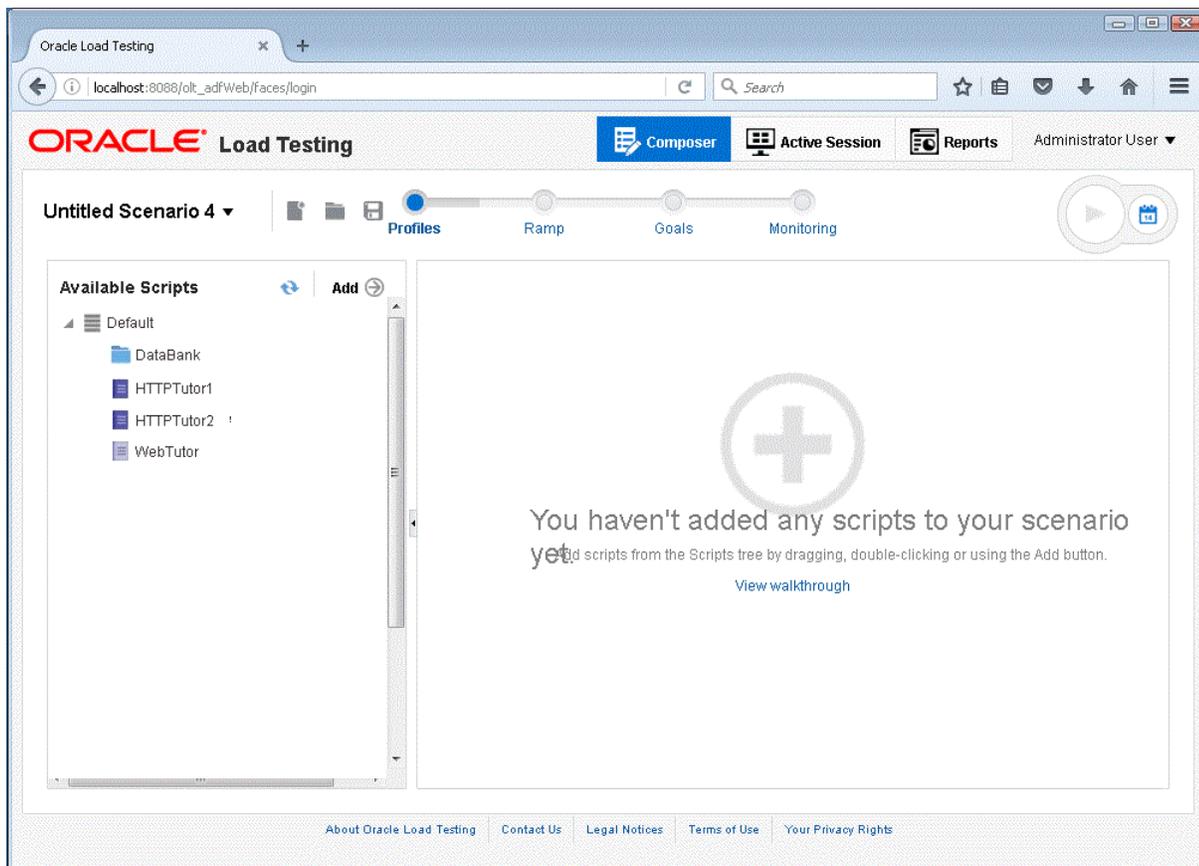
4.1.1 Starting Oracle Load Testing

Note: This section uses the default login credentials from the Oracle Application Testing Suite installation.

To start Oracle Load Testing:

1. Select **Programs** from the **Start** menu and then select **Oracle Load Testing** from the **Oracle Application Testing Suite Start** menu.
2. Enter **administrator** as the user name.
3. Enter the password specified during the Oracle Application Testing Suite installation process.
4. Click **Login**. The main window appears, as follows:

Figure 4–1 Oracle Load Testing Main Window



5. Select **Default** in the **Available Scripts** list.

4.1.2 Specifying a Scenario Profile

1. Make sure the **Composer** tab is displayed in Oracle Load Testing showing the **Profile** section.
2. Select **HTTPTutor1** in the **Available scripts** list. These are the scripts that you record using Oracle OpenScript.

3. Click the **Add** button to add HTTP Tutor1 to the **Profile** list. You can also drag the script name to add it to the **Profile** list.

Figure 4–2 Profile Pane

Profile	Max. # VUs	Agent System	Iteration Delay	VU Pacing (Think Time)
HTTP Tutor1	10	OLT Server	1	Recorded

Oracle Load Testing automatically specifies a set of default virtual user properties for the Scenario Profile in the Composer tab. For this example, we'll use the default properties.

4.1.3 Running the Scenario Profile

1. Click the **Ramp** button on the Composer tab.
2. Select users next to **Add** in the **Ramp Rate** pane.
3. Enter 1 in the **Add [#] users** edit box.
4. Select [#] seconds below **Every** in the Ramp Rate pane.
5. Enter 10 in the [#] **seconds** edit box.
6. Select **Run for specified iterations** option in the **Stop Condition** group of the Ramp section.
7. Enter 5 in the **Run for specified iterations** edit box.
8. Click the **Run Now** button on the toolbar.
9. Click **OK** to save the session using the default session name.

Oracle Load Testing starts running the virtual users in the Active Session. Watch as the session starts running the HTTP Tutor1 script as ten virtual users in the Session Overview sub-tab.

10. Click the **Virtual User Status** sub-tab in the Active Session tab.

Figure 4–3 Virtual User Status Grid Window

VUID	Profile	Status	Iterations	Failed	Last Run Time	Current Step	System	Databa	LastError	Previous Error
1	HTTP Tutor1	Think time...	2	0	39.665	[1] Welcome T...	OLT Se...			
2	HTTP Tutor1	Think time...	1	0	39.751	[4] View Pendi...	OLT Se...			
3	HTTP Tutor1	Think time...	1	0	39.718	[3] Administrat...	OLT Se...			
4	HTTP Tutor1	Think time...	1	0	39.664	[2] MedRec En...	OLT Se...			
5	HTTP Tutor1	Think time...	1	0	39.663	[1] Welcome T...	OLT Se...			
6	HTTP Tutor1	Think time...	0	0	0.0	[4] View Pendi...	OLT Se...			
7	HTTP Tutor1	Think time...	0	0	0.0	[3] Administrat...	OLT Se...			
8	HTTP Tutor1	Think time...	0	0	0.0	[2] MedRec En...	OLT Se...			
9	HTTP Tutor1	Think time...	0	0	0.0	[1] Welcome T...	OLT Se...			
10	HTTP Tutor1	Starting	0	0	0.0		OLT Se...			

11. Allow the virtual users to continue running until all of them indicate Finished in the **Status** column of the virtual user grid.

Congratulations. You have just performed a simple load test on the Demo Web application. Oracle Load Testing performs the virtual user Web interaction in the background. You can monitor the virtual users in the grid as they are running. In the later examples of this tutorial, you'll see how to use Oracle Load Testing to view statistical and performance information, and how to view virtual user actions.

4.2 Example 2: Setting Test Goals

The Goals section of the Composer tab lets you set test goals that specify conditions for specific counter and script parameters. You can specify one or more goals and set the results based upon to test reaching any one of the goals or all of the goals.

To use test goals:

1. Click the **Goals** section of the **Composer** tab.
2. Set the **stop ramping VUs when** option.
3. Click **Add Goal**.

Figure 4–4 Goals Section with a New Goal Added

Goals

+ Add Goal Stop ramping VUs when any of these goals are met

▲ Goal 1 Goal is met when any of these conditions apply

★ Select Counter is greater than 0.0

Results [Edit results values...](#)

When goals are met, mark load session No result

When goals are not met, mark load session No result

4. For each goal, set the following for each condition:
 - The Goal is met when condition: any condition or all conditions.
 - Select the counter to use to measure the goal criteria.
 - Specify the condition to use to compare: selected counter value is greater than, less than, equal to, or does not equal.
 - Counter goal value to use as the goal target.

For each goal you can specify one or more conditions. Click **Add Condition** to specify more than one condition to a goal. Click **Add Goal** to add more than one goal for the scenario.

Figure 4–5 Goals Section with Multiple Goals and Conditions

Goals

⊕ Add Goal Stop ramping VUs when any of these goals are met ▼

▲ ⊕ Goal 1 ✕

⊕ Add Condition Goal is met when all of these conditions apply ▼

★ Number of VUs equals 500.0 ✕

★ Total - Avg Performance (sec) is less than 20 ✕

▲ ⊕ Goal 2 ✕

⊕ Add Condition Goal is met when any of these conditions apply ▼

★ VUs with Errors is less than 3.0 ✕

Results [Edit results values...](#)

When goals are met, mark load session Passed ▼

When goals are not met, mark load session Failed ▼

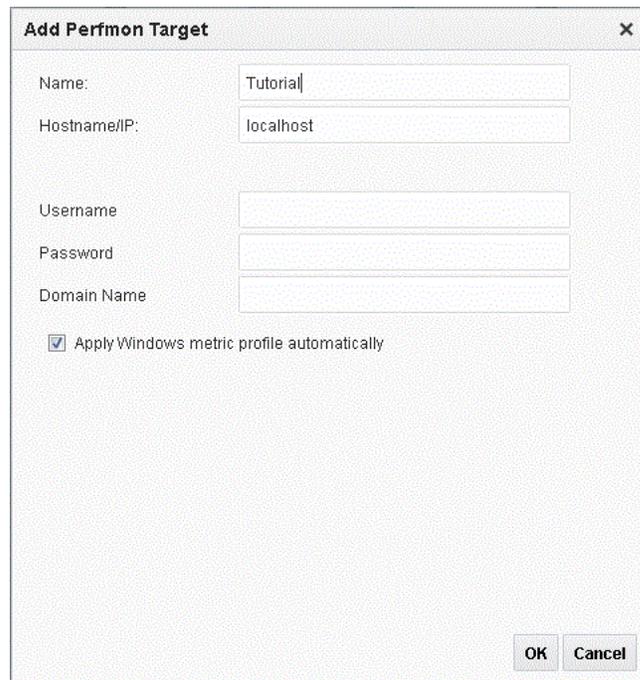
4.3 Example 3: Adding Data Sources

This example shows how to add data sources to the Oracle Load Testing ServerStats configuration to monitor server-side statistics, such as CPU usage, and available memory.

Oracle Load Testing ServerStats can monitor statistics from a variety of systems and server types. This tutorial adds counters from your local Windows system to demonstrate the features of Oracle Load Testing ServerStats. If you are not running the Oracle Application Testing Suite on a Windows machine, you should skip examples 2 and 3 and continue the tutorial with example 4.

To configure counters from a Windows data source, do the following:

1. Click the **Composer** tab and click the **Monitoring** section.
2. Select the **Add Target** menu and select **Windows** to add a new configuration.

Figure 4–6 Add Configuration Dialog Box

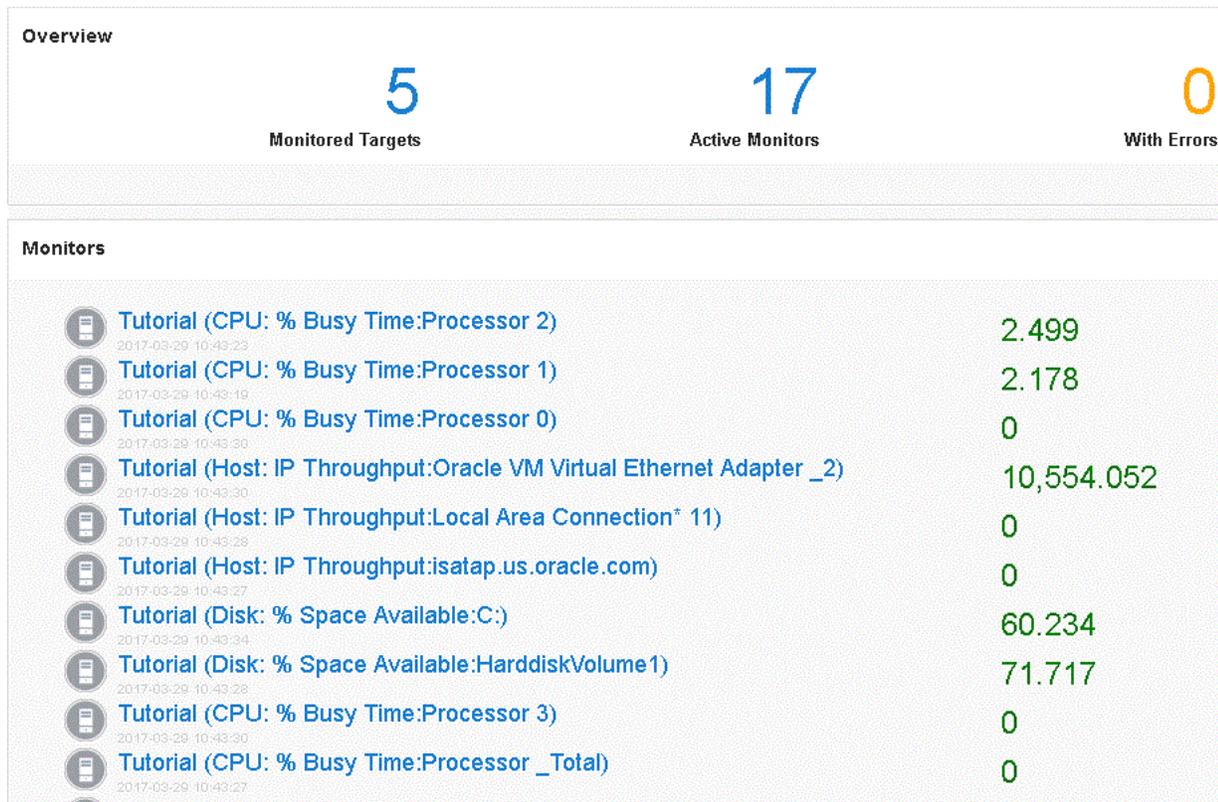
The screenshot shows a dialog box titled "Add Perfmon Target" with a close button (X) in the top right corner. The dialog contains the following fields and options:

- Name:** A text box containing "Tutorial".
- Hostname/IP:** A text box containing "localhost".
- Username:** An empty text box.
- Password:** An empty text box.
- Domain Name:** An empty text box.
- Apply Windows metric profile automatically**

At the bottom right of the dialog are two buttons: **OK** and **Cancel**.

3. Type Tutorial for the Name.
4. Select the **Apply Windows metric profile automatically** option.
5. Click **OK**. The default Windows metric profile is added to the Monitoring Targets list. You can add counters to the set of Monitoring Targets using the Add Counters menu. You can also edit and delete counters using the corresponding buttons.
6. Click **Test** to test the counters.

Figure 4-7 Test Monitors Dialog Box



7. Review the results to verify the counters are working properly.
8. Click **OK** to exit the test results.
9. Click **Save Configuration**.
10. Enter Tutorial as the name and click **OK**.

The next example explains the procedures for editing existing ServerStats configurations.

4.4 Example 4: Editing Data Sources

This example shows how to edit existing Oracle Load Testing ServerStats configurations to modify specific counters. The steps in this example are based upon steps completed in the previous example.

1. Make sure the Tutorial configuration from the previous example is displayed. If it is not, click Load Configuration and select the Tutorial configuration saved in the previous example.
2. Click the Tutorial (Host: Ping (sec) monitor and click **Edit**.

Figure 4–8 Edit Monitor Dialog Box

The screenshot shows the 'Edit Monitor' dialog box with the following settings:

- Name: Tutorial (Host: Ping (sec))
- Translation Type: No Translation
- SampleFrequency: 5
- Sample Multiplier: 1.0
- Measurement: PingAvgRTT
- Length: 64
- Time to Live: 50
- Data Collector: OLT Server

3. Change the **SampleFrequency** to 10 seconds.
4. Click **OK**.

See the *Oracle Load Testing User's Guide* for additional information about using the features and options of Oracle Load Testing ServerStats.

4.5 Example 5: Creating a Scenario with Multiple Profiles

This example shows how to create scenarios with multiple virtual user profiles and how to set the attributes for each scenario. It also shows how to specify the reporting options.

4.5.1 Adding a Virtual User Profile to the Scenario

1. Click the **Profiles** section of the **Composer** tab.
2. Drag the HTTP Tutor2 script in the **Available Scripts** list to the **Profile** list.
3. Change the **#VUs** value to 3.
4. Select the HTTP Tutor2 script in the Profile list to display the properties for the script in the **Properties** pane.
5. Click the **General** tab.
6. Make sure the **Virtual User Pacing** is set to Recorded and the **Maximum** value is set to 10 seconds.
7. Leave the default settings for the remainder of the properties.
8. Click the **Data Bank** tab for the HTTP Tutor2 profile to display the Data Bank properties.
9. Select the `avitek.csv` Data Bank file in properties tab.

10. Select **Each Iteration of Script** as the **Advance to Next Record** property.
11. Select **Loop Over Range** as the **When Out of Records** property.
12. Select HTTP Tutor1 script in the **Profile** pane.
13. Change the **Max # VUs** value to 6.
14. Click the **General** tab in the Properties pane. Notice the **Max # VUs** property is automatically changed in the Properties for the HTTP Tutor1 script.
15. Make sure the **Virtual User Pacing** is set to Recorded and the **Maximum** value is set to 10 seconds and click **OK**.

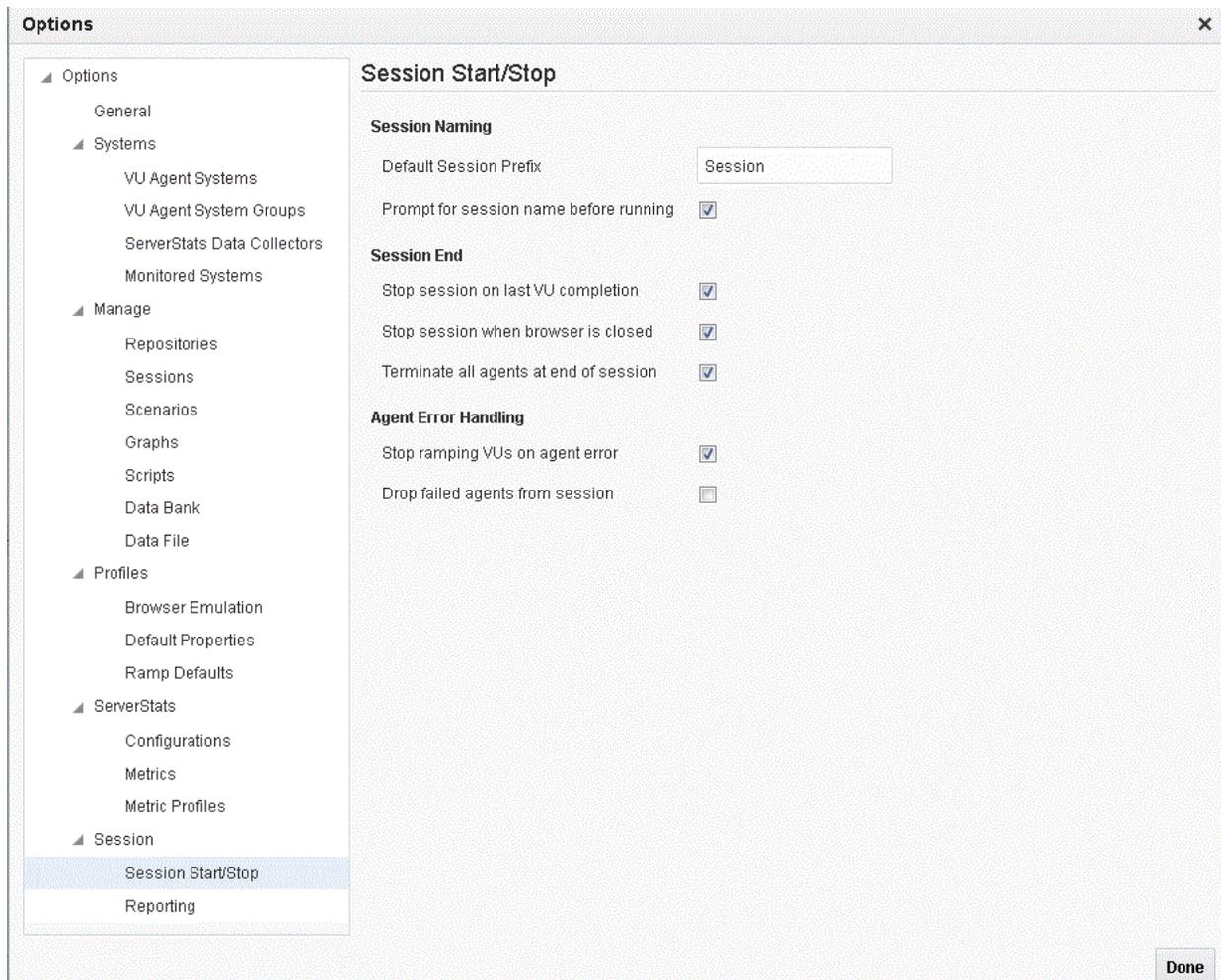
Notice that each profile in the **Profile** list can have a different set of properties.

4.5.2 Setting Reporting Options

The data generated by a Oracle Load Testing Autopilot session is saved to the Oracle Load Testing database for post-session analysis. You can specify the reporting intervals and Virtual User reporting options in the Reporting options.

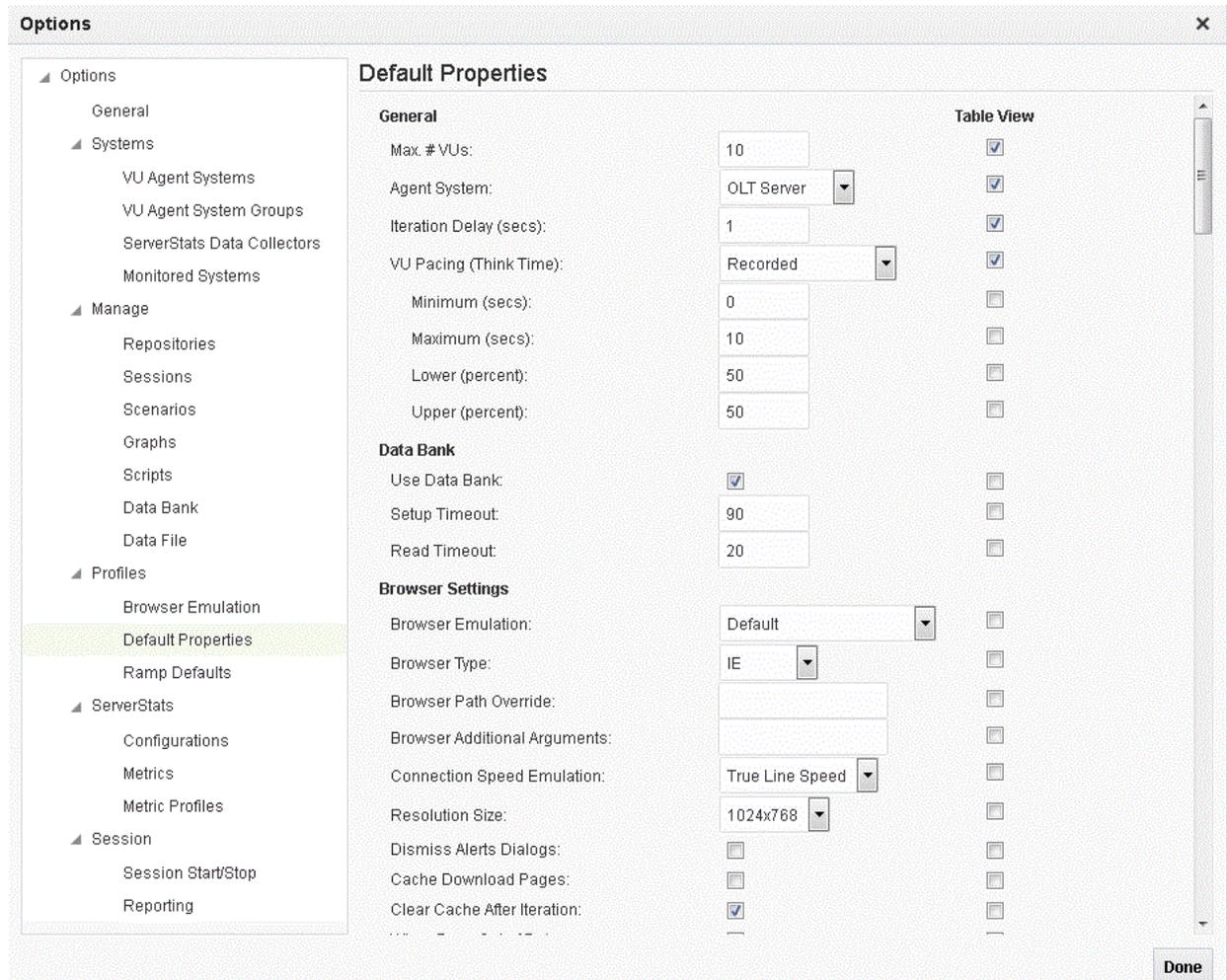
1. Select **Options** from the **User** menu and then select **Session Start/Stop** in the **Session** group

Figure 4–9 Session Start/Stop Options Dialog Box



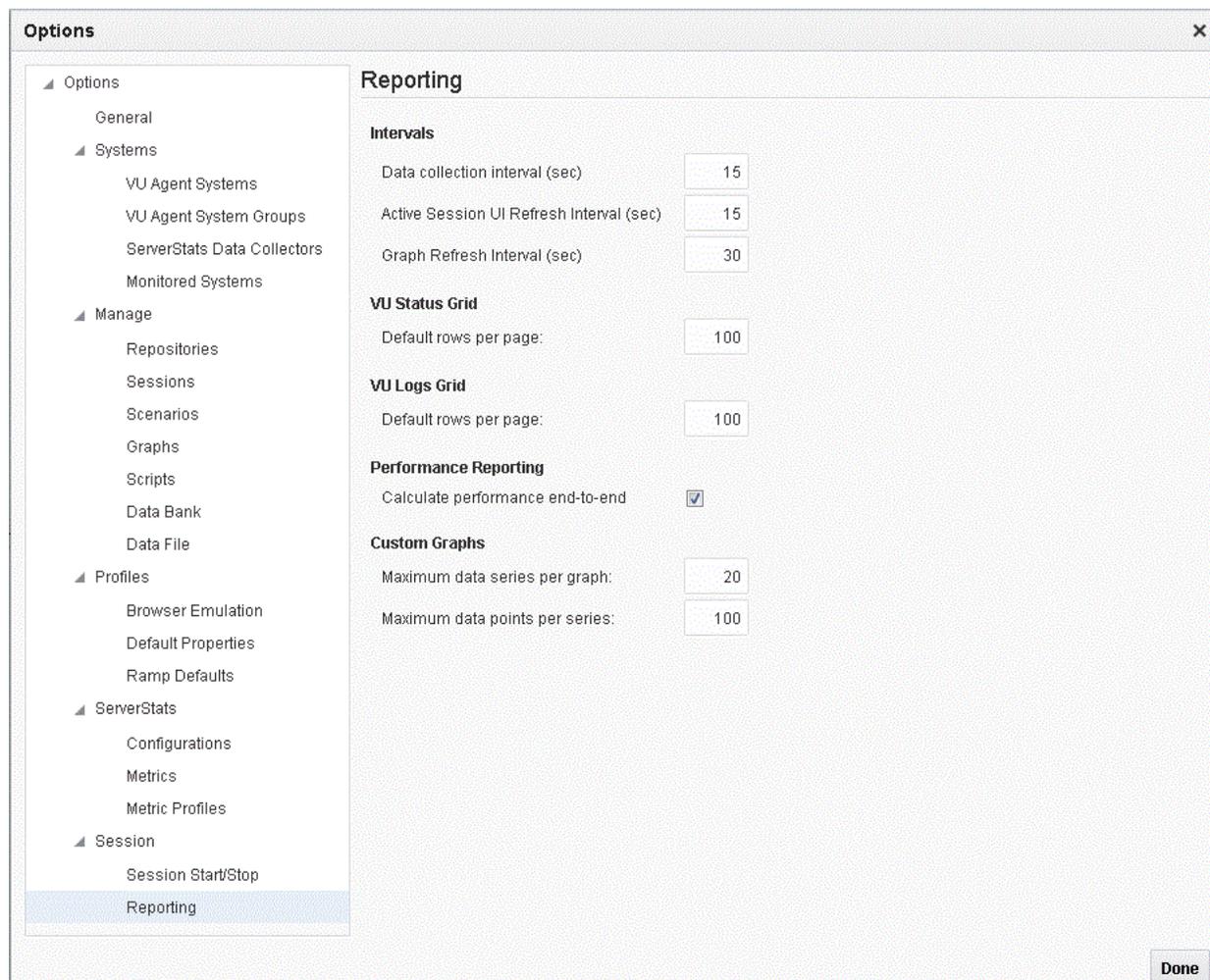
2. Select the **Terminate all agents at end of session** checkbox.
3. Select **Default Properties** in the Profiles group of the left pane.

Figure 4–10 Default Properties Options Dialog Box



4. Set **Message Delivery** in the Virtual User Logs section to Always.
5. Scroll down the screen and set **Generate Timers For Resources** in the Reporting section to True.
6. Select **Reporting** in the left pane.

Figure 4–11 Reporting Options Dialog Box



7. Set the **Graph refresh interval** to 15 seconds.
8. Click **Done**.

4.5.3 Saving the Scenario

1. Select **Save As** from the **Scenario** menu.
2. Specify the filename as LoadTest1 and click **Save**.

4.6 Example 6: Running Multiple Profiles

This example shows how to use Oracle Load Testing to run multiple Scenario profiles with different amounts of virtual users and how to view statistical and performance information.

4.6.1 Running Scenario Profiles

1. Make sure the Scenario from the previous example is still shown in the Composer tab.
2. Click the **Ramp** section on the **Composer** tab.

- Oracle Load Testing opens the Ramp options with the HTTP Tutor1 and HTTP Tutor2 Scenario Profiles listed in the **Advanced** list.

Figure 4–12 Ramp Options

Profile	Ramp Rate	Start Condition	Stop Condition
HTTP Tutor1	Add 10% every 10 iterations	When load test starts	When load test stops
HTTP Tutor2	Add 10% every 10 iterations	When load test starts	When load test stops

- Select **Run until user stops test** in the **Stop Condition** group of the **Ramp** section of the **Composer** tab.
- Select the **Handle ramping of profiles individually** option in the **Advanced** pane.
- Click the **Ramp Rate** column next to the HTTP Tutor1 profile.
- Enter 3 in the edit box next to the **percent/users** option and select **users**.
- Enter 5 in the edit box next to the **seconds/iterations** option and selected **iterations**.
- Click the **Ramp Rate** column next to the HTTP Tutor2 profile.
- Enter 6 in the edit box next to the **percent/users** option and select **users**.
- Enter 5 in the edit box next to the **seconds/iterations** option and select **iterations**.
- Click away from the popup to update the values.
- Click the **Monitoring** section on the **Composer** tab.
- Click Load configuration.
- Select the Tutorial configuration
- Click the **Run Now** button on the Oracle Load Testing toolbar.
- Oracle Load Testing opens the Save Session data dialog box.
- Click **OK** to use the default Session Name. The Active Session tab opens and shows an overview of the performance statistics as the Virtual User begins ramping up.
- Click the **Virtual User Status** sub-tab. on the **Active Session** tab.
- Watch as the session starts running the HTTP Tutor1 and HTTP Tutor2 scripts as virtual users. Notice also that HTTP Tutor2 is playing back records from the Data Bank.

Figure 4–13 Virtual User Status Grid

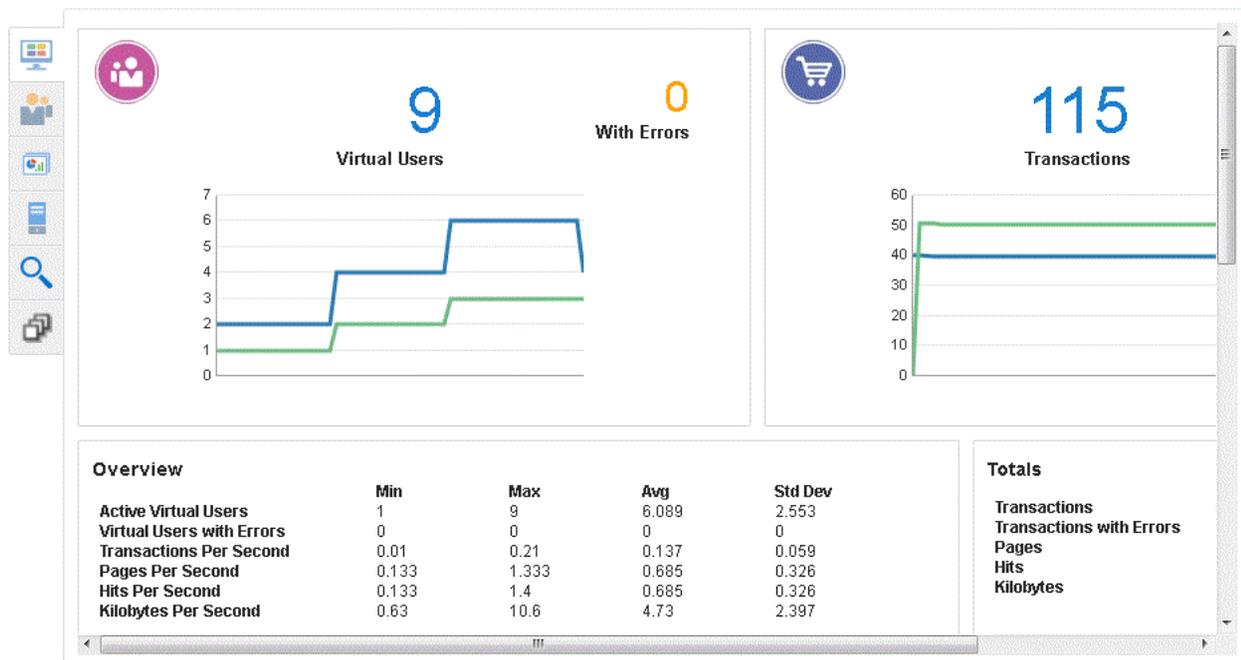
VUID	Profile	Status	Iterations	Failed	Last Run Time	Current Step	System	Databank	LastError	Previous Error
1	HTTP Tutor1	Think tim...	14	0	39.693	[2] MedRe...	OLT Server			
2	HTTP Tutor1	Think tim...	14	0	39.71	[2] MedRe...	OLT Server			
3	HTTP Tutor2	Think tim...	11	0	50.271	[2] MedRe...	OLT Server	avitek: [fred@golf.c...		
4	HTTP Tutor1	Think tim...	8	0	39.577	[1] Welco...	OLT Server			
5	HTTP Tutor1	Think tim...	8	0	39.588	[1] Welco...	OLT Server			
6	HTTP Tutor2	Think tim...	6	0	50.244	[2] MedRe...	OLT Server	avitek: [volley@ball...		
7	HTTP Tutor1	Think tim...	1	0	39.653	[4] View P...	OLT Server			
8	HTTP Tutor1	Think tim...	1	0	39.682	[4] View P...	OLT Server			
9	HTTP Tutor2	Think tim...	1	0	50.311	[2] MedRe...	OLT Server	avitek: [page@fish...		

Initially, the Autopilot starts only three virtual users. After the first three have completed five iterations, the Autopilot starts another three virtual users. Once the second three virtual users have completed five iterations, the remaining three virtual users start. The **Virtual User (VU) Ramp-up** options of the Autopilot let you control the rate at which virtual users start running.

4.6.2 Viewing Performance Statistics

The Session Overview tab shows the Performance Statistics report. The Performance Statistics report shows a summary of the performance data for the running virtual users.

Figure 4–14 Session Overview Tab Showing Performance Statistics



The statistics show the values for the following performance categories:

Overview

- **Active Virtual Users** - the number of virtual users currently running in the Autopilot.
- **Virtual Users with Errors** - the number of virtual users with errors.
- **Transactions Per Second** - the number of times the virtual user played back the script per second.
- **Pages Per Second** - the number of pages returned by the server per second. A "page" consists of all of the resources (i.e. page HTML, all images, and all frames) that make up a Web page.
- **Hits Per Second** - the number of resource requests to the server per second. Each request for a page, individual images, and individual frames is counted as a "hit" by Oracle Load Testing. If Oracle Load Testing does not request images from the server (as specified in the Download Manager), images are not included in the hit count. The **Hits Per Second** and **Pages Per Second** counts will be the same if images are not requested and there are no frames in the page.
- **Kilobytes Per Second** - the number of kilobytes transferred between the server and browser client per second.

Totals

- **Transactions** - the total number of times the virtual user played back the virtual user profile.
- **Transactions with Errors** - the total number of virtual user profile iterations that had errors.
- **Pages** - the total number of number of pages returned by the server.
- **Hits** - the total number of resource requests to the server.
- **Kilobytes** - the total number of kilobytes transferred between the server and browser client.

Performance by Profile

- **<Profile Name>** - the latest, minimum, maximum, and average performance for the virtual user profile in seconds.
- **<Timer Name>** - the latest, minimum, maximum, and average performance for the server response timers in seconds. Server Response timers are added to scripts using Oracle OpenScript.

Monitors

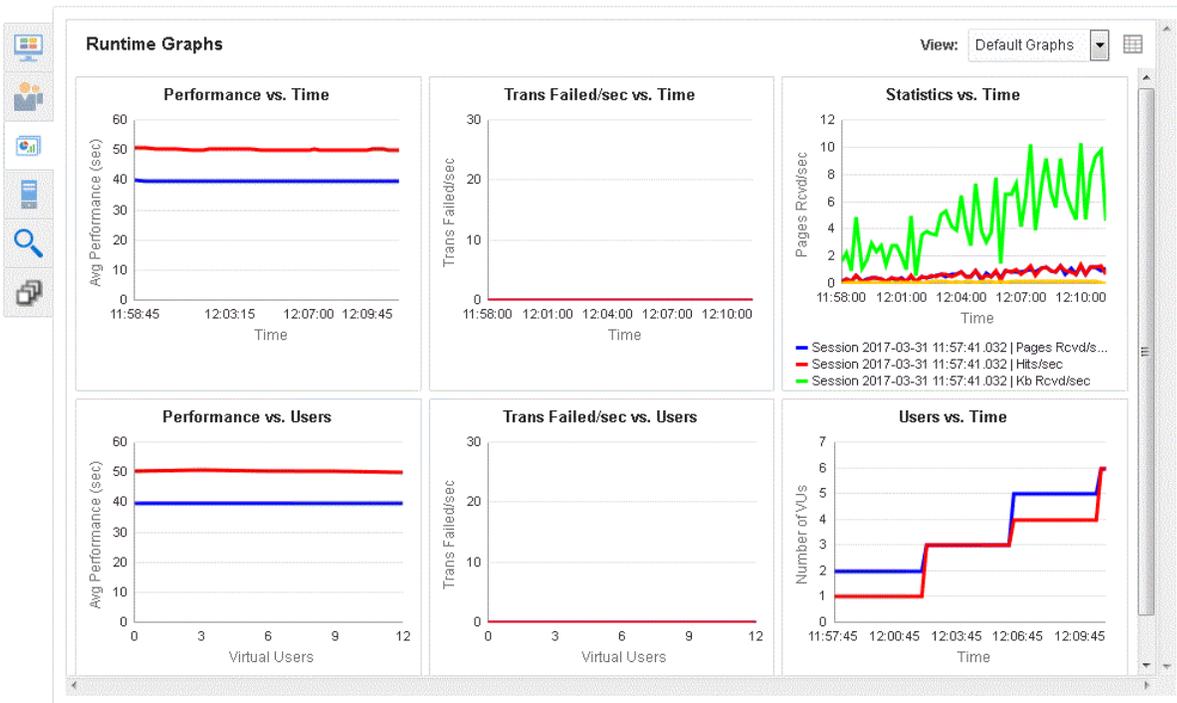
- Shows the performance statistics for any ServerStats monitors configured for the scenario.

4.6.3 Viewing Runtime Graph and Statistics

Oracle Load Testing provides several types of graphs that show performance, error, and statistical information for the running virtual users. Oracle Load Testing automatically displays run time graphs in the Runtime Graphs sub-tab. The Runtime Graphs sub-tab shows a summary of the default graphs in a single view. The graphs update continuously while the session is running.

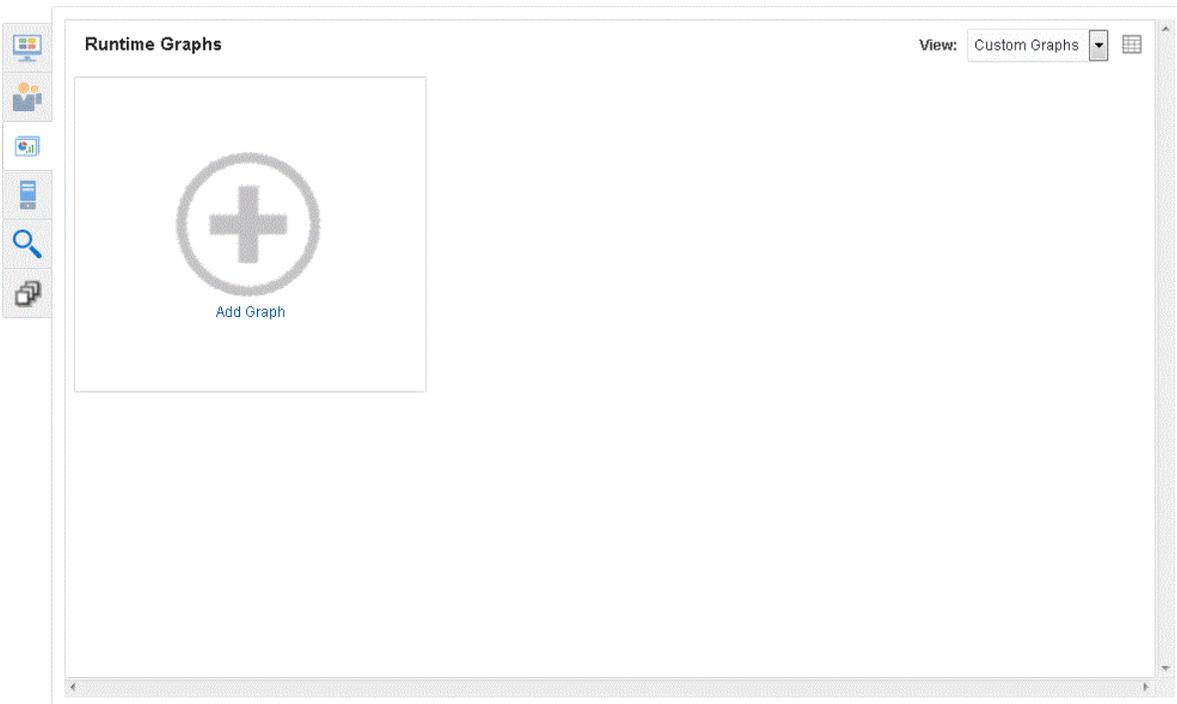
1. Click the Runtime Graphs sub-tab.

Figure 4–15 Runtime Graphs Tab - Default Graphs



2. Select **Custom Graphs** in the **View** dropdown of the Runtime Graphs sub- tab.

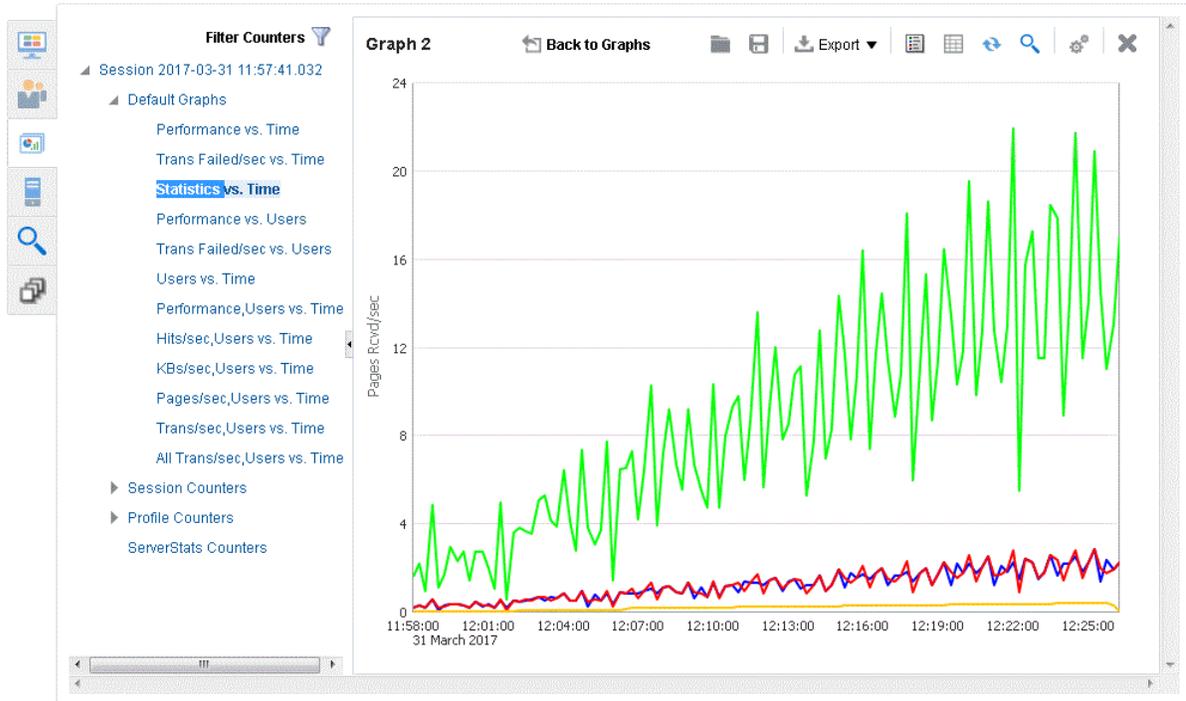
Figure 4–16 Custom Graphs Initial View



3. Click **Add Graph**.
4. Expand the Session tree in the left pane.

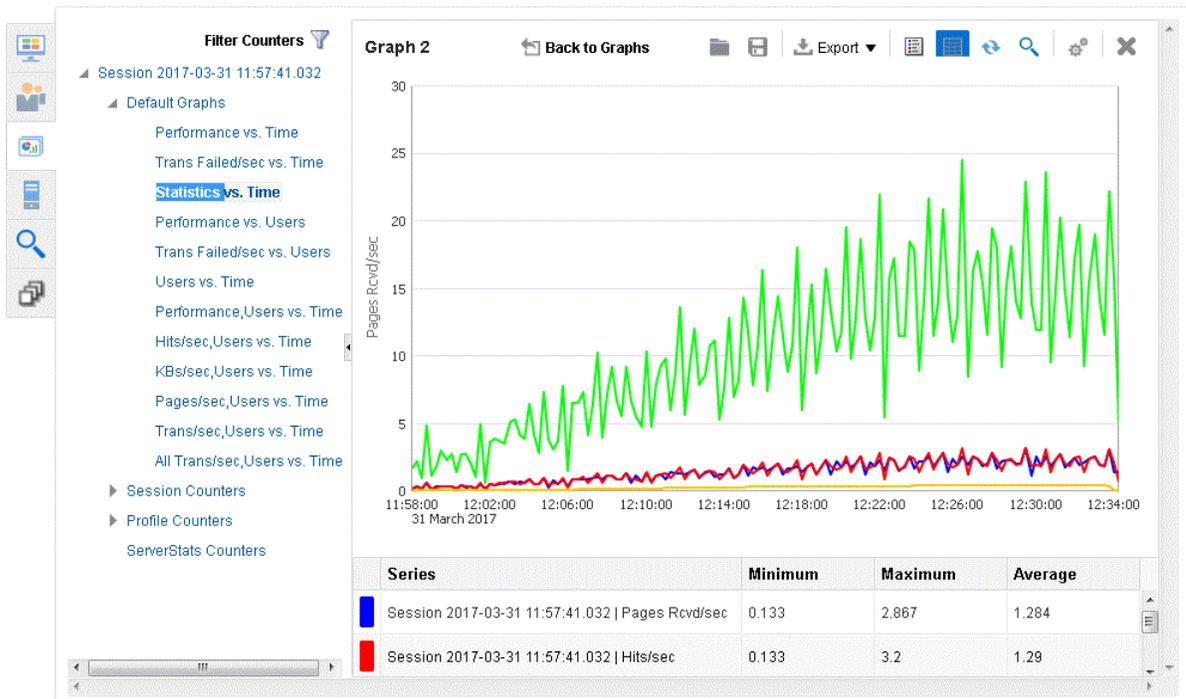
5. Expand Default Graphs.
6. Double-click the Statistics vs. Time counter to create a new graph.

Figure 4–17 Statistics vs. Time Custom Graph



7. Click the **Toggle Stats** toolbar button above the graph pane.

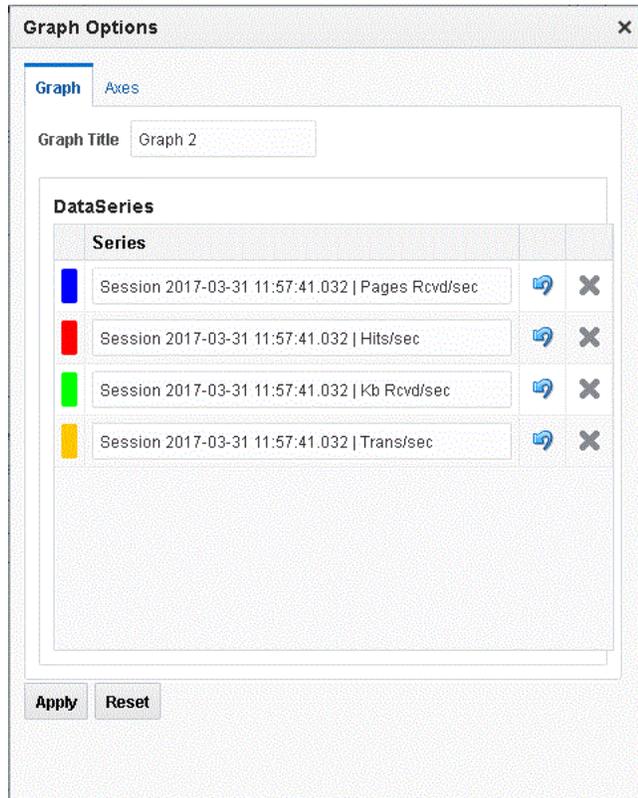
Figure 4–18 Statistics vs. Time Custom Graph with Statistics Table View



The **Toggle Stats** toolbar button shows and hides the session counters and data for the graph.

8. Click the **Options** toolbar button above the graph pane. If necessary, click the **Graph** tab.

Figure 4–19 Graph Tab of the Graph Options Dialog Box



The **Graph** tab of the Graph Options let you change the name of the graph and labels or remove counters from the graph.

9. Enter a new name for the graph.
10. Click the **Axes** tab.

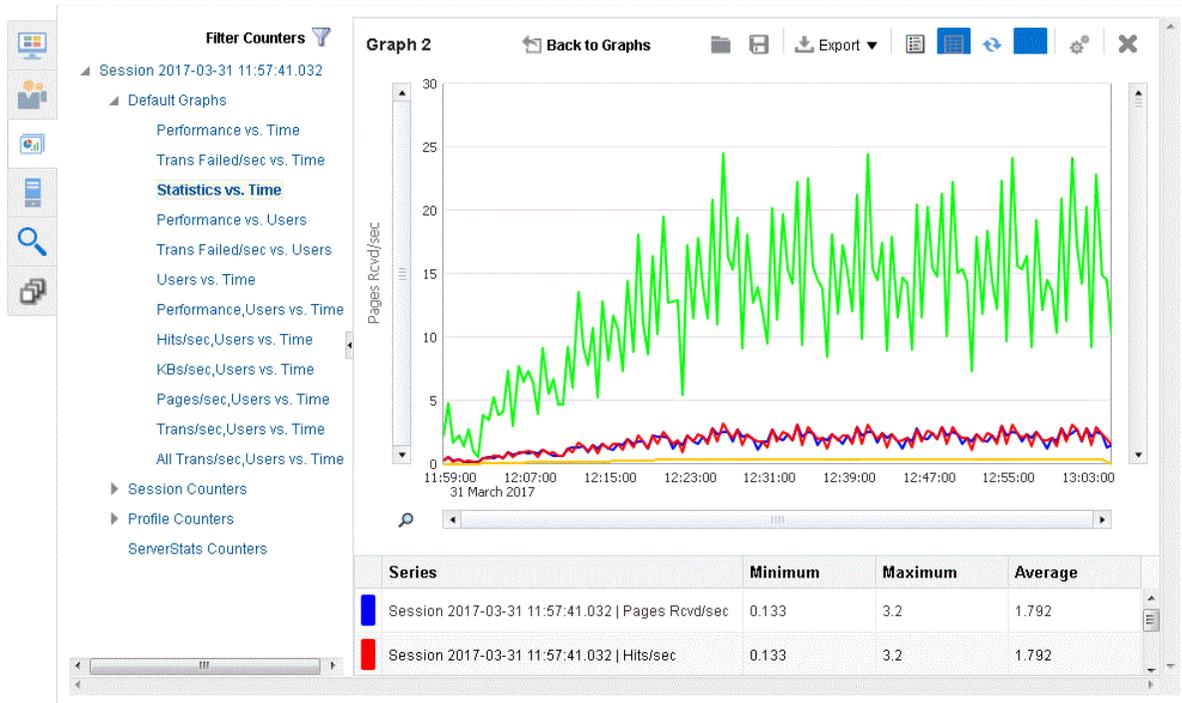
Figure 4–20 Axes Tab of the Graph Options Dialog Box

The screenshot shows the 'Graph Options' dialog box with the 'Axes' tab selected. The 'X-Axis' section has a 'Scale' dropdown menu set to 'Absolute Time'. Below it is a 'Range Filter' section with 'Start' and 'End' input fields, both containing the placeholder text 'yyy-mm-dd HH:MM:SS'. The 'Y-Axis' section has a 'Scale' dropdown menu set to 'Linear'. Below it is a 'Threshold Line' section with 'Value' and 'Label' input fields, where the 'Value' field contains '0.0'. At the bottom of the dialog, there is a note: 'Changing these values will result in a re-query of the database.' and two buttons: 'Apply' and 'Reset'.

The Axes tab of the Graph Options let you change the x and y axis scales and set time range filters and a threshold line for the graph.

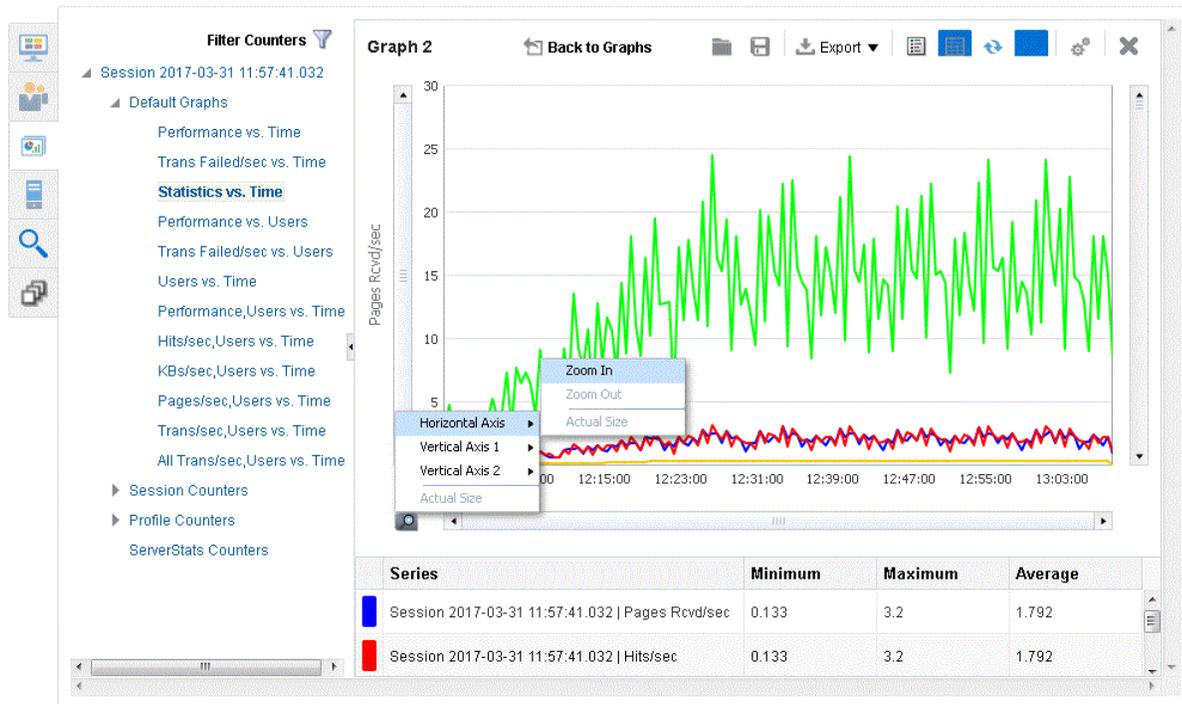
11. Click **Apply** and close the Graph Options dialog box.
12. Click the **Toggle Zoom** toolbar button above the graph pane. A magnifying glass appears at the lower left corner of the graph.

Figure 4–21 Statistics vs. Time Custom Graph with Zoom Mode On



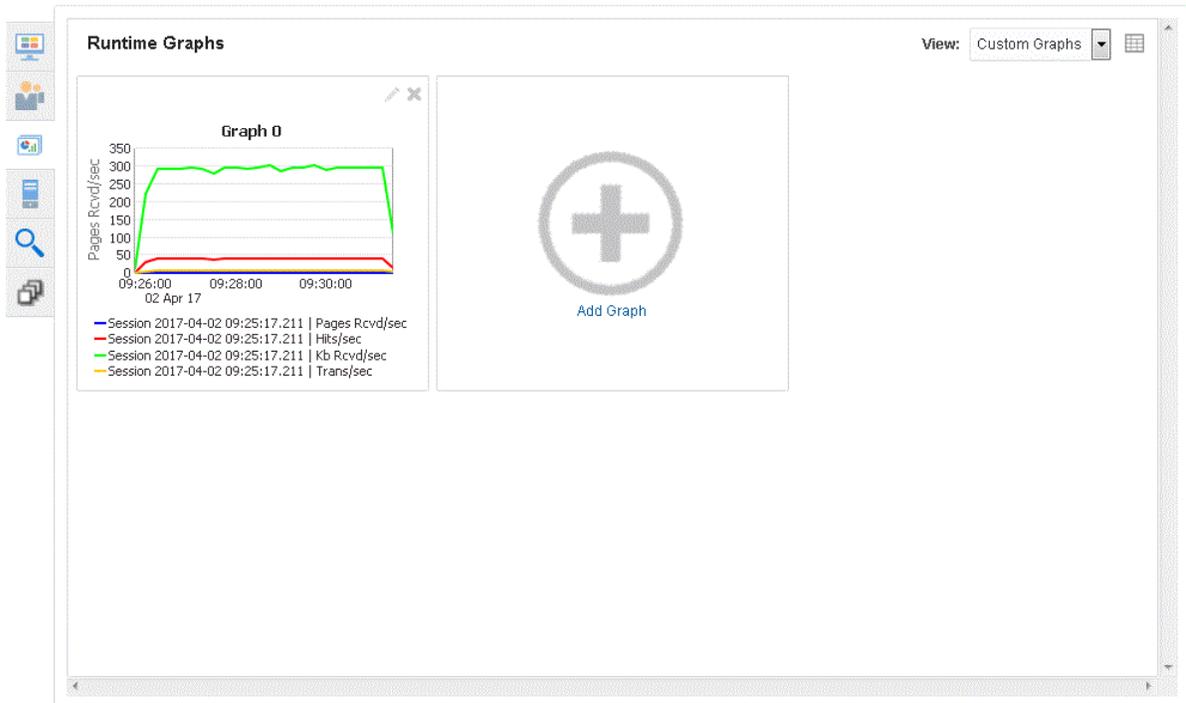
13. Click the Magnifier to open the Zoom menu options.

Figure 4–22 Statistics vs. Time Custom Graph with Zoom Menu Options



14. Click **Back to Graphs** to return to the Custom Graphs view. The new graph is added to the custom graphs dashboard.

Figure 4–23 Custom Graphs Dashboard with New Graph



15. Click the ServerStats sub-tab.

Figure 4–24 ServerStats Sub-Tab Showing Monitoring Configuration Targets and Counters



The Virtual User Logs sub-tab lets you view log file data. The Sync Point Status sub-tab lets you view and control sync point that have been configured for the Virtual User scripts in OpenScript.

4.7 Example 7: Controlling Virtual Users

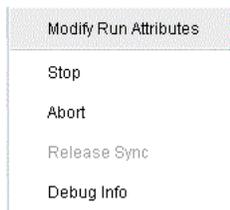
This example shows how to modify individual virtual user attributes, view actions, and stop and abort virtual users in Oracle Load Testing.

1. Make sure the virtual users from Example 3 are still running.
2. Click the Virtual User Status sub-tab.

4.7.1 Modifying the Run Attributes

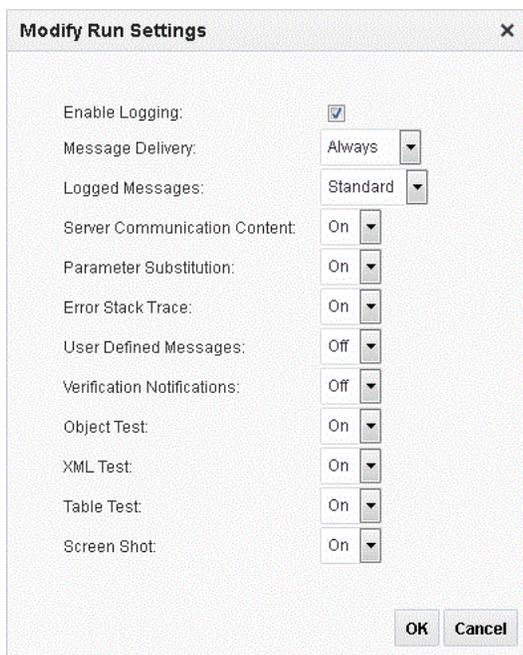
1. Click on any virtual user in the virtual user grid.
2. Click the right mouse-button to open the popup menu.

Figure 4–25 Virtual User Shortcut Menu



3. Select **Modify Run Attributes**. Oracle Load Testing opens a dialog box for changing the run attributes for the selected virtual user.

Figure 4–26 Modify Run Attributes Dialog Box



You can change the attributes of each virtual user individually.

4. Click **Cancel** to close the dialog box.

4.7.2 Stopping an Individual Virtual User

1. Click on any virtual user in the virtual user status grid.
2. Click the right mouse-button to open the popup menu.
3. Select **Stop**. Oracle Load Testing stops running the selected virtual user. The virtual user will complete the current script iteration and then stop.

4.7.3 Aborting an Individual Virtual User

1. Click on any virtual user in the virtual user status grid.
2. Click the right mouse-button to open the popup menu.
3. Select **Abort**. Oracle Load Testing aborts running the selected virtual user without completing the current script iteration.

4.7.4 Stopping All Virtual Users

1. Click the Stop toolbar button to stop all virtual users. The virtual users will complete the current script iteration and then stop.

4.7.5 Aborting All Virtual Users

1. Click the Abort toolbar button to abort all virtual users. The virtual users will abort the virtual user without completing the current script iteration.

4.8 Example 8: Generating Reports

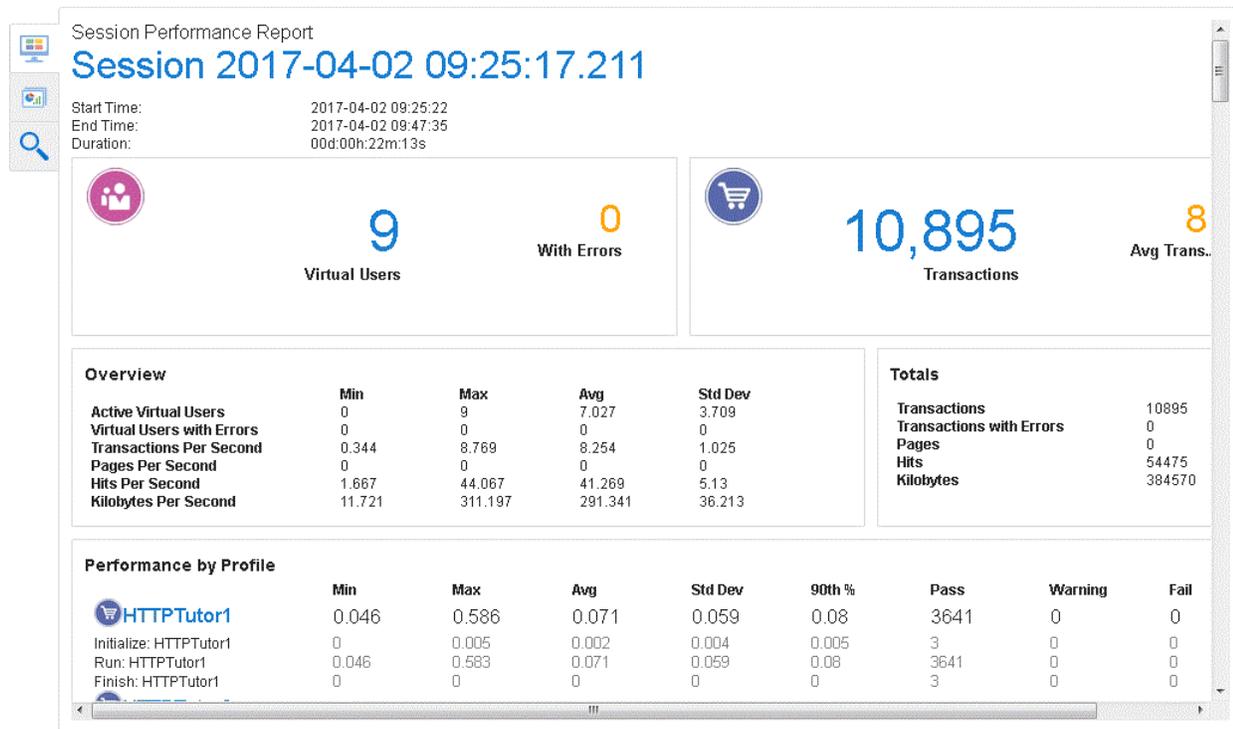
This example explains the report generation features of Oracle Load Testing. The data collected by Oracle Load Testing and Oracle Load Testing ServerStats while the session is running virtual users is saved to a database. You can use Oracle Load Testing to analyze the data and generate a variety of graphs and reports.

4.8.1 Generating Reports from Oracle Load Testing

This example shows how to use previously saved data to create custom reports and to view Session and Scenario reports. The Create Reports tab is used to generate session run reports after a session is finished.

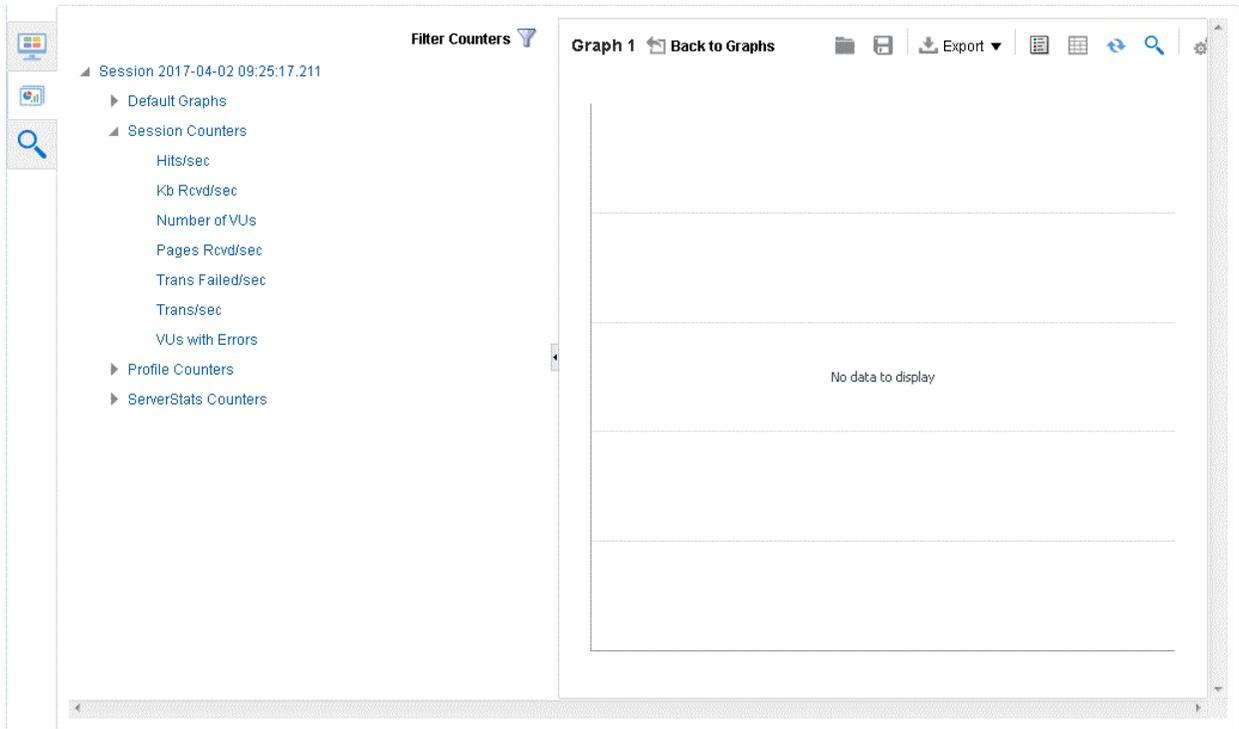
1. Select the **Reports** tab.
2. Select the session you saved in the previous example from the **Session(s)** list and click **Generate**. The Performance Statistic report appears for the saved session.

Figure 4-27 Session Overview Showing the Performance Statistics Session Report



3. Click the **Graphs** sub-tab.
4. Click **Add Graph**.
5. Expand the session tree in the left pane, then expand Session Counters. The data categories appear in the Available Data Series list.

Figure 4–28 *Graphs Sub-Tab*



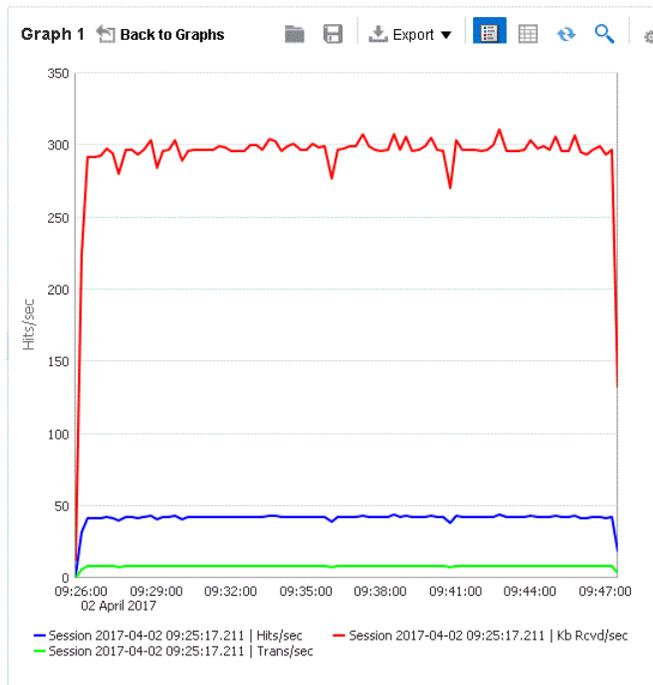
6. Double-click Hits/sec, KB Rcvd/sec, Pages Rcvd/sec, and Trans/sec in the Session counters tree to add the counters to the graph. These are the overall counters.

Figure 4–29 *Sample Session Report Graph*



- Click the **Toggle Legend** button on the top of the graph. The chart legend opens below the graph.

Figure 4–30 Sample Session Report Graph Showing the Legend View

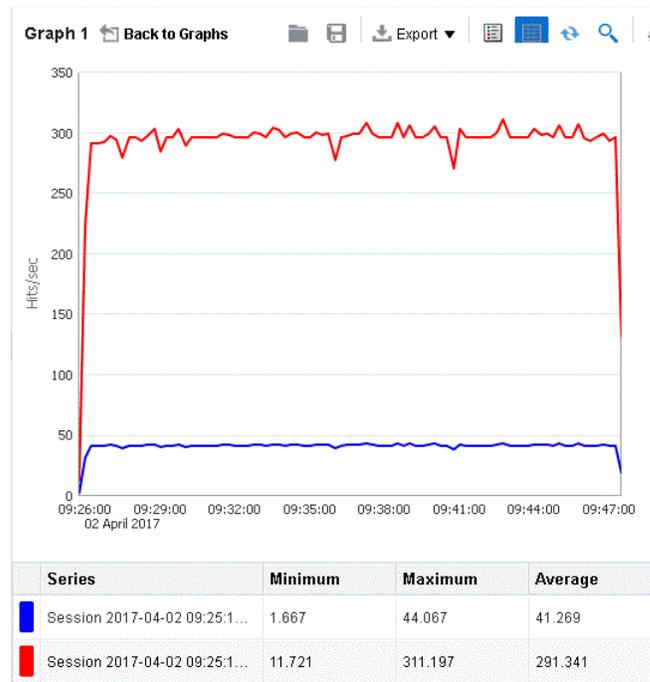


The legends show which color line represents which virtual user profile, script page, and Oracle Load Testing ServerStats counter. The legends for Oracle Load Testing data show the session, the virtual user profile, and the scripts page. The legends for ServerStats data show the session, counter object, counter instance and counter.

You can export the graphs to image files or the data to comma-separated value files and Microsoft Excel files.

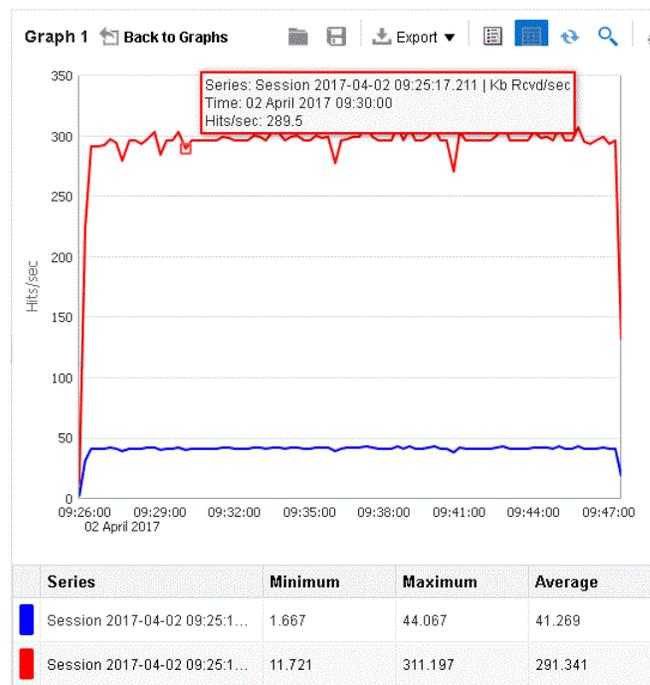
- Click the **Options** toolbar button and click the X next to a data series on the **Graph** tab and click **Apply** to remove a data series from the graph.
- Click the **Toggle Legend** button again to hide the legend.
- Click the **Toggle Stats** button on the top of the graph. The chart statistics table view opens at the bottom of the graph.

Figure 4–31 Sample Session Report Graph Showing the Chart Statistics



11. Move the mouse cursor over a data series line in the graph. The data point information popup appears over the graph.

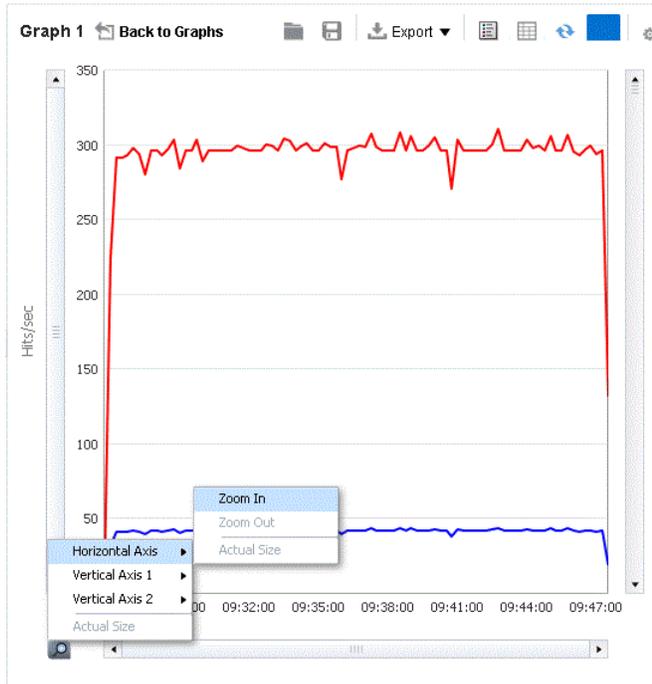
Figure 4–32 Sample Session Report Graph Showing Data Point Information



12. Click the **Toggle Stats** button again to hide the statistics table.
13. Click the **Toggle Zoom** button on the right side of the graph. Scrollbars and a magnifying glass appear on the graph.

14. Click the magnifying glass icon to open the zoom popup menu.

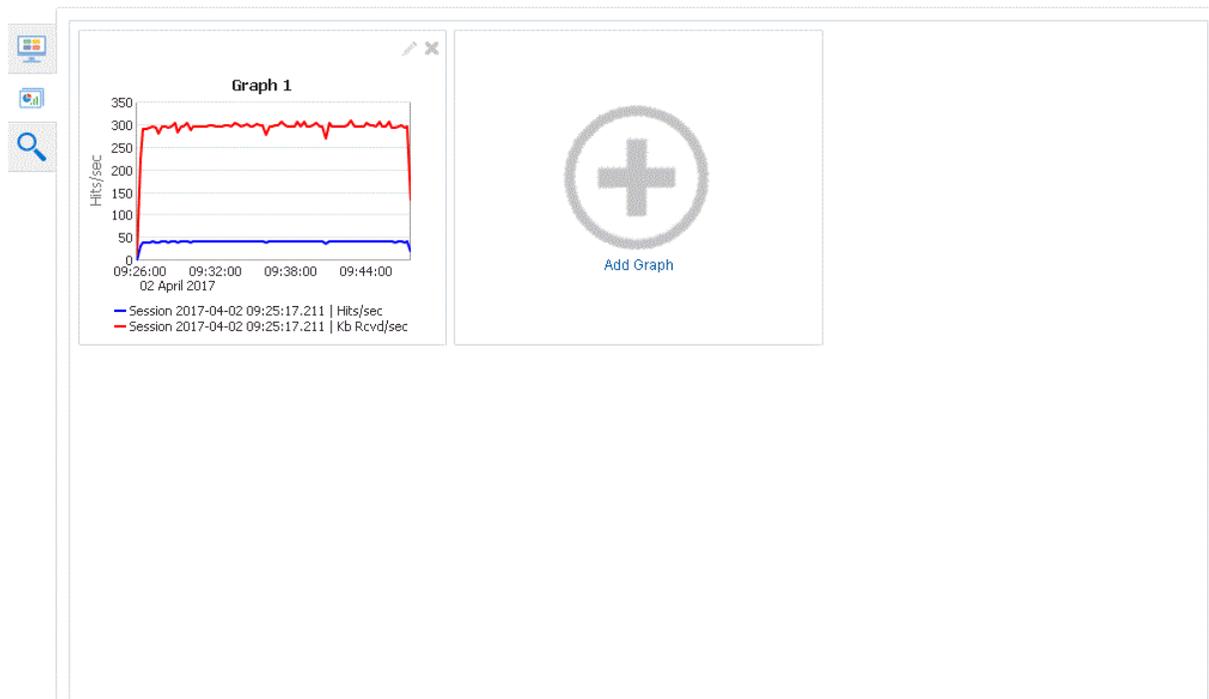
Figure 4–33 Sample Session Report Graph Showing the Zoom Tool



You can zoom in multiple steps by selecting the **Zoom In** options repeatedly.

15. Select the **Zoom Out** options to zoom out one step. Select the **Actual Size** options to zoom out to the full graph size.
16. Click the **Toggle Zoom** button again to turn off the zoom tool.
17. Click back to Graphs. The new graph appears in the Reports dashboard.

Figure 4–34 Reports Dashboard with Custom Graph Added



The Virtual User Logs sub-tab lets you view log file data.

4.8.2 Setting Graph Options

Use the **Options** toolbar button to set the title and the x/y axis options for the graph.

1. Click the **Options** button on the top of the graph.

Figure 4–35 The Graph Options View Showing the X/Y-Axis Options

The screenshot shows a 'Graph Options' dialog box with two tabs: 'Graph' and 'Axes'. The 'Axes' tab is active. It contains the following sections:

- X-Axis:**
 - Scale: Absolute Time (dropdown menu)
 - Range Filter:
 - Start: 2017-04-02 09:25:22.0
 - End: 2017-04-02 09:47:35.9
- Y-Axis:**
 - Scale: Linear (dropdown menu)
 - Threshold Line:
 - Value: 0.0
 - Label: (empty text box)

At the bottom of the dialog, there is a note: 'Changing these values will result in a re-query of the database.' and two buttons: 'Apply' and 'Reset'.

2. Set the graph title on the **Graph** tab and the x/y axis options on the **Axes** tab.
3. Click **Apply**.

4.8.3 Exporting Charts

You can use the export buttons on the graph toolbar to export graph images and data to other file types.

1. Click the **Export Image**, **Export CSV**, or **Export XLS** buttons on the top of the graph to export the graph as an image, comma-separated value file, or Excel spreadsheet file.
2. Specify the file save or open options and select a location to save the data.
3. Use your image or spreadsheet application to open the saved file.
4. You can print the report by clicking the **Print/Save [HTML]** button and selecting **Print** from the **File** menu in the browser window.

This completes the Oracle Load Testing tutorial. See the *Oracle Load Testing User's Guide* for additional information about load testing and using Oracle Load Testing.

Oracle Test Manager Tutorial

This tutorial walks you through the main features of Oracle Test Manager. It consists of the following examples.

- **Adding a Test Plan** - describes how to add a test plan.
- **Adding a Requirement** - describes how to add a requirement.
- **Adding Tests** - describes how to add a both a manual and automated test and how to associate a requirement with a test.
- **Creating Test Sets and Running Tests** - explains how to add test sets, run both a manual test and an automated test and how to view the results of the automated test.
- **Adding an Issue** - describes how to find and issue, add an issue and associate it with a test.
- **Creating Reports** - explains how to view reports and charts.
- **Using Dashboards** - explains how to view default chart Dashboards and create custom Dashboards.

The tutorial is designed to be followed sequentially from beginning to end. Many of the examples are interrelated and build upon the steps in previous examples.

5.1 Starting Oracle Test Manager

Note: This section uses the default login credentials from the Oracle Application Testing Suite installation.

To start Oracle Test Manager:

1. Select **Programs** from the **Start** menu and then select **Oracle Test Manager** from the **Oracle Application Testing Suite** Start menu.
2. Enter **administrator** as the user name.
3. Enter the password specified during the Oracle Application Testing Suite installation process.
4. Make sure the **Database** is set to OATS_otm_DS.
5. Click **Login**.

5.2 Opening the Sample Project

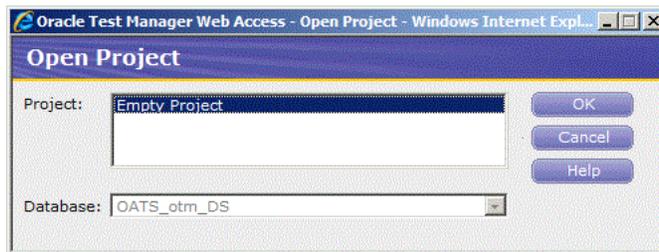
A demonstration project is installed with Oracle Test Manager for testing the sample stock brokerage application Fitch & Mather. This application can be viewed at <http://demo.fmstocks.com/fmstocks/>. To open the sample project:

1. Start Oracle Test Manager and log in.

The default installation user names are **administrator** and **default** unless changed by an administrator. The password is the password specified during the installation procedure unless changed by an administrator.

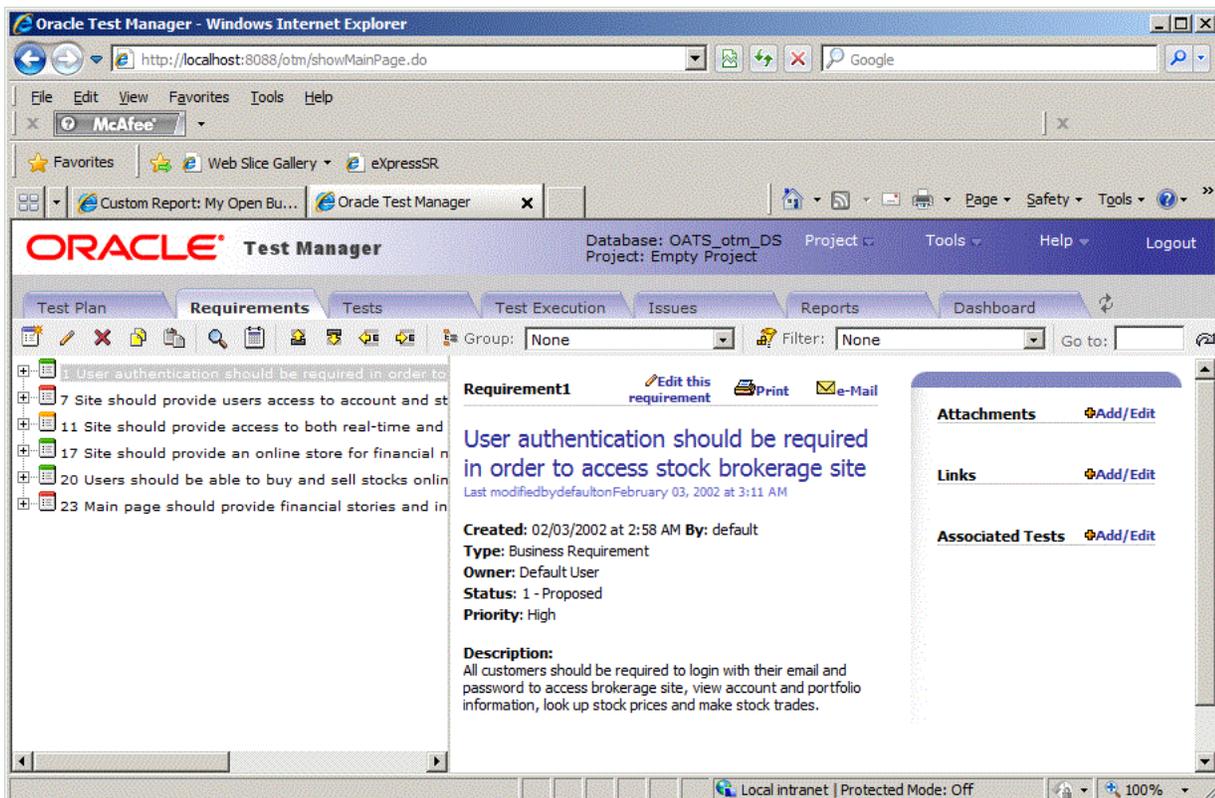
2. Click **Open** from the **Project** menu to display the Open Project dialog box.

Figure 5–1 Open Project Dialog Box



3. Make sure the **OAST_otm_DS** database is selected. This is the database that was created when you installed Oracle Test Manager.
4. Click **OK**. The main window appears as follows:.

Figure 5–2 Oracle Test Manager Main Window



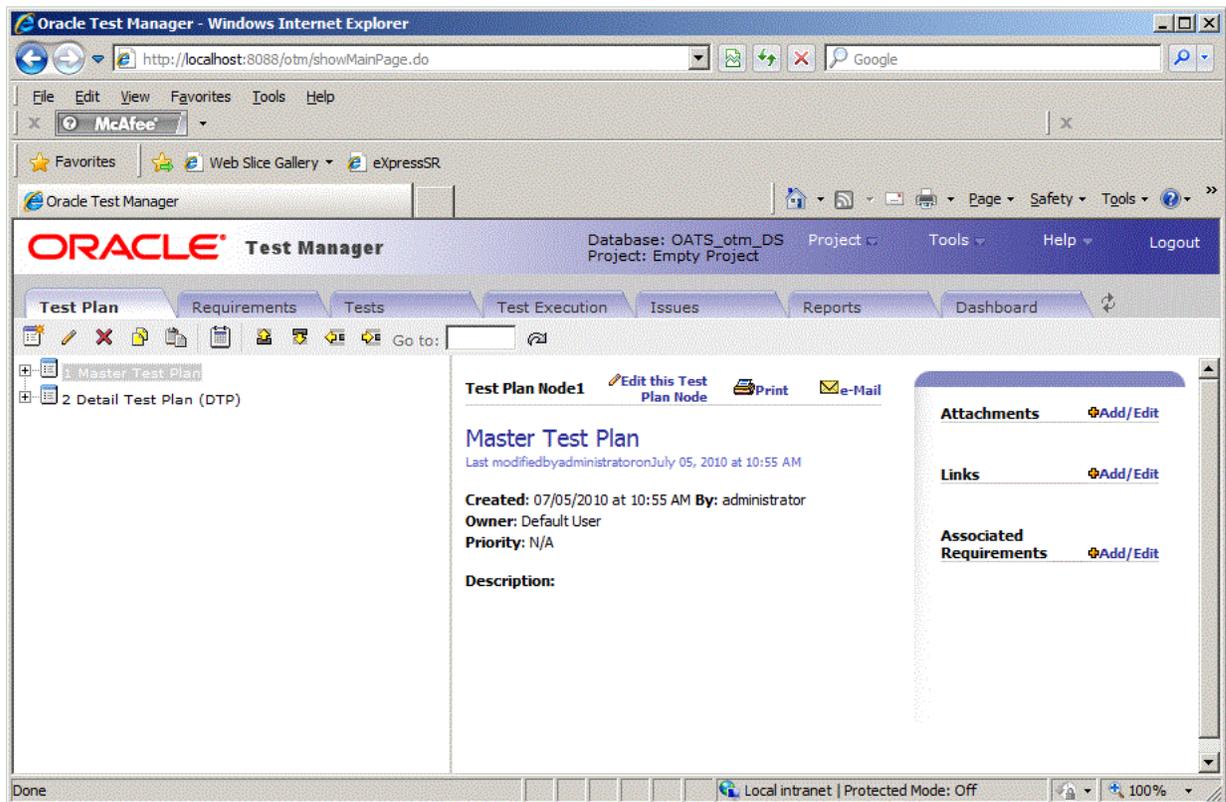
The left pane contains tabs for the modules that comprise the application. They are test plans, requirements, tests, test execution, issues, reports, and dashboard. The detailed information for the selected item is displayed in the right pane. The information displayed may be different from the examples shown in this tutorial if your system administrator has customized the database to add new fields or disable default fields.

5.3 Example 1: Adding a Test Plan

This example explains how to add a Test Plan.

1. Click the **Test Plan** tab.
2. Select item 1. The test plan will be added for the Master Test Plan.

Figure 5–3 Test Plan Tab



3. Click **Add** to display the Add Test Plan dialog box.

Figure 5-4 Add Test Plan Window

The screenshot shows a web browser window titled "Oracle Test Manager Web Access - Add - Windows Internet Explorer". The main content area is titled "Add Test Plan Node". It features a form with the following elements:

- *Name:** A text input field.
- Owner:** A dropdown menu currently showing "Administrator User".
- Priority:** A dropdown menu currently showing "N/A".
- Description:** A large text area with a vertical scrollbar.
- Buttons:** Four buttons are stacked vertically on the right: "Save", "Reset", "Cancel", and "Help".
- * Denotes required fields**: A note below the main form fields.
- Attachment :** A section with two radio buttons: "File" (selected) and "Link".
 - File :** A text input field followed by a "Browse..." button.
 - Link :** A text input field with "Title :" and "Link :" labels. Below it is an example: *ex. http://www.yoursite.com*

4. Enter "System Requirements" in the Name field.
5. Select an owner.
6. Select High from the Priority list.
7. Enter "Web Server and Oracle Database" in the Description field.

Figure 5-5 Add Test Plan Window with Sample Data

Oracle Test Manager Web Access - Add - Windows Internet Explorer

Add Test Plan Node

*Name: Save

Owner: Reset

Priority: Cancel

Description: Help

* Denotes required fields

Attachment :

File : Browse...

Link :

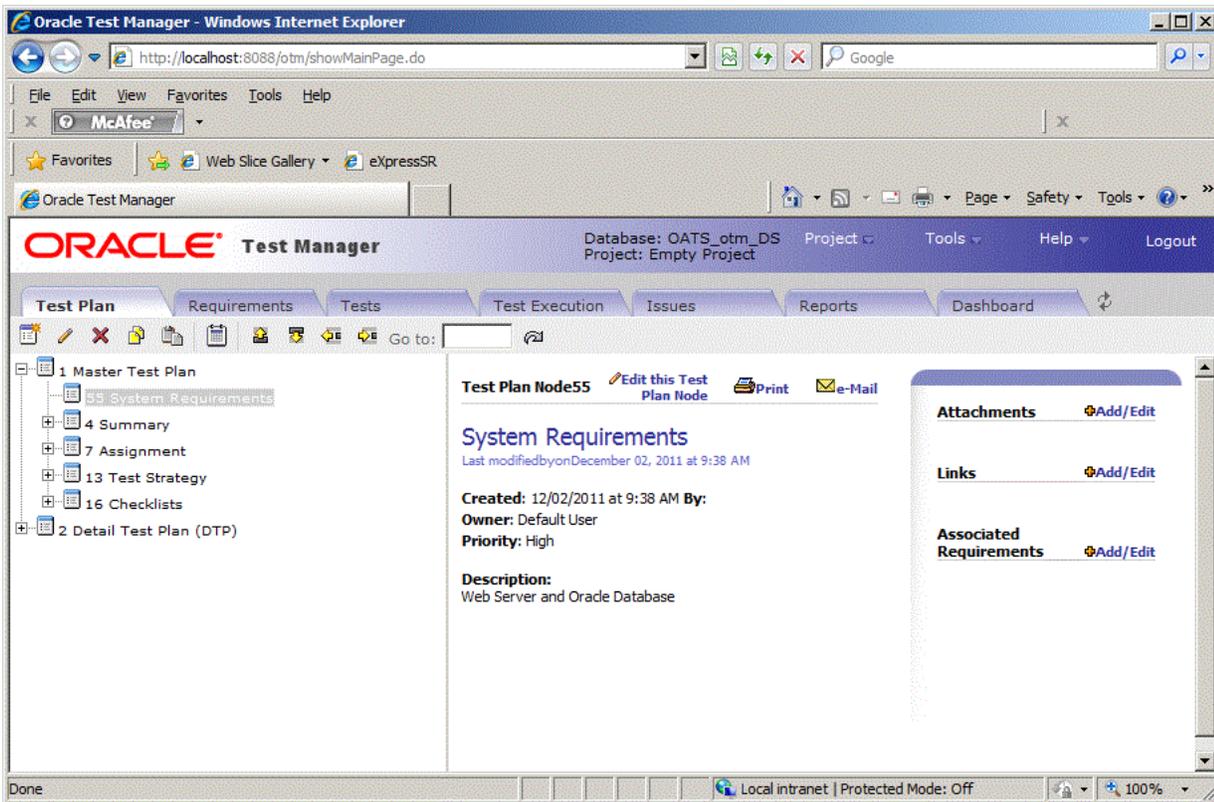
Title :

Link :

ex. <http://www.yoursite.com>

8. Click **Save**. The new test plan appears in the tree.
9. Select the System Requirements item to make it the selected item in the tree.
10. Click the Indent toolbar button so that the System Requirements node is moved below the item 1 Master Test Plan tree node.

Figure 5–6 Test Plan Tab with New Test Plan Added

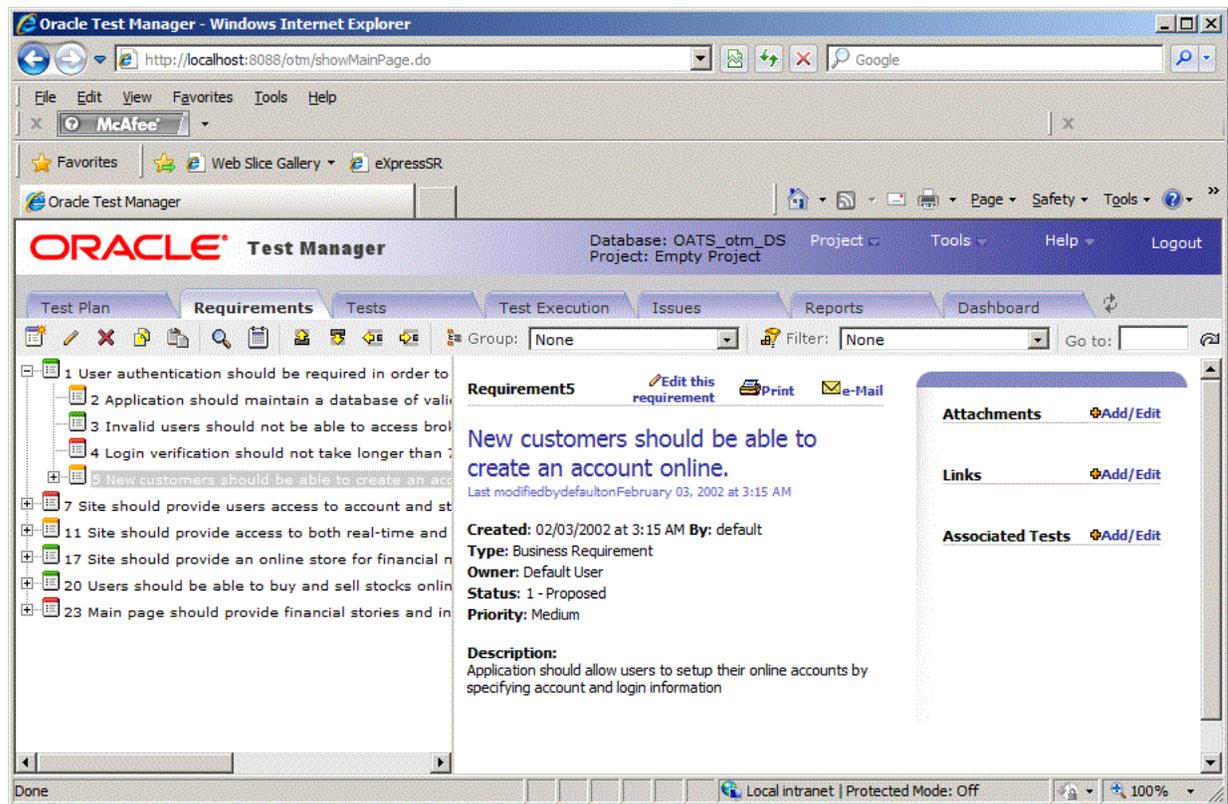


5.4 Example 2: Adding a Requirement

This example explains how to add a requirement.

1. Click the **Requirements** tab.
2. Expand item 1 "User authentication should be required in order to access stock brokerage site" and select item 5 "New customers should be able to create an account online". The new requirement will be added under item 1.

Figure 5-7 Requirements Tab



3. Click **Add** to display the Add Requirement dialog box.

Figure 5–8 Add Requirement Window

Oracle Test Manager Web Access - Add - Windows Internet Explorer

Add Requirement

*Name: Save

*Type: -- Select -- Reset

*Owner: -- Select -- Cancel

*Status: -- Select -- Help

*Priority: -- Select --

Description:

** Denotes required fields*

Attachment :

File : Browse...

Link :

Title :

Link :

ex. http://www.yoursite.com

4. Enter "Users should have access to the chart view of their portfolio" in the Name field.
5. Select a type, owner, and status.
6. Select Medium from the Priority list.
7. Enter "All customers should be able to view their portfolio in the chart view" in the Description field.

Figure 5-9 Add Requirement Window with Sample Data

Oracle Test Manager Web Access - Add - Windows Internet Explorer

Add Requirement

*Name:
*Type:
*Owner:
*Status:
*Priority:
Description:

* Denotes required fields

Attachment :

File :

Link :

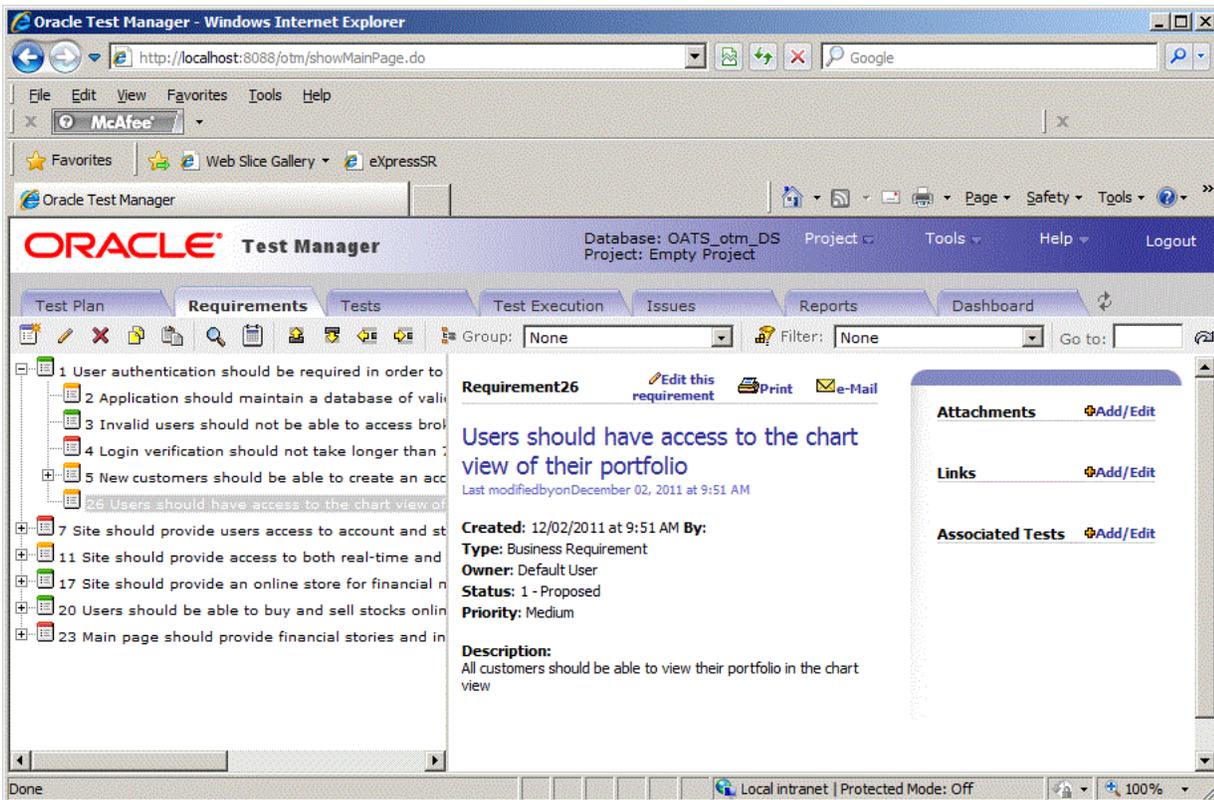
Title :

Link :

ex. <http://www.yoursite.com>

8. Click **Save**. The new requirement appears in the tree.

Figure 5–10 Requirements Tab with New Requirement Added



5.5 Example 3: Adding Tests

You can add two types of test cases to Oracle Test Manager:

Manual tests - these are tests that allow you to organize your test cases. For each step in the test, you enter the action, expected result, and pertinent comments. When you run the test, the Oracle Test Manager Manual Test Wizard takes you step by step through the test, allowing you to manually execute each test and enter the result.

Automated tests - these are Oracle OpenScript tests that can be run automatically without manual intervention. You can run one test, an entire branch of tests, or all automatic tests in the project.

This example has two parts. The first part explains how to add a manual test. The second part explains how to create the same test using Oracle OpenScript and add it as an automated test.

5.5.1 Adding a Manual Test

This example explains how to add a manual test.

1. Click the **Tests** tab.
2. Expand item 2, Customer Account Tests.
3. Click **Add** to display the Add Test dialog box.

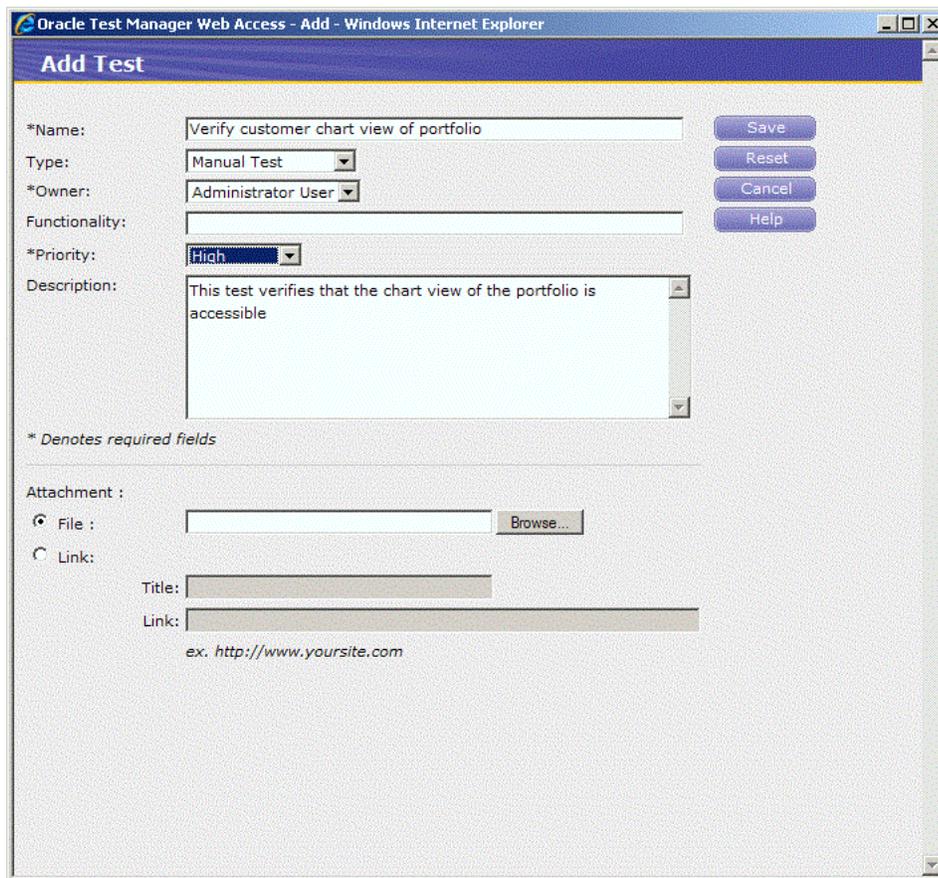
Figure 5–11 Add Test Window

The screenshot shows the 'Add Test' window in Oracle Test Manager. The window title is 'Oracle Test Manager Web Access - Add - Windows Internet Explorer'. The form contains the following fields and controls:

- *Name:** A text input field.
- Type:** A dropdown menu with 'Manual Test' selected.
- *Owner:** A dropdown menu with '-- Select --' selected.
- Functionality:** A text input field.
- *Priority:** A dropdown menu with '-- Select --' selected.
- Description:** A large text area.
- Buttons:** Save, Reset, Cancel, and Help.
- * Denotes required fields**
- Attachment :**
 - File :** A text input field with a 'Browse...' button.
 - Link:**
 - Title:** A text input field.
 - Link:** A text input field with an example: *ex. http://www.yoursite.com*

4. Enter "Verify customer chart view of portfolio" in the **Name** field.
5. Select **Manual Test** in the **Type** field.
6. Enter "This test verifies that the chart view of the portfolio is accessible" in the **Description** field.
7. Select an owner and priority.

Figure 5–12 Add Test Window with Sample Data



8. Click **Save**. The test is added to the tree.
9. Select the newly added node in the tree and click the Indent toolbar button to move the new item below item 2 "Customer Account Tests". You are now ready to add test steps.
10. Make sure the new test is selected in the tree and click **Add/Edit** in the Test Steps section of the right-hand pane to display the Test Steps dialog box.

Figure 5–13 Manual Test Steps Window

The screenshot shows a web browser window titled "Test Steps - Microsoft Internet Explorer". The main content area is titled "Manual Test Steps". At the top of this area, there are several icons: a star for "Add", a trash can for "Delete", arrows for "Move Up", and arrows for "Move Down". To the right of these icons are four navigation buttons: a left arrow, a right arrow, a double left arrow, and a double right arrow. Further right are three buttons: "OK", "Cancel", and "Help".

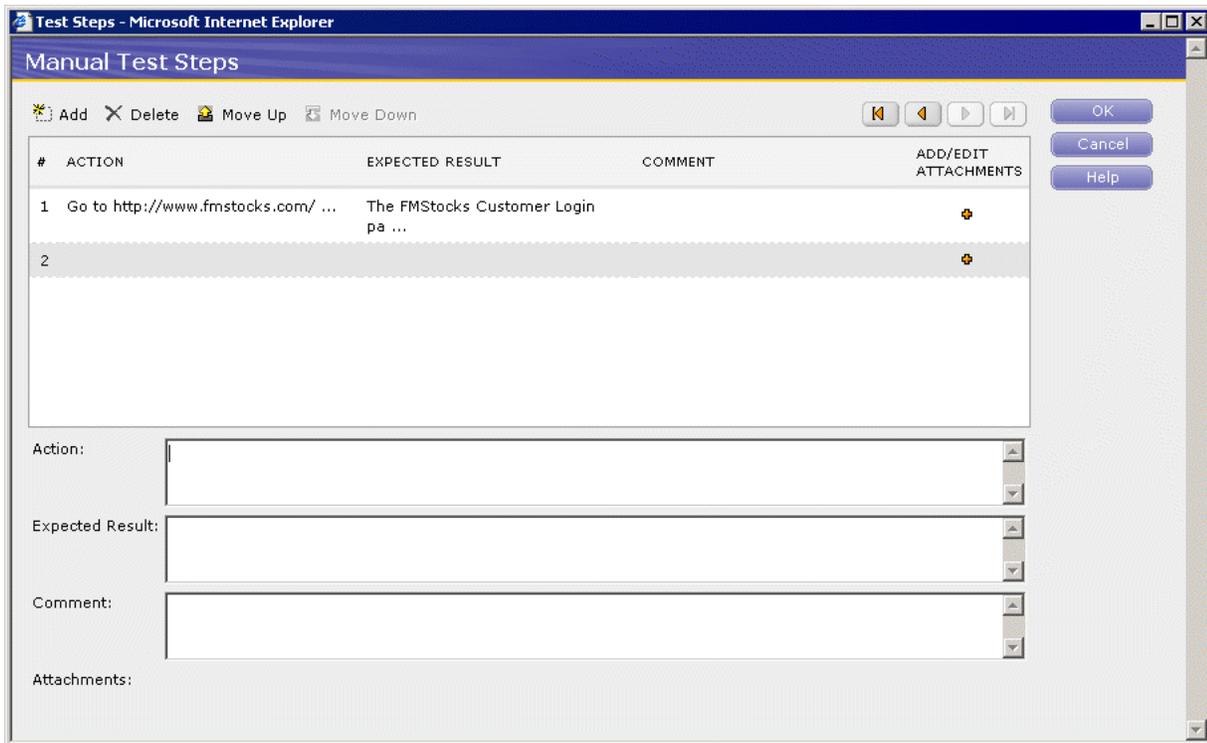
#	ACTION	EXPECTED RESULT	COMMENT	ADD/EDIT ATTACHMENTS
---	--------	-----------------	---------	----------------------

Below the table, there are four input fields:

- Action:
- Expected Result:
- Comment:
- Attachments:

11. Click **Add**.
12. Enter, "Go to <http://www.fmstocks.com/fmstocks>" in the **Action** field.
13. Enter, "The FMStocks Customer Login page should be displayed" in the **Expected Results** field.
14. Click **Add** to update the top of the dialog box and to go to the next step.

Figure 5–14 Manual Test Steps Window with Sample Data



15. Enter the following steps, clicking **Add** to start each step:

Step	Action	Expected Result
2	Click Login.	The Welcome to FMStocks page should be displayed.
3	Click the Chart Your Portfolio link	The Your Portfolio page should be displayed with a spreadsheet and graphs.

The Manual Test Steps dialog box shows the entries as entered.

16. Click **OK**.

5.5.2 Adding an Automated Test

Oracle Test Manager can run Oracle OpenScript functional test scripts as automated tests. This example explains how to add a script created in Oracle OpenScript to the Tests in Oracle Test Manager and associate it with the requirement just added.

1. Select **Programs** from the **Start** menu and then select **OpenScript** from the **Oracle Application Testing Suite** menu.
2. Select **New** from the **File** menu.
3. Expand the Functional Testing (Browser/GUI Automation) folder.
4. Select "Web" and click **Next**.
5. Select the default repository.
6. Enter ChartPortfolio as the name of the script and click **Finish**.

OpenScript creates the script project and adds the Initialize, Run, and Finish sections to the script tree.

7. Select **Record** from the **Script** menu or click the toolbar button. A new browser window opens.
8. Go to <http://www.fmstocks.com/fmstocks>.
9. Click **Login**.
10. Click the **Chart Your Portfolio** link.
11. Select **Stop** from the **Script** menu or click the toolbar button.
12. Select **Save** from the **File** menu.
13. Select **Playback** from the **Script** menu or click the toolbar button and verify that the script plays back correctly and passes. You can view the results in the OpenScript **Results** view or the **Details** view.
14. Select **Exit** from the **File** menu to exit Oracle OpenScript and return to Oracle Test Manager.
15. Click the **Tests** tab.
16. Expand Customer Account Tests and select Verify customer stock portfolio.
17. Click **Add** to display the Add Test dialog box.
18. Enter "Verify customer chart view of portfolio" in the Name field.
19. Select **Oracle OpenScript** in the Type field.
20. Click **Find** in the Repository field.
21. Expand the Default repository, select the ChartPortfolio script, and click **OK**.
22. Select an owner and priority.
23. Enter "This test verifies that the chart view of the portfolio is accessible" in the Description field.

Figure 5–15 Add Test Window with Sample Automated Test

Oracle Test Manager Web Access - Add - Windows Internet Explorer

Add Test

*Name: Save

Type: Reset

Test File : Browse... Cancel

Repository : Find... Help

Workspace :

OpenScript :

Command line run setting :

*Owner:

Functionality:

*Priority:

Description:

* Denotes required fields

Attachment :

File : Browse...

Link:

Title:

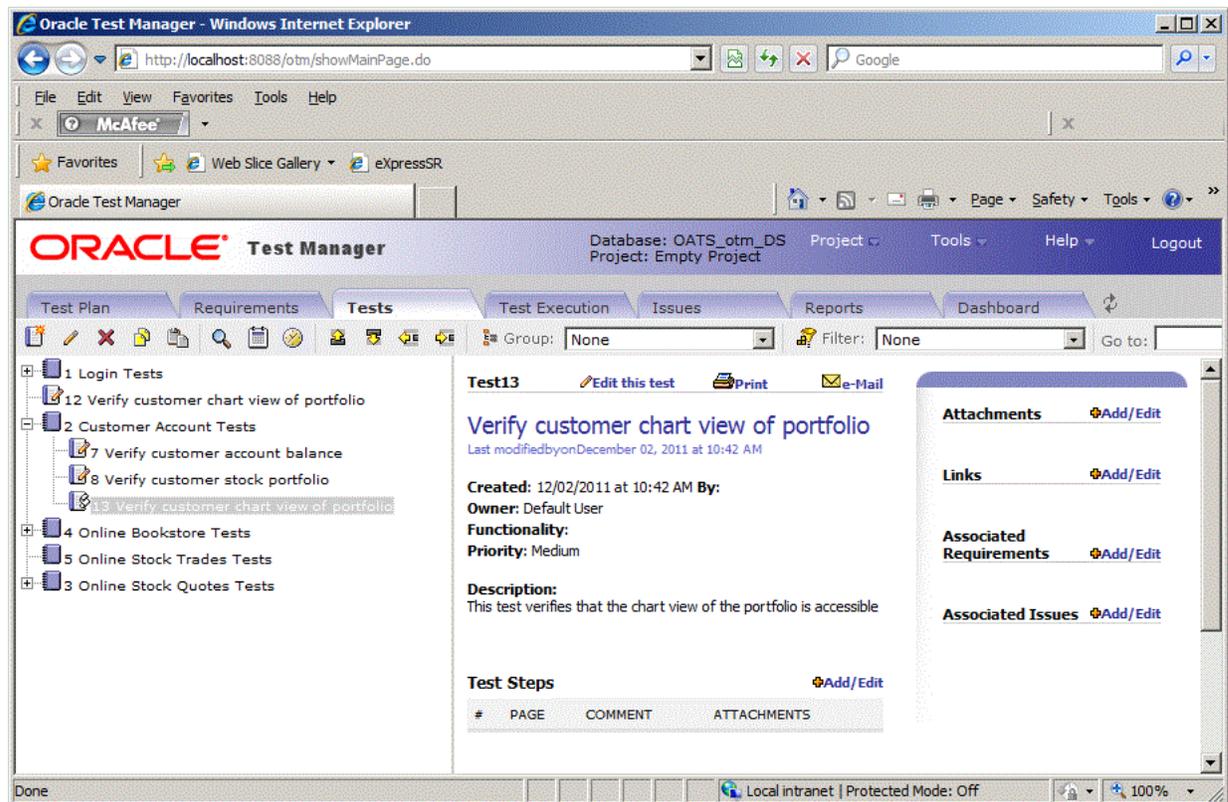
Link:

ex. <http://www.yoursite.com>

24. Click **Save**.

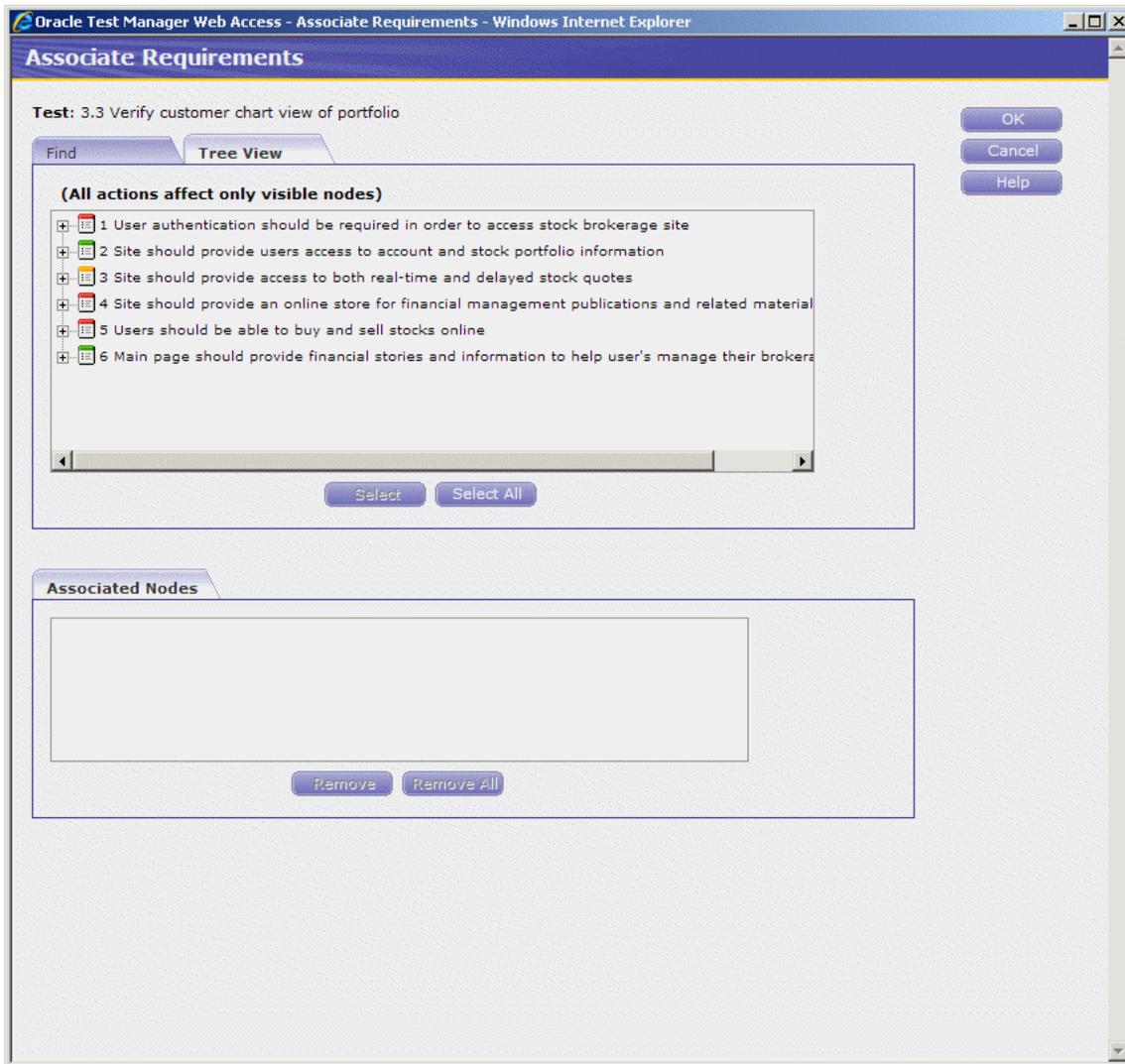
25. The test is added to the tree.

Figure 5–16 Tests Tab with New Test Added

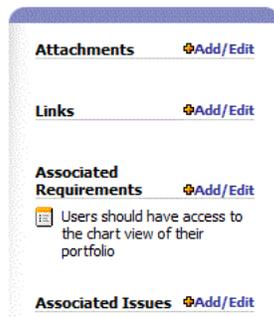


26. Click **Add/Edit** next to Associated Requirements in the right pane, to display the Associate Requirement dialog box.
27. Click the **Tree View** tab.

Figure 5-17 Associate Requirements Window



28. Expand item 1 and select "Users should have access to the chart view of their portfolio".
29. Click **Select**.
30. Click **OK**. The test is now linked to the requirement and is listed on the right-hand side of the screen. The test is also listed in the Associated Tests section of the requirement.

Figure 5–18 Test Associated with Requirement

5.6 Example 4: Creating Test Sets and Running Tests

Tests are run using the Test Execution tab. The Test Execution tab is where you define Test Set Folders and Test Sets. Test Set Folders can be used to group test sets. Test Sets specify the tests to execute.

This example has three parts. The first part explains how to create a Test Set and add tests to the test set. The second part explains how to run the manual test created in the previous example. The third part explains how to run the automated test created in the previous example, then how to view the detailed Results Report.

5.6.1 Creating a Test Set

This example explains how to create a Test Set and add tests to the test set.

1. Click the **Test Execution** tab.
2. Click **Add** to display the Add Test Set Node dialog box.

Figure 5–19 Add Test Set Node Window

The screenshot shows a web browser window titled "Oracle Test Manager Web Access - Add - Windows Internet Explorer". The main content area is titled "Add Test Set Node". It contains the following fields and controls:

- *Name: [Text input field]
- Type: [Dropdown menu with "Test Folder" selected]
- *Owner: [Dropdown menu with "-- Select --" selected]
- Functionality: [Text input field]
- *Priority: [Dropdown menu with "-- Select --" selected]
- Description: [Large text area]
- * Denotes required fields
- Attachment :
 - File : [Text input field] [Browse...]
 - Link :
 - Title : [Text input field]
 - Link : [Text input field]
 - ex. <http://www.yoursite.com>

On the right side of the form, there are four buttons: Save, Reset, Cancel, and Help.

3. Enter "Chart portfolio tests" as the test set name.
4. Select Test Set as the Type.
5. Select an owner.
6. Enter "Run Chart portfolio tests" as the Description.

Figure 5–20 Add Test Set Node Window with Sample Data

Oracle Test Manager Web Access - Add - Windows Internet Explorer

Add Test Set Node

*Name:

Type:

*Owner:

Functionality:

*Priority:

Description:

* Denotes required fields

Attachment :

File :

Link :

Title :

Link :

ex. <http://www.yoursite.com>

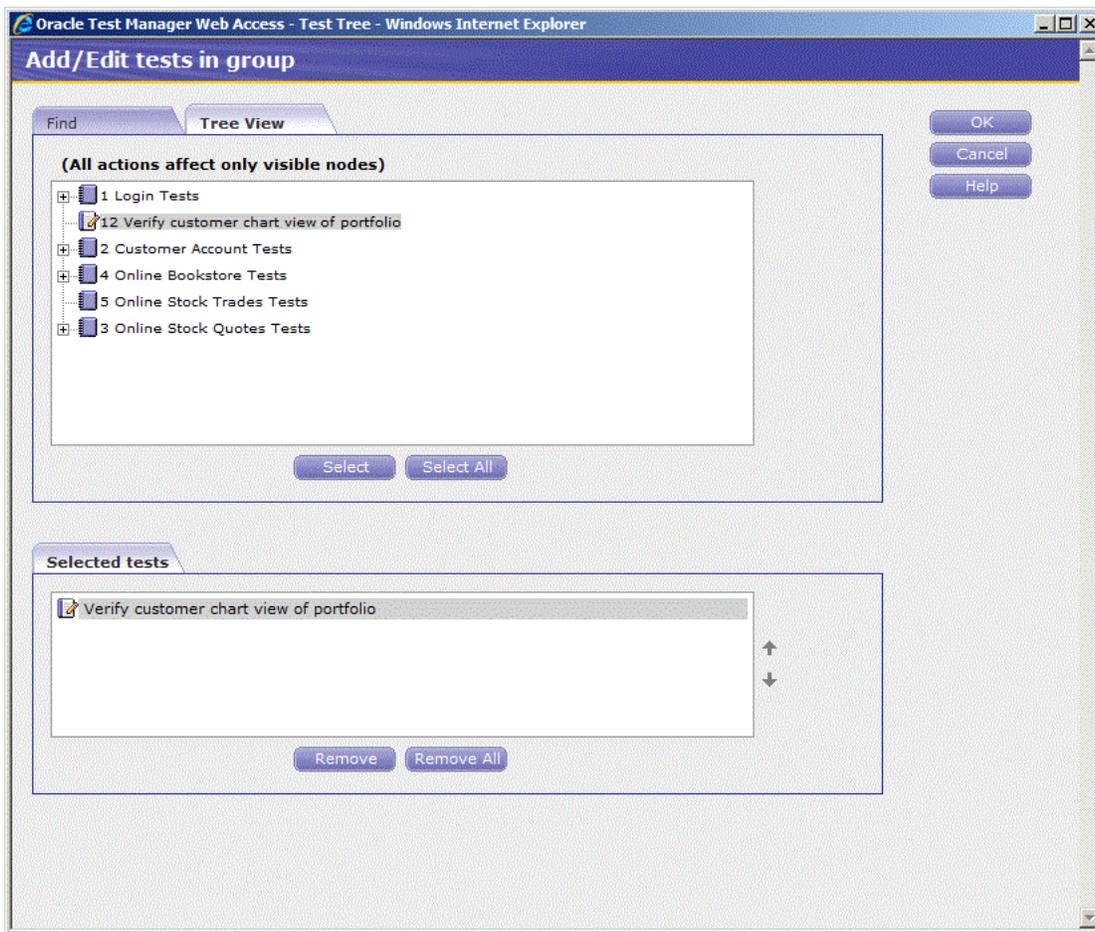
7. Click **Save**. The new Test Set is added to the tree.

5.6.2 Adding Tests to a Test Set

This example explains how to add tests to the Test Set created in the in the previous example.

1. Select "Chart portfolio tests" in the tree.
2. Click **Add/Edit** next to Test List in the right pane, to display the Add/Edit test in group dialog box.
3. Click the **Tree View** tab.
4. Select "Verify customer view of chart portfolio" and click **Select**. The test is added to the Selected List.

Figure 5-21 Add/Edit test in group dialog box with Test Selected



5. Expand item 2 Customer Account Tests.
6. Select "Verify customer view of chart portfolio" and click **Select** to add the automated OpenScript test to the list. The test is added to the Selected List.
7. Click **OK**. The test is added to the Test List in the right-hand pane.

Figure 5–22 Test Execution Tab with Tests Added to Test Set

Test Set4
 Create Run
  Edit Test Set
  Print
  e-Mail

Chart portfolio tests
 Last modified by Administrator User on August 18, 2015 at 10:54 AM

Details
 Expand
  Collapse

Created: 08/18/2015 at 10:54 AM **By:** Administrator User
Type: Test Set
Owner: Administrator User
Functionality:
Priority: Low
Description:

 Add/Edit (Count: 2)
 RUNS: -- Show all tests --  **Actions**

 Expand
  Collapse

TEST NAME	STATUS	OWNER
 Verify customer chart view of portfolio	-	Default User
 Verify customer chart view of portfolio	--	Default User

Run History
 Expand
  Collapse

RUN NAME	RESULT
----------	--------

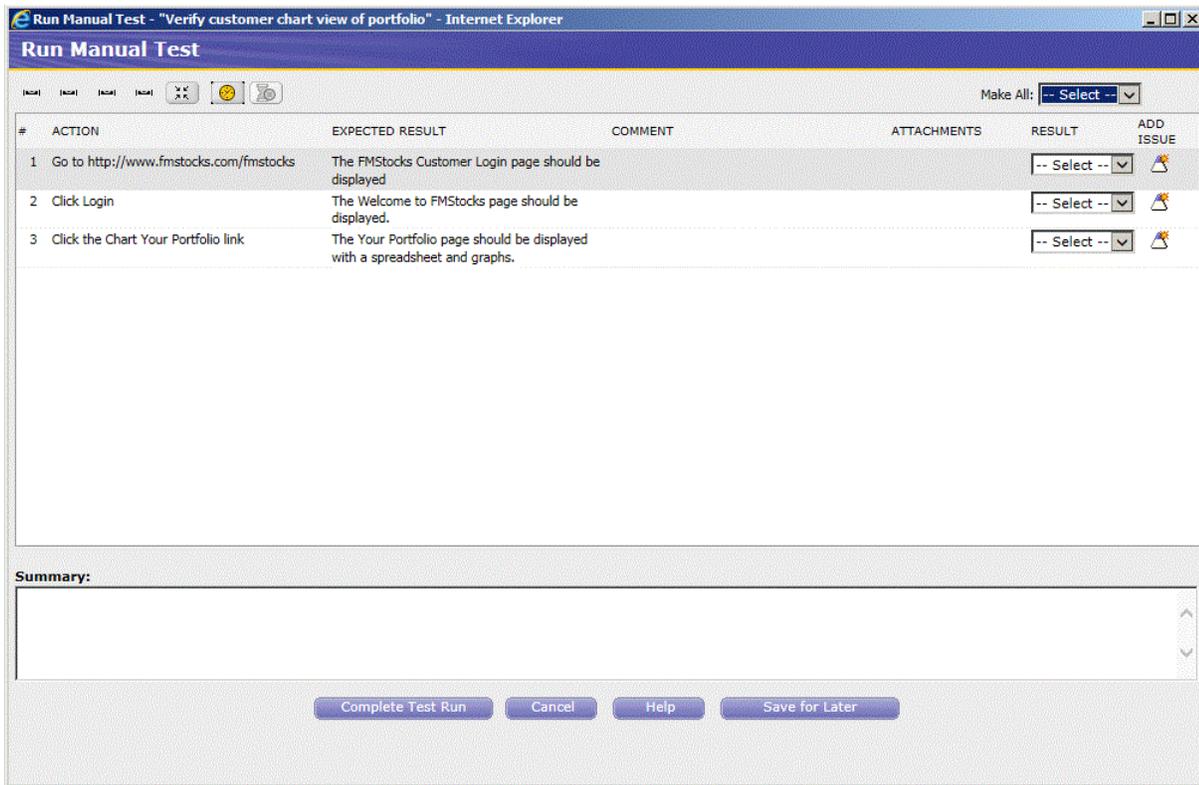
8. If necessary, scroll down to view the Run History section in the right-hand pane

5.6.3 Running a Manual Test

This example explains how to run the manual test entered in the previous example.

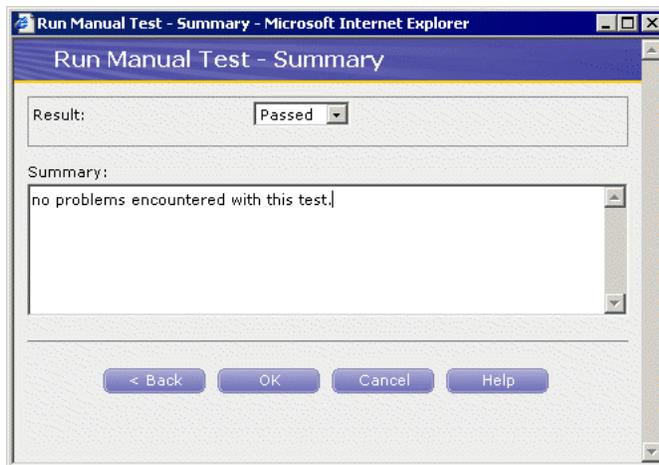
1. Click the Tests Execution tab and select Chart Portfolio tests in the tree.
2. Click **Create Run** at the top of the Tests Set in the right-hand pane.
3. Specify the Create Test Set Run information and click **Save**.
4. Click the **Run** button (arrow button next to the "Verify customer view of chart portfolio" with the pencil (manual test) in the RAdd/Remove Tests to this run section of the right-hand pane. For manual tests, the Run Manual Test window opens.

Figure 5–23 Run Manual Test Window



5. This dialog box tells you the action to take and the expected result. Open your browser and perform the first action. Select the result **Passed**. Enter comments, when needed, in the Summary field.
6. Repeat for steps 2 and 3.
7. Click **Complete Test Run** to display the Run Manual Test - Summary window. **Save for Later** saves the test run status and shows a result of In Progress in the Run History section for this test run.

Figure 5–24 Run Manual Test Summary Window



8. Select **Passed**.

9. Enter, "No problems encountered with this test." in the Summary field.
10. Click **OK**.

The Run History and Result Detail are displayed in the right pane.

Figure 5–25 Run History of Manual Test

RUN NAME	RESULT
Run 11/10/15 9:08 (Tue, 11/10/15 9:08 AM)	Incomplete

11. Select **Complete this run** from the **Actions** popup menu.

5.6.4 Running an Automated Test

This example explains how to run an the automated test created in the previous example and how to view the results detail and the detailed Oracle OpenScript Results Report.

1. Click the Tests Execution tab and select Chart Portfolio tests in the tree.
2. Click **Execute Test Set** in the at the top of the right-hand pane to display the Test run Info dialog box.
3. Select the "Verify customer view of chart portfolio" with the pencil (manual test) icon.
4. Make sure the check box is cleared.
5. Select **OTM Server** in the **System** field.
6. Leave the current date and time in the **Run Name** field.
7. Select 1.0 in the **Version** field. This is the version number of the application you are testing.
8. Select the "Verify customer view of chart portfolio" with the scroll (automated test) icon.
9. Make sure the check box is selected.
10. Select OTM Server in the **System** field.
11. Leave the current date and time in the **Run Name** field
12. Select 1.0 in the **Version** field. This is the version number of the application you are testing.
13. Click **Run**. Oracle OpenScript executes the script (this may take a few moments).
14. Click the Refresh arrows next to the Script Name in the right pane to update the Run History. Oracle Test Manager displays the Result Detail Summary when the test is finished.

Figure 5–26 Run History of Automated Test

Run History		Delete results	Expand	Collapse
RUN NAME	RESULT			
Run 11/10/15 9:08 (Tue, 11/10/15 9:08 AM)	Passed			

- Click the date of the test in the Run History section of the right pane to view the status of the Test Set run.

Figure 5–27 Status of Test Set Run

Status of Test Set Run on: Tue, 04/16/13 2:32 PM

Passed: 1 (100%)
Warning: 0 (0%)
Failed: 0 (0%)

Running: 0 (0%)
In Progress: 0 (0%)
Skipped: 0 (0%)

Details of Test Set Run on: Tue, 04/16/13 2:32 PM

TEST NAME	DURATION (SEC)	RESULT
chart test	0.0	Passed

- Review the report and close the Result Report window when finished.

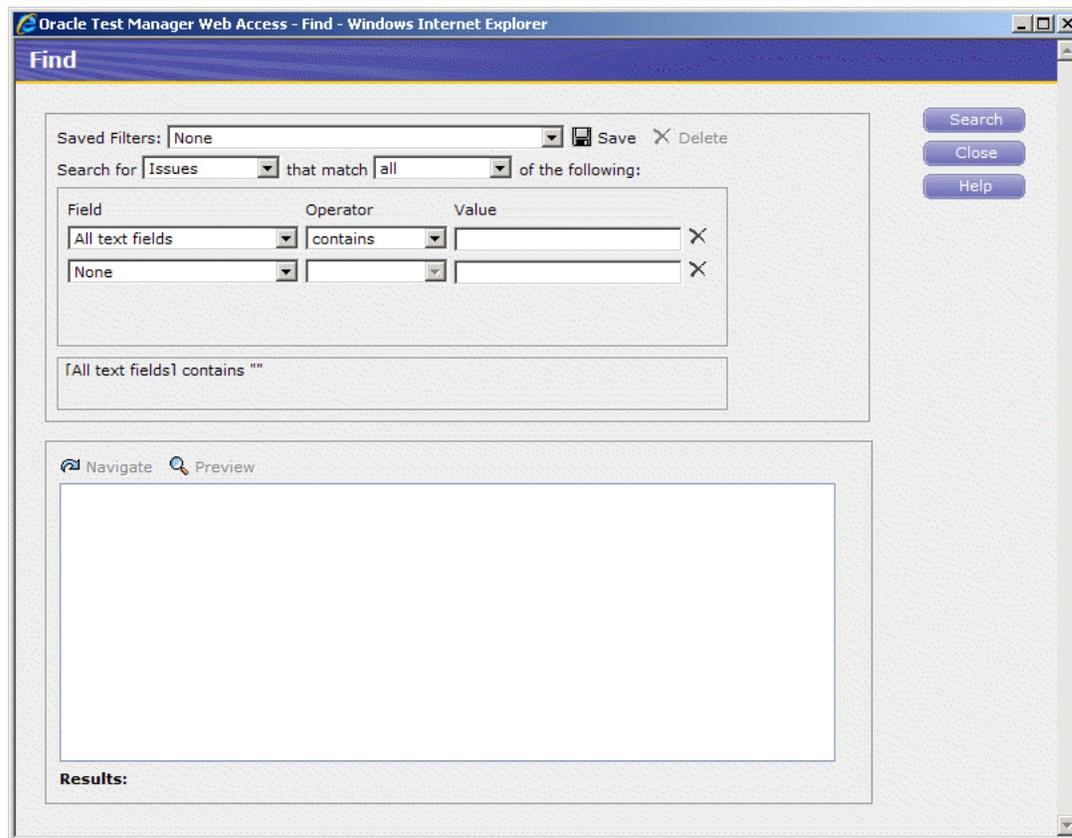
5.7 Example 5: Adding an Issue

This example explains how to search through issues, add an issue, associate it with a test, and add an attachment with additional information. For the purposes of this example, we will assume that the script run in example 3 failed.

To search through issues to see if an issue already exists for this topic, or to find related issues:

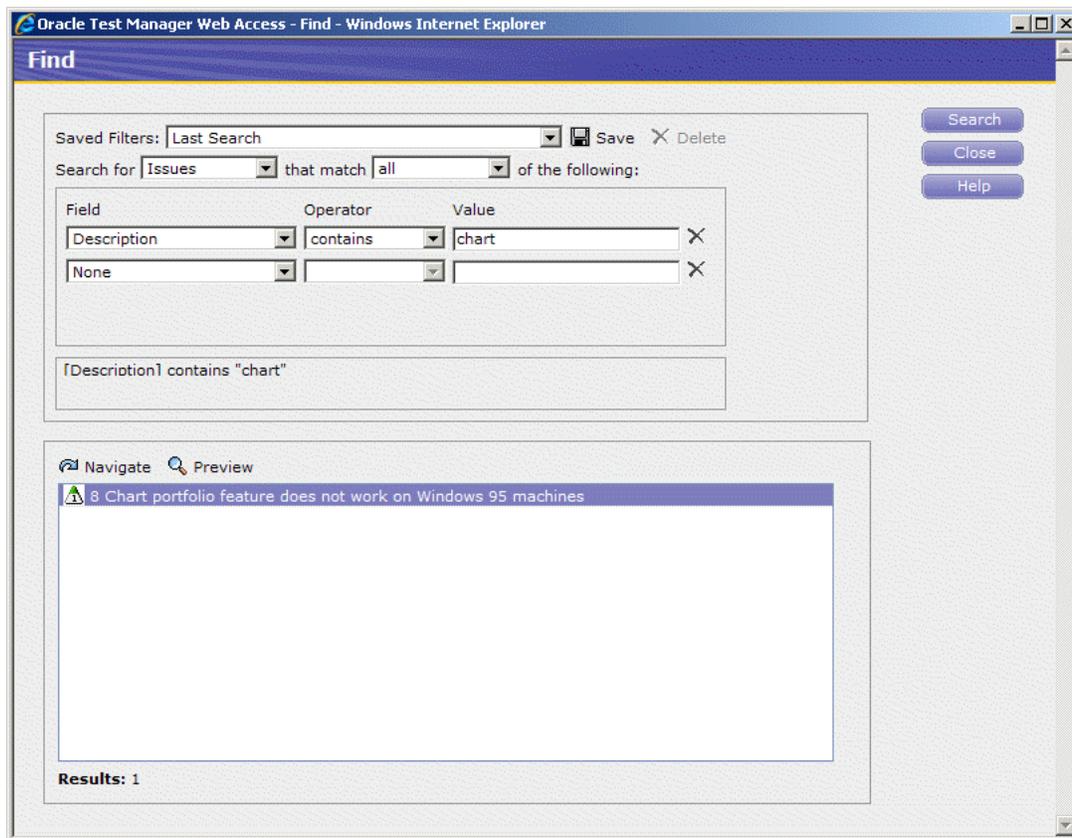
- Click the **Issues** tab.
- Click the **Find** icon (magnifying glass) to display the Find dialog box.

Figure 5–28 Find Window



3. Select **Description** for the field to search.
4. Enter "chart" in the **Value** field.
5. Make sure that **Issues** is selected in the **Search for** field and that **all** is selected in the **that match** field. This will search all of the issue descriptions for the word, "chart."
6. Click **Search**. If there are any matches, they are displayed in the Results portion of the window.

Figure 5–29 Find Window with Search Results



One match was found. You can click **Navigate** in the Results list to display it in Oracle Test Manager or click **Preview** to view the issue in a separate preview window. We will assume that our failure is different enough to warrant creating a new issue.

7. Click **Close** to close the Find dialog box.

To create an issue.

1. Click the **Issues** tab.
2. Click **Add** to display the Add Issue dialog box.

Figure 5-30 Add Issue Window

Oracle Test Manager Web Access - Add - Windows Internet Explorer

Add Issue

*Summary:

*Component:

Version:

*Assigned To:

*Status:

*Priority:

*Severity:

Platform:

Description:

Solution:

* Denotes required fields

Attachment :

File :

Link :

Title :

Link :

ex. <http://www.yoursite.com>

Buttons: Save, Reset, Cancel, Help

3. Enter "Chart portfolio failed" in the **Summary** field.
4. Select the default component.
5. Select 1.0 for the version.
6. Assign the issue to Default User.
7. Set the status to Created.
8. Change the Priority to Medium.
9. Change the Severity to Medium.
10. Select the Windows platform.

Figure 5-31 Add Issue Window with Sample Data

Oracle Test Manager Web Access - Add - Windows Internet Explorer

Add Issue

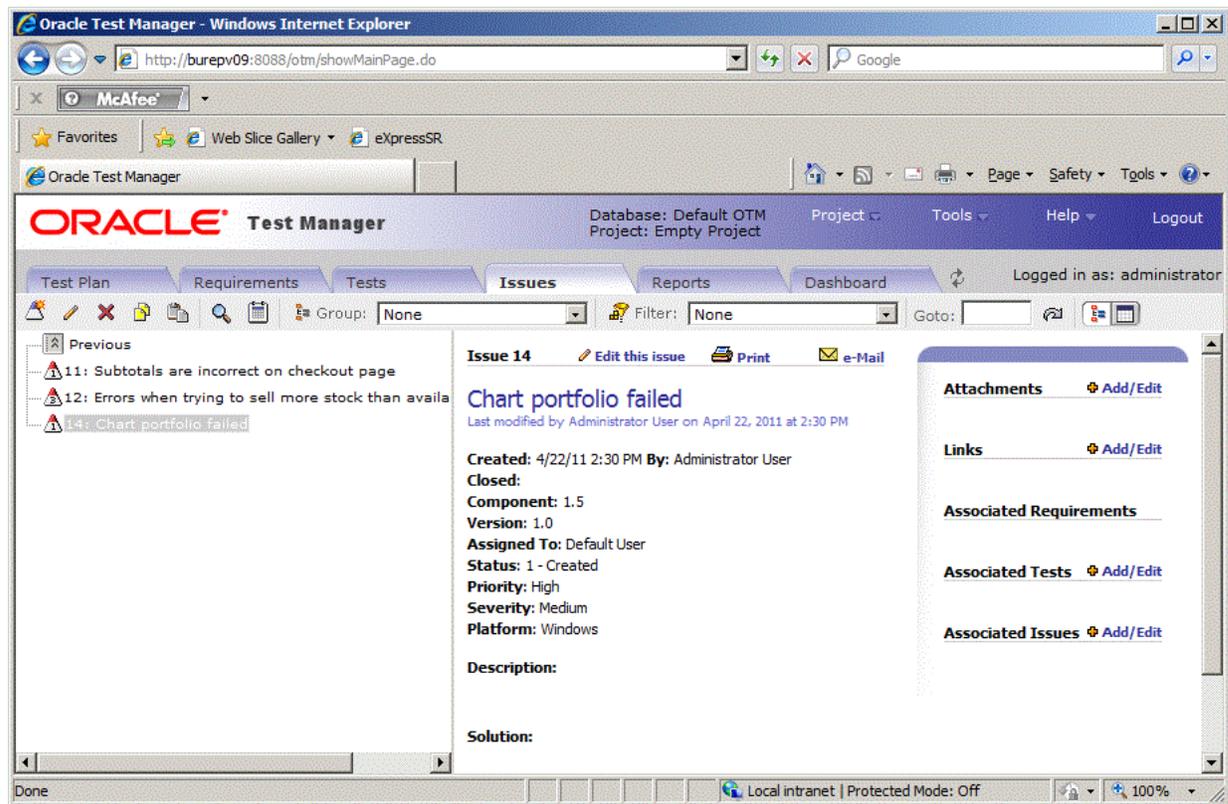
*Summary: Save
*Component: Reset
Version: Cancel
*Assigned To: Help
*Status:
*Priority:
*Severity:
Platform:
Description:
Solution:
** Denotes required fields*

Attachment :

File : Browse...
 Link :
Title :
Link :
ex. http://www.yoursite.com

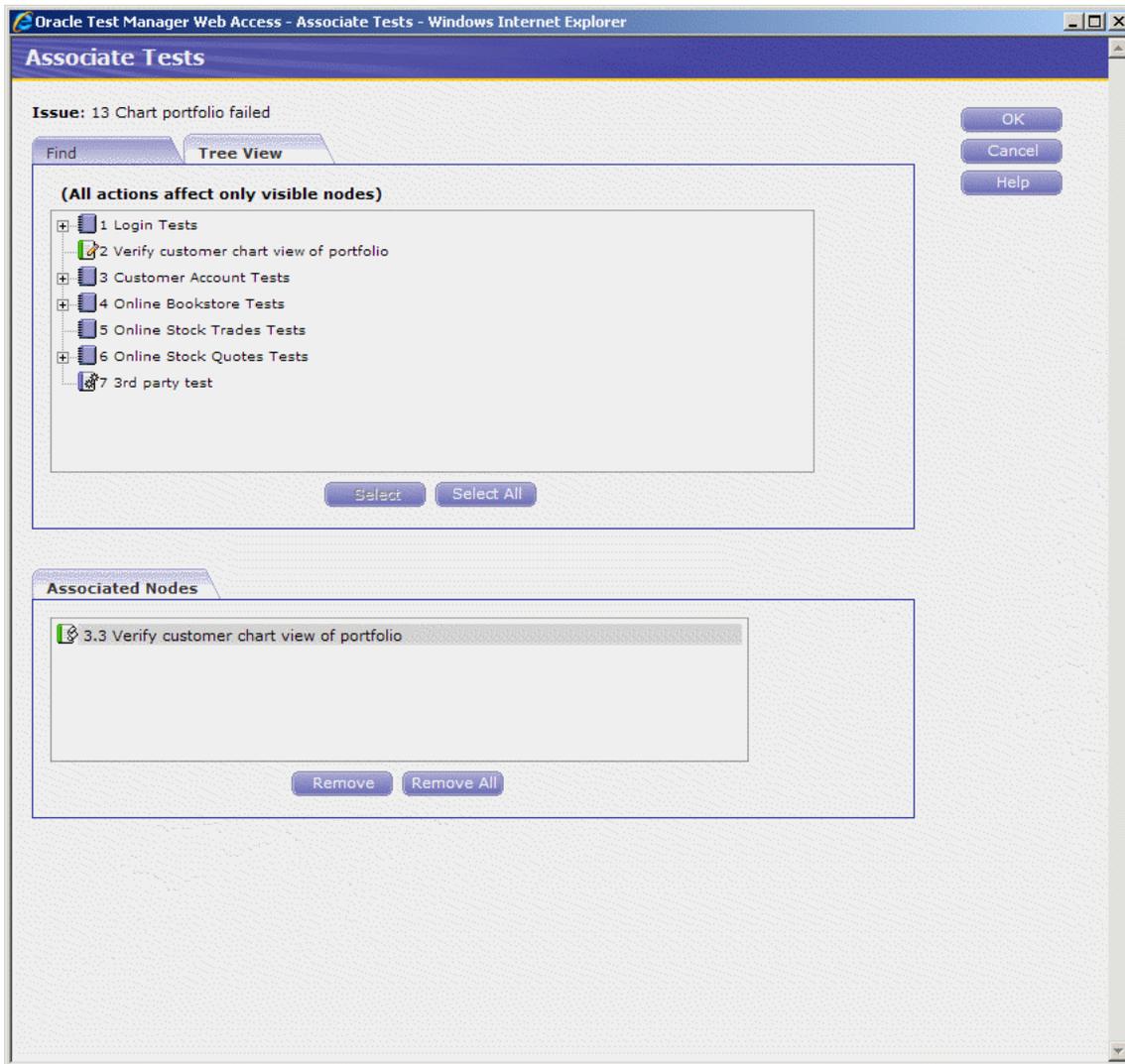
11. Click **Save**. The issue is assigned the next available number and added to the bottom of the list.

Figure 5–32 Issues Tab with New Issue Added



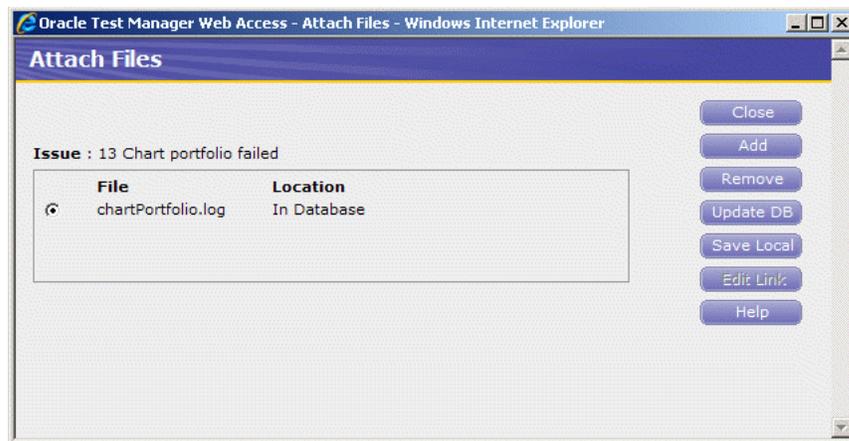
12. Click **Add/Edit** next to Associated Tests in the right pane to display the Associate Test dialog box.
13. Click the **Tree View** tab.
14. Expand the Customer Account Tests folder and select "Verify customer chart view of portfolio".
15. Click **Select**.

Figure 5–33 Associate Test Window with Issue Selected



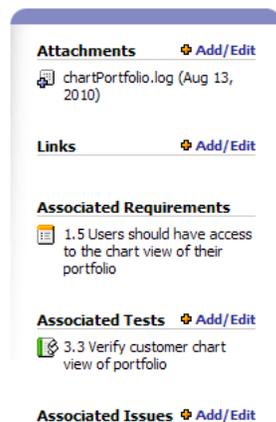
16. Click **OK**. The test is listed in the Associated Tests list.
17. Select **Add/Edit** in the Attachments section to display the Attach Files dialog box.
18. Click **Add**.
19. Click **Browse**.
20. Select a file to attach and click **Open**.
21. Click **Upload**.

Figure 5–34 Attach Files Window with File Selected



22. Click **Close**. The attachment is listed in the Attachments list in the right pane. Click on the attachment to open it in the appropriate application.

Figure 5–35 Issue with File Attachments

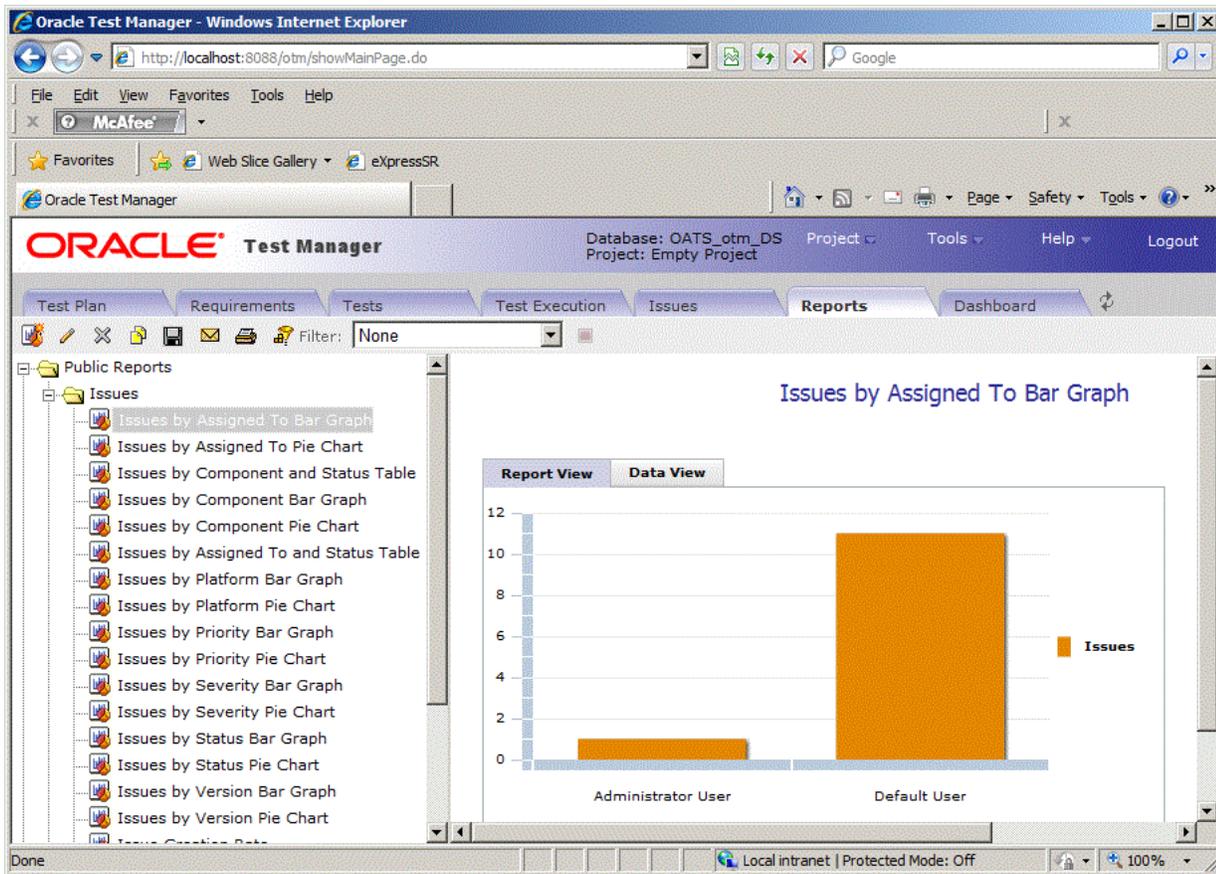


5.8 Example 6: Creating Reports

Oracle Test Manager comes with a standard set of reports. In addition, you can create and optionally save custom reports. Reports can be either public, that is, available to all users, or private, available only to you. This example explains how to view standard reports and how to create a custom report and save it.

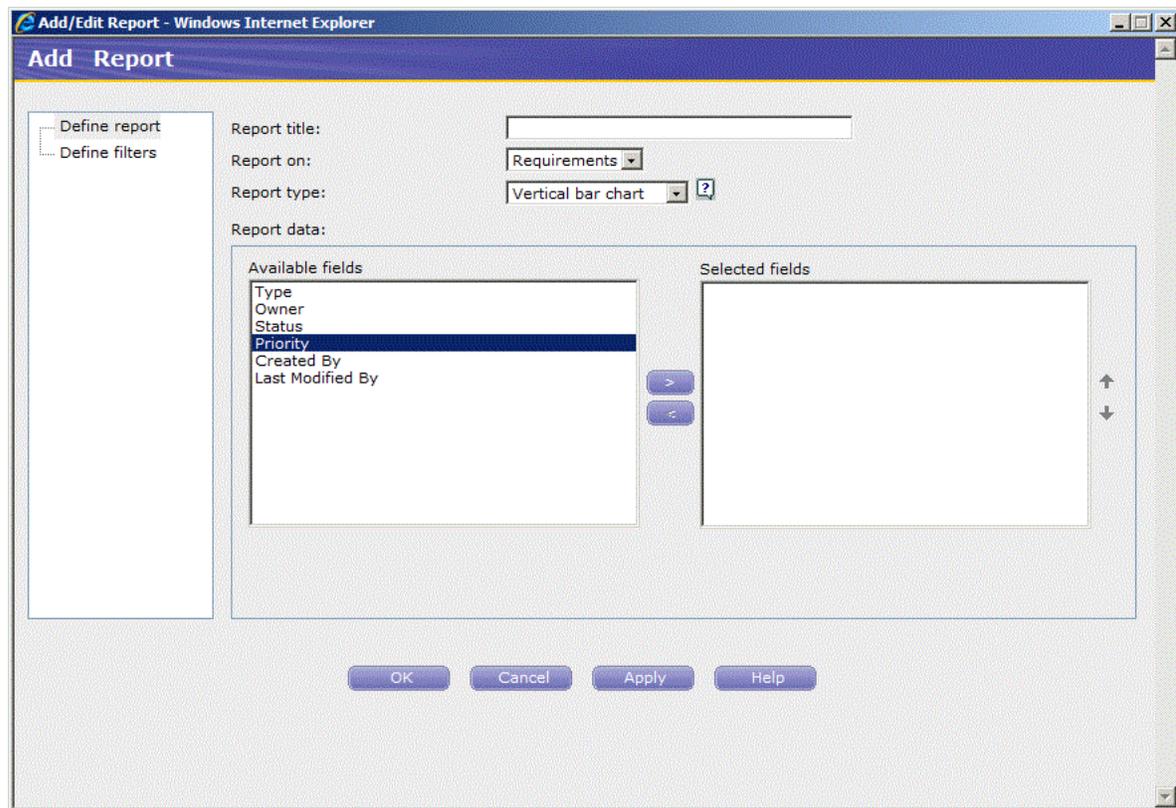
1. Click the **Reports** tab.
2. Expand the Public Reports node, then the Issues node.
3. Select **Issues by Assigned to Bar Graph** to display the graph in the right pane.

Figure 5–36 Reports Tab with Bar Graph Report



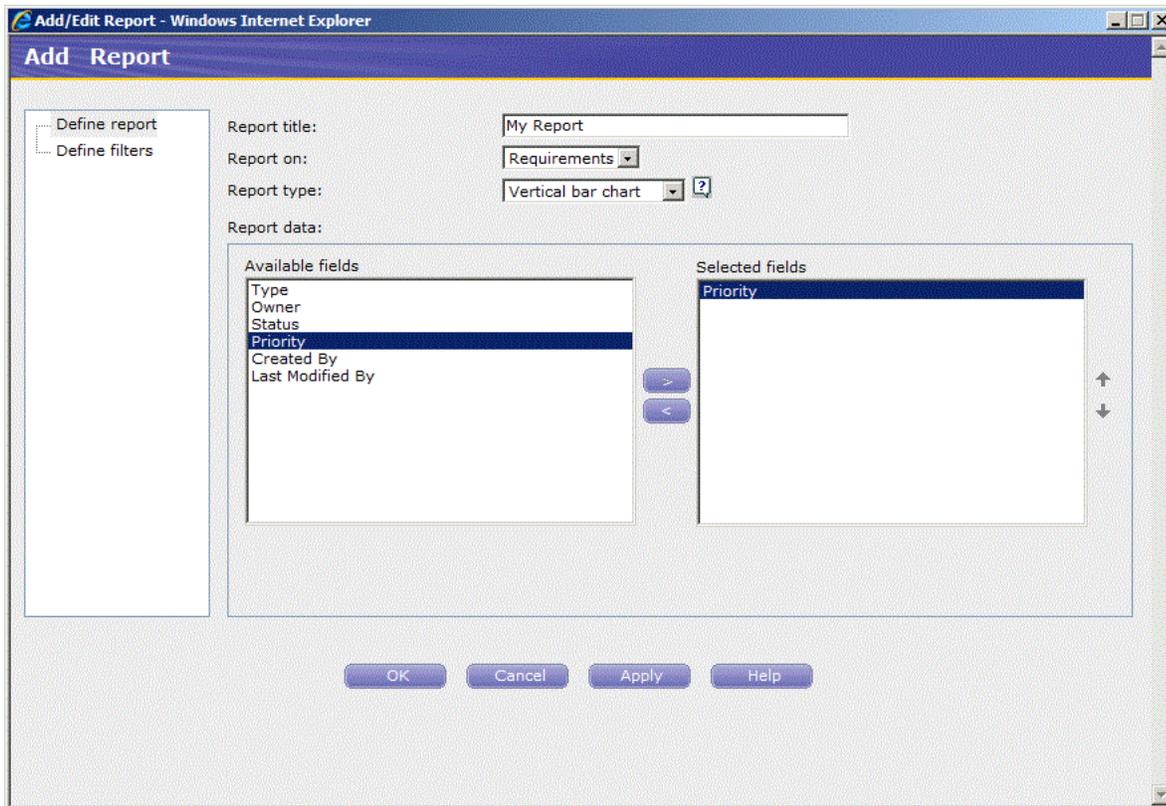
4. Click once on the graph area then mouse over the bars to view the actual values. Click **Data View** to view just the data.
5. To create a custom report click **Add**.

Figure 5–37 Add Report Window



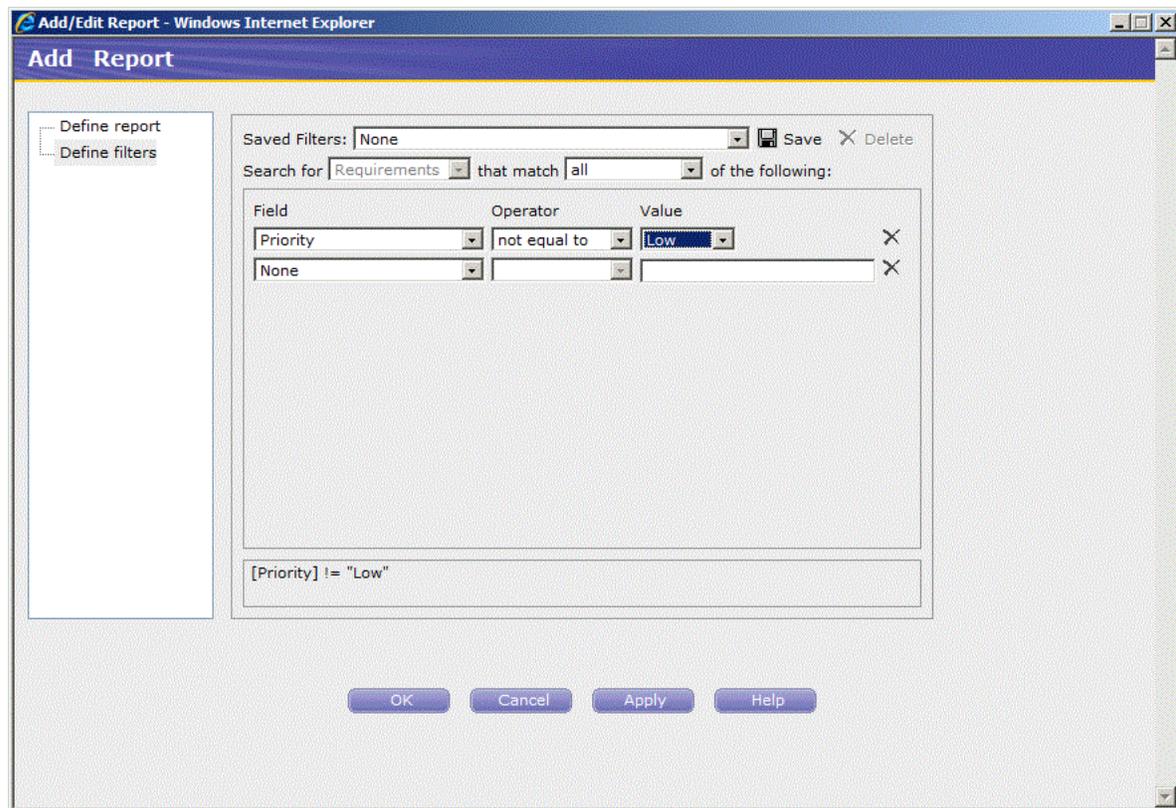
6. Enter a name for the report.
7. Select **Vertical bar chart** for the report type.
8. Select **Priority** from the **Available fields** and click the right arrow to add it to the **Selected fields** list.

Figure 5–38 Add Report Window with Selected Fields



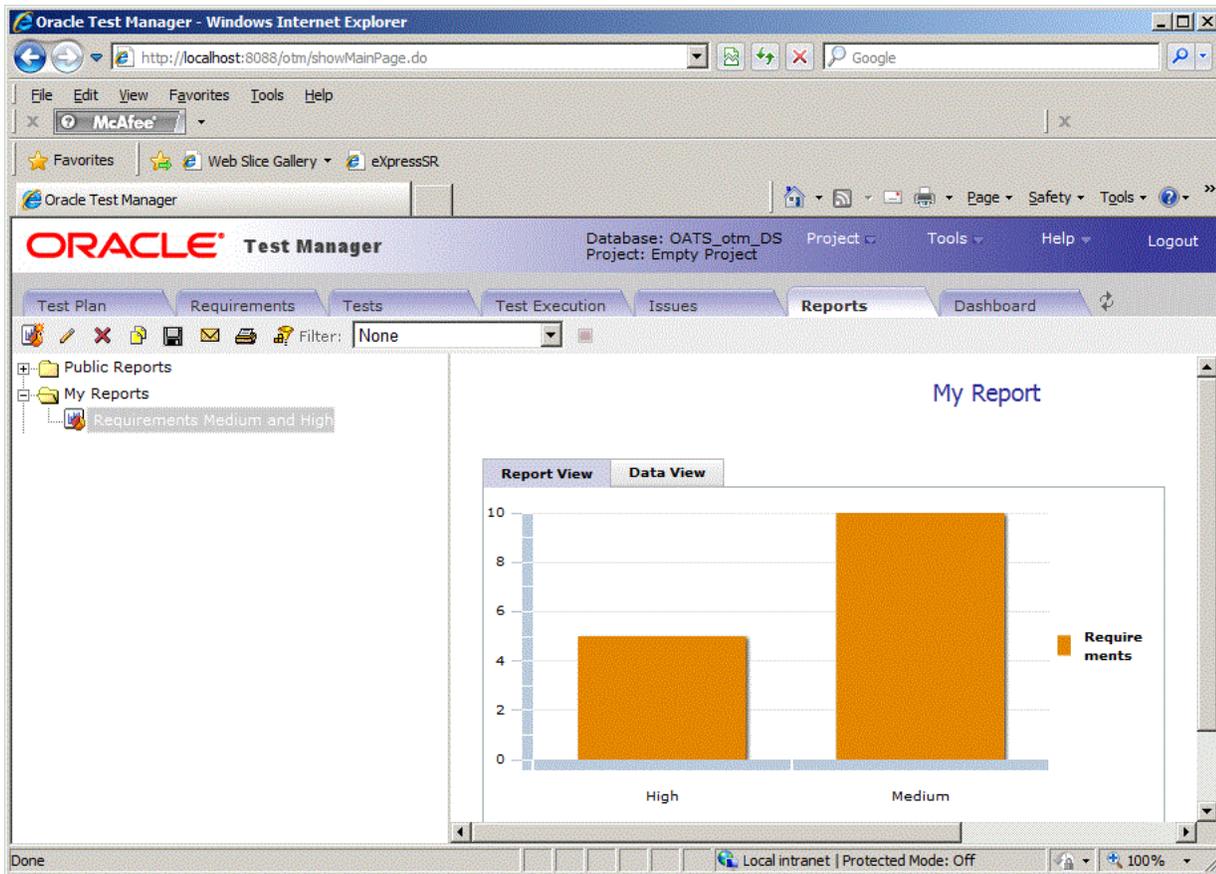
9. Click **Define filters**.

Figure 5–39 Add Report Filters Window



10. Select **Priority** as the field, **not equal to** in the **Operator** field, and **Low** for the Value. This means that the report will only display information for Medium and High priority requirements.
11. Click **OK** to display the report.
12. Click **Save** to save this report.
13. Enter **Requirements Medium and High** for the report name. The name will be displayed in the report tree.
14. Select **My Reports** as the Report Category.
15. Click **OK**. The new report is added under the My Reports folder.

Figure 5–40 Reports Tab with Custom Reports

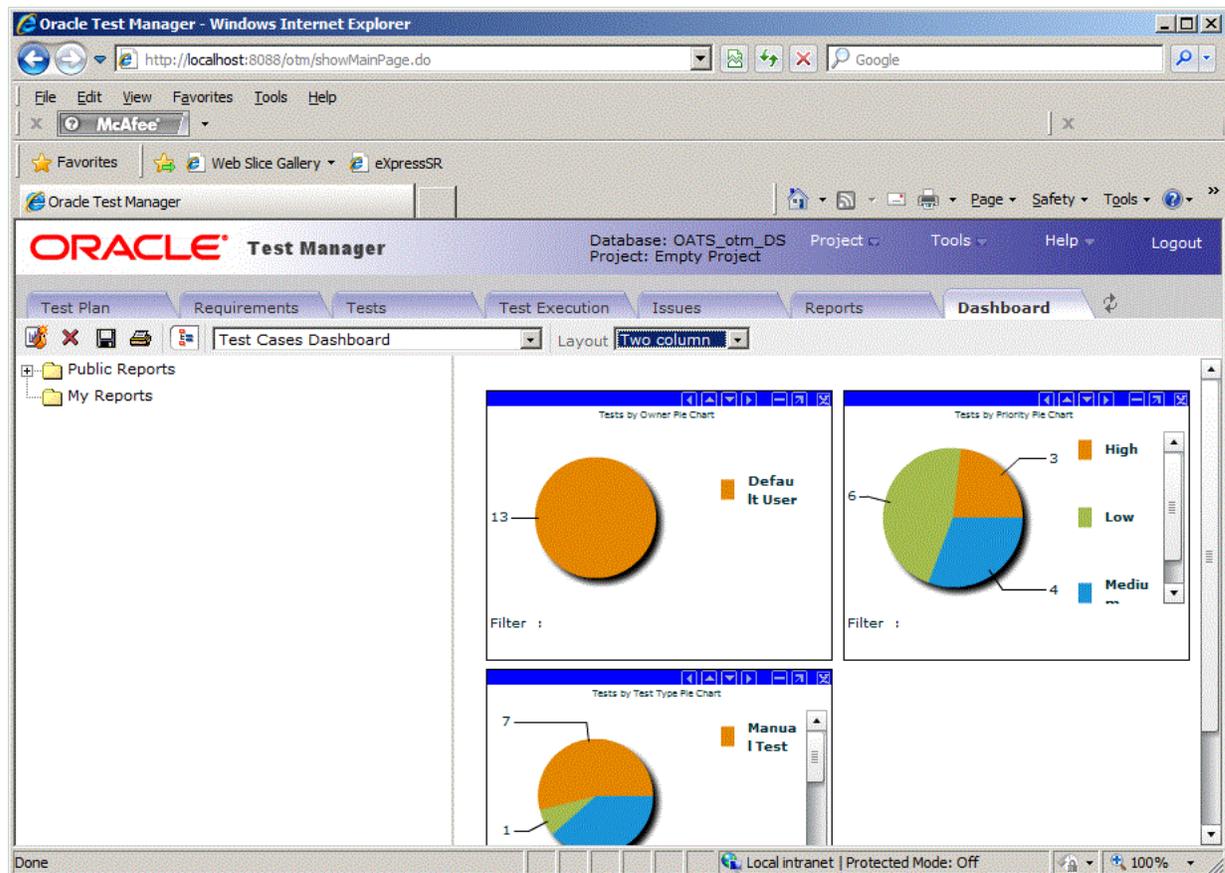


5.9 Example 7: Using Dashboards

The Oracle Test Manager Web Dashboard tab is where you can create and view multi-report dashboards. These dashboards allow you to select the key reports of interest and save them in a single integrated view. This allows you to create report dashboards that are tailored to the needs of specific users. Each new dashboard can also be saved as either a public dashboard which will be viewable by all users who log into this project or a private dashboard that is only viewable by your account.

1. Click the **Dashboard** tab.
2. Select the Test Cases Dashboard from the select list.
3. Select Two Column from the Layout list.

Figure 5–41 Dashboard Tab with Test Cases Dashboard



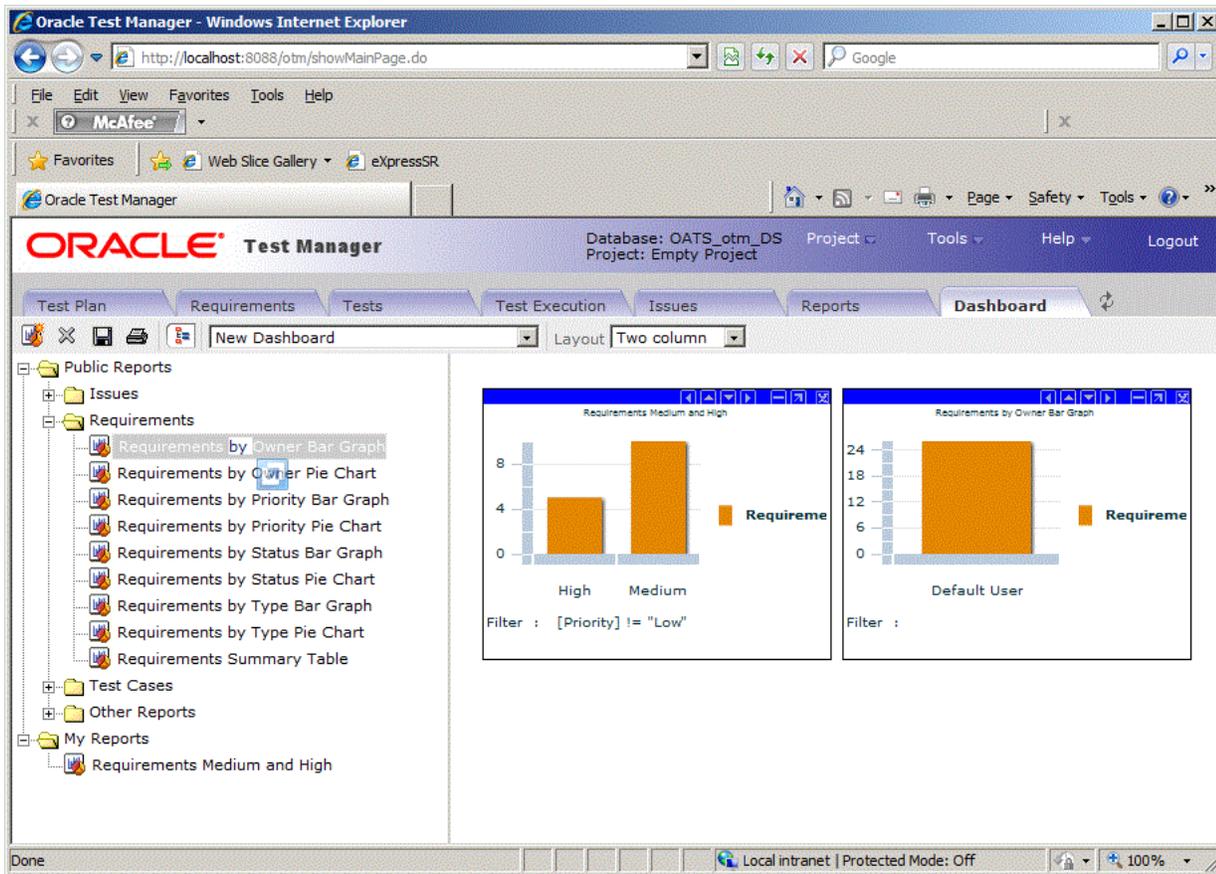
Each graph in the Dashboard has a toolbar for moving, sizing, and closing individual graphs in the Dashboard.

Figure 5–42 Dashboard Graphs Toolbar



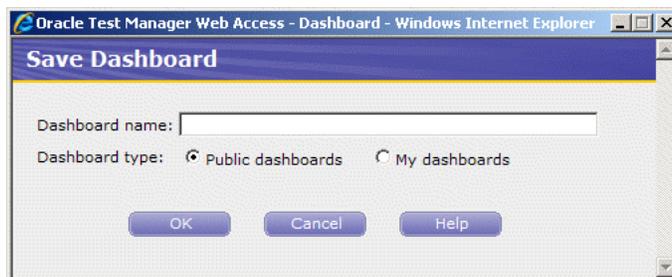
4. Click **New Dashboard** on the main toolbar.
5. Expand the **My Reports** node.
6. Double-click the **Requirements Medium and High** report created previously in this example.
7. Expand the **Public Reports** node then the **Requirements** node.
8. Double-click the **Requirements by Owner Bar Graph** report. The second graph is added to the Dashboard.

Figure 5-43 New Dashboard with Selected Graphs Added



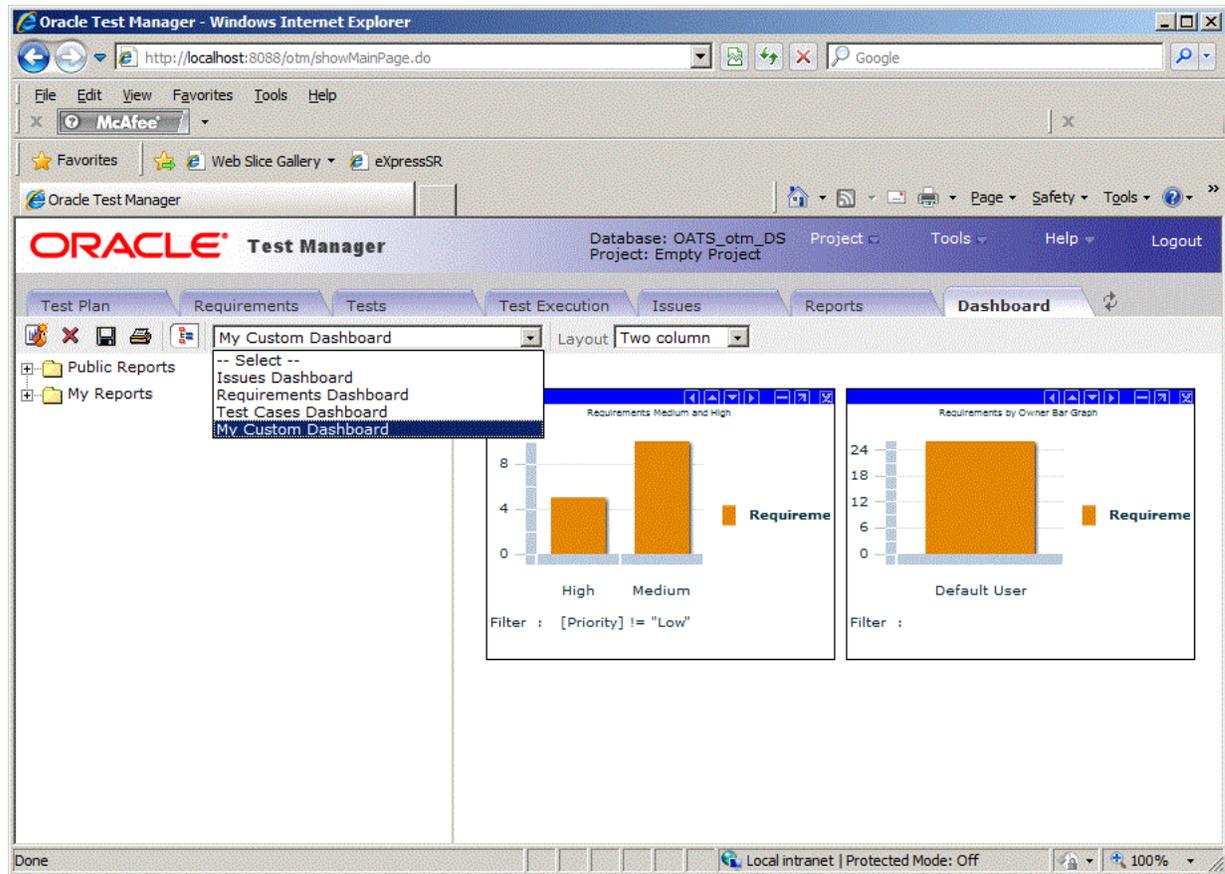
9. Click the left arrow [**<**] in the second graph’s toolbar to move it to the left.
10. Click the minimize [**-**] button in a graph’s toolbar to minimize the graph. Click the restore [**+**] button in a graph’s toolbar to restore the graph.
11. Click **Save**.

Figure 5-44 Save Dashboard Dialog Box



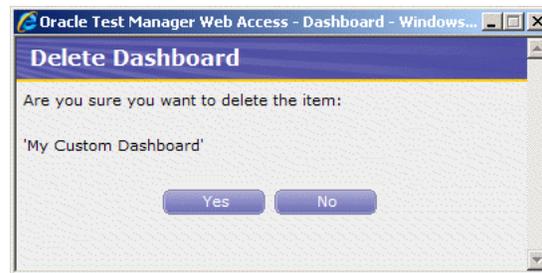
12. Enter **My Custom Dashboard** as the name for the custom Dashboard.
13. Select **My Dashboards** and click **OK**. The new dashboard is added to the Dashboard sector list.

Figure 5–45 Dashboard Tab with a Custom Dashboard Added



14. Make sure My Custom Dashboard is selected and click **Delete**.

Figure 5–46 Delete Dashboard Dialog Box



15. Click **Yes** to delete the custom Dashboard.

This completes the Oracle Test Manager tutorial. Click Logout to exit the application.

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