Oracle® Application Testing Suite

Getting Started Guide Version 9.01 for Microsoft Windows (32-Bit) E15487-02

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Oracle Application Testing Suite Getting Started Guide, Version 9.01 for Microsoft Windows (32-Bit)

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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, Job Scheduler, and Oracle Load Testing for Web Applications for testing Web pages or applications.

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 operational monitoring.

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 regression test scripts for testing Web pages or applications with Oracle OpenScript. The tutorial includes examples that highlight the script features, the Databanks, and test cases.

Chapter 4, "Oracle Functional Testing for Web Applications Tutorial" provides step-by-step instructions and explanations for building regression test scripts for testing Web pages or applications with Oracle Functional Testing for Web Applications. The tutorial includes examples that highlight the Visual Script features, the Data Bank Wizard, and test cases.

Chapter 5, "Job Scheduler Tutorial" provides step-by-step instructions for creating Job Scheduler jobs and schedules to play back multiple Oracle Oracle Functional Testing for Web Appllications Visual Scripts for operational and performance monitoring of a site.

Chapter 6, "Oracle Load Testing for Web Applications Tutorial" provides step-by-step instruction for using multiple Oracle Functional Testing for Web Appllications Visual

Scripts or 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 7, "Oracle Test Manager for Web Applications Tutorial" provides step-by-step instruction for using the main features of Oracle Test Manager for Web Applications.

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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 OpenScript User's Guide
- Oracle Functional Testing for Web Applications Functional Testing User's Guide
- Oracle Functional Testing for Web Applications Job Scheduler User's Guide
- Oracle Functional Testing for Web Applications Navigation Editor User's Guide
- Oracle Functional Testing for Web Applications Application Programming Interface Reference
- Oracle Functional Testing for Web Applications Result Objects Reference
- Oracle Functional Testing for Web Applications Settings Manager Reference
- Oracle Load Testing for Web Applications Load Testing User's Guide

- Oracle Load Testing for Web Applications Load Testing ServerStats Guide
- Oracle Test Manager for Web Applications 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.
italic	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

1

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 Functional Testing for Web Applications for automated functional and regression testing
- Job Scheduler for scheduling functional and regression testing
- Oracle Load Testing for Web Applications for load, scalability and stress testing. Oracle Load Testing for Web Applications also includes tools for server side monitoring and reporting
- Oracle Test Manager for Web Applications for organizing and managing your overall testing process.

As your application changes, any differences in your tests are highlighted in the Visual Scripts, and can be automatically updated in-place. That means that your regression, and load tests will always stay synchronized with your application, and you can make automated testing a routine part of your Web development 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 for Web Applications and Oracle Test Manager for Web Applications. For Oracle Load Testing for Web Applications, you define user accounts and the type of access allowed. For Oracle Test Manager for Web Applications, you define user accounts, roles, projects, and fields.

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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 for Web Applications or Oracle Test Manager for Web Applications.
- **Roles** roles with access permissions for read, write, delete, and execute can be defined and customized for Oracle Test Manager for Web Applications.
- **Projects** projects can be defined and customized and assigned to specific user accounts for Oracle Test Manager for Web Applications.
- Fields fields can be defined and customized for requirements, issues, tests, and test runs for Oracle Test Manager for Web Applications.

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.

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Tree View Java Code	

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 Web Applications for application load testing, allowing users to simulate hundreds our 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 3 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 for Web Applications
 - Oracle Test Manager for Web Applications

1.3 About Oracle Functional Testing for Web Applications

Oracle Functional Testing for Web Applications is used for functional/regression testing and serves as a script recorder for the Oracle Application Testing Suite. Oracle Functional Testing for Web Applications records all of the objects on every page that you visit and automatically inserts tests to validate the objects. The components of each page are represented graphically in the Visual Script and can be masked or augmented using simple point and click actions.



Figure 1–3 Visual Script Tree Hierachy

Oracle Functional Testing for Web Applications lets you easily create, maintain, and execute regression testing scripts for your Web applications. Oracle Functional Testing for Web Applications features a powerful, intuitive visual script, an automated test case generator, a specialized text matching component, and the ability to execute data-driven tests using the Data Bank Wizard.

1.3.1 Oracle Functional Testing for Web Applications Feature Highlights

Oracle Functional Testing for Web Applications offers the following advantages for Web-based application testing:

- Visual Script Technology/Automatic Test Generation you can record and test your entire application in minutes with reusable, object-oriented Visual Scripts. Recorded Visual Scripts automatically capture and test Anchors, Elements, Forms, Frames, HTML, Images, Image Maps, Links, ActiveX controls, Java Applets, VBScript, and JavaScript. Visual Scripts require no programming.
- Graphical Test Results and Simple Script Updating test failures and HTML differences are indicated by red flags annotated within the Visual Scripts for rapid diagnoses of application errors. Visual Scripts can be updated to reflect changes to the application with the click of a button.
- Data Bank Wizard create data-driven tests without programming. A single Visual Script can be used over and over with varying input and response data using values from an external data source.
- Visual Test Case Insertion additional test cases can be added to Visual Scripts to verify server response times, form elements, and the presence or absence of specific text in a page.
- Programming Interface full flexibility and extensibility to match your Web testing needs. Oracle Functional Testing for Web Applications provides levels of testing extensibility from the simplicity of Visual Scripts to your own fully-customized external application that controls Oracle Functional Testing for Web Applications. Basic Visual Script capabilities can be extended using Oracle Functional Testing for Web Applications built-in test cases or your own custom Test Scriptlets.

- HTTPs and SSL Support supports all popular protocols as well as certificates.
- Built-in Application Server Support automatically manages session variables for Net Dynamics, Broadvision, WebObjects, ColdFusion, and Microsoft ASP platforms.
- **High Throughput Resource Validation** automatically collects and verifies all referenced Web resources that include links and images.
- Test Case Librarian allows you to create and store re-usable test cases for use across multiple test scripts.

1.4 About Job Scheduler

Job Scheduler is a test management tool that lets you group and run multiple Oracle Functional Testing for Web Applications Visual Scripts in sequence as a single job. Job Scheduler jobs can be scheduled to run automatically at specific times or be run manually at any time.



Figure 1–4 Job Scheduler Main Window

The Job Scheduler Wizard provides a convenient way to build Job Scheduler jobs, which can then be included on any schedule. The Job Scheduler Wizard includes steps for selecting Visual Scripts and setting notification options.

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Figure 1–5 Job Scheduler Wizard Window

The Job Scheduler Schedule lets you specify when to start a job.

Figure 1–6 Job Scheduler Schedule Window



1.4.1 Job Scheduler Feature Highlights

Job Scheduler offers the following advantages for Web-based application testing:

Multiple Oracle OpenScript Visual Scripts - play back a series of Oracle Functional Testing for Web Applications Visual Scripts as a single job. Jobs can be run immediately or scheduled to run on a specific set of days and times.

Schedule Window - lets you schedule multiple jobs to run on specific days and times.

Job Scheduler Wizard - guides you through creating jobs with Visual Scripts created earlier with Oracle Functional Testing for Web Applications. The wizard provides options for customizing error notifications and e-mail recipients for playback results. **Integrated HTML Viewer** - view pages in real time as Job Scheduler plays back Visual Scripts. The HTML viewer shows page content and provides visual indications of pages with failures.

Job Notification Messages - specify customized error notification messages using the Job Scheduler Wizard. The messages appear in the results log.

Job Notification e-Mail - send job results via e-mail to one or more recipients using MAPI or SMTP e-mail.

HTML Format Job Results Reports - playback results reports are saved to an HTML page for later review and analysis.

1.5 About Oracle Load Testing for Web Applications

Oracle Load Testing for Web Applications provides an easy and accurate way to test the scalability of your e-Business applications. Oracle Load Testing for Web Applications emulates thousands of virtual users accessing your site simultaneously, and measures the effect of the load on application performance.

Figure 1–7 Oracle Load Testing for Web Applications Virtual Users View

VU-ID	Profile	Status	Iterations Failed Las	t Run Time	Current Page	System	Data Bank	Current Error	Previous Error
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2	tutor1	Think time delay	49	9.463	[2] Kitchens - Home SuperStores Inc.	localhost			
3	tutor1	Running	48	8.892	[4] Electronics - Home SuperStores Inc.	localhost			
4	tutor3	Iteration delay	5	31.816	[3] Results - Home SuperStore Inc.	localhost	Record 4:Cabinets		
5	tutor1	Think time delay	28	9.594	[2] Kitchens - Home SuperStores Inc.	localhost			
6	tutor1	Iteration delay	29	9.053	[4] Electronics - Home SuperStores Inc.	localhost			
7	tutor3	Starting				localhost			
8	tutor1	Think time delay	2	8.513	[2] Kitchens - Home SuperStores Inc.	localhost			
9	tutor1	Think time delay	2	7.37	[2] Kitchens - Home SuperStores Inc.	localhost			

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 for Web Applications to help make key decisions about your system's architecture, tuning, and hosting alternatives.

Hit 1Response 1 Hit 2Response 2 Hit 3Response 3 Hits/Unit time	Concurre (TrueLo	nt Object Requests ad Technology)
Hit 1Response 1	Sequentia (Conventior	al Object Requests nal HTTP Recorders)
1 Hit/Unit time	Hit 2Response 2	Hit 3 Response 3
	Time	

Figure 1–8 Concurrent Object Requests vs. Sequential Object Requests

1.5.1 Oracle Load Testing for Web Applications Feature Highlights

Oracle Load Testing for Web Applications 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 or Oracle Functional Testing for Web Applications 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 Manager and Autopilot 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.
- 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 for Web Applications 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.

1.6 About Oracle Test Manager for Web Applications

Oracle Test Manager for Web Applications 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 1–9 Oracle Test Manager for Web Applications Main Window

Oracle Test Manager for Web Applications 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.

1.6.1 Oracle Test Manager for Web Applications Feature Highlights

Oracle Test Manager for Web Applications 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 or Oracle Functional Testing for Web Applications 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 and 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.

1.7 Oracle Application Testing Suite Database Configuration

The Oracle Application Testing Suite Database Configuration utility lets you add database connections for Oracle Load Testing for Web Applications and Oracle Test Manager for Web Applications. 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 set the current database or to connect to databases other than the default.

1.7.1 Database Configuration Feature Highlights

The Database configuration utility provide the following features:

- Add, Update, Delete Database Connections provides a convenient way to manage database connections for Oracle Load Testing for Web Applications and Oracle Test Manager for Web Applications.
- 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/technology/software/products/app-testing/index.html.
- **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 oats###.exe to install Oracle Application Testing Suite.
- 4. Run openScript###.exe to install Oracle OpenScript.
- **5.** Follow the setup instructions to install the Oracle Application Testing Suite and OpenScript. The Oracle Application Testing Suite install program will install the WebLogic web server and the Oracle 10g Express Edition Database by default.

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 for Web Applications, and Oracle Test Manager for Web Applications.

6. 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 for Web Applications, or Oracle Test Manager for Web Applications, 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 for Web Applications and Oracle Test Manager for Web

Applications. For Oracle Test Manager for Web Applications, you can also customize roles, projects, and fields.

rigule 2-1 Oracle Application resting Suite Authinistrator main white	Figure 2–1	Oracle Application	Testing Suite Ad	dministrator Main	Window
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When you log into the Administrator and select an Oracle Load Testing for Web Applications database, only the **Users** tab appears. When you log into the Administrator and select an Oracle Test Manager for Web Applications 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 for Web Applications and Oracle Test Manager for Applications.

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

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Figure 2–2 Users Tab for Oracle Load Testing for Web Applications Users

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

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users les for default oject	Administrator	User	Role	No	Yes		
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users	Administrator	User		No	Yes		

Figure 2–3 Users Tab for Oracle Test Manager for Web Applications 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.

Username - displays the name the user will use to log on. 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 for Web Applications 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.

Roles 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 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 2–4 Roles Tab for Oracle Test Manager for Web Applications Users

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Name		Der	scription			
Developer		De	veloper Role			
Full Access		Full	Access			
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QA Engineer Tester Viewer Permissions for Read	Developer Project X	Requirement X	ter Role wer Role Test X	Issue X	Public Reports X	My Reports X
QA Engineer Tester Viewer Permissions for Read Write	Developer Project X	Requirement X	ter Role wer Role Test X	Issue X X	Public Reports X X	My Reports X X
QA Engineer Tester Viewer Permissions for Read Write Delete	Developer Project X	Requirement X	ter Role wer Role Test X	Issue X X	Public Reports X X X X	My Reports X X X X

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.

2.2.3 Projects Tab

The Projects tab is where you maintain projects.

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RACLE' Application Testing Suite Administrator				Tools 🗸 🛛 Help 🚽 atabase: Default OTM		
sers	Roles	Projects	Fields			
Add 🗗 Clon	e 🥒 Edit 🥒 As:	sian 🗙 Delete				
roject		User	First Name	Last Name	Role	
mpty Project		default	Default	User	Full Access	
		administrator	Administrator	User	Full Access	
		2 aut of 2 years have	un unlan			STORE 1

Figure 2–5 Projects Tab for Oracle Test Manager for Web Applications 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).

Delete - deletes the selected project.

Project - displays a list of projects in the database.

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.

2.2.4 Fields Tab

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

Figure 2–6 Fields Tab for Oracle Test Manager for Web Applications Users



The Fields tab has the following options:

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

- 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.
- **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 for Web Applications. 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 for Web Applications.

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 for Web Applications.

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 for Web Applications.

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 for Web Applications or Oracle Test Manager for Web Applications.

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 Web Applications 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 2–7 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 2–8 Script Tree View

💐 WebTutor 🛛 🗖 🗖
🖃 💐 Script - WebTutor
🗄 🖏 Initialize
🛱 🖓 Run
🖻 📆 [1] No Title (/medrec/)
⊞ 🖅 [2] (/medrec/)
🗄 🐨 🔝 [3] (/index.action)
🖻 🐨 🔝 [4] (/loginPatient.action)
🗄 🧠 WaitForPage (http://localhost:7011/medrec/loginPatient.action)
⊡ ") Click textBox("@id='j_id_id3:usernameInput")
🗄 🧰 SetText textBox("@id='j_id_id3:usernameInput"") fred@golf.com
⊡ 🕛 Click textBox("@id='j_id_id3:passwordInput'")
E E SetPassword textBox("@id='j_id_id3:passwordInput") ******
Click button("@name='j_id_id3:j_id_id19"")
🗄 🐨 🔛 [5] (/loginPatient.action)
🗄 🔛 [6] (/viewLoginResult.action)
🗄 📆 [7] (/viewRecordSummary.action)
San Finish
Tree View Java Code

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 2–9 Script Java Code View

💐 WebTutor 🛛 🗖 🗖
💁 😑 public void run() throws Exception (
<pre>beginStep("[1] No Title (/medrec/)", 0);</pre>
(
web
.window(2,
"/web:window[@index=
.navigate("http://localhost:
}
endStep();
<pre>beginStep("[2] (/medrec/)", 0);</pre>
(
web
.window(4,
"/web:window[@index=
.waitForPage(null);
{
think(1.204);
}
Tree View Java Code

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 2–10 Java Code View Intellisense Window



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

2.3.2 Details View

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





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 2–12 Problems View

🚼 Problems 🛛 🔲 Propertie	es 📮 Console 🗖 Results			⇒ ⊂ □ □			
0 errors, 0 warnings, 0 infos							
Description 🔺	Resource	Path	Location				

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 2–13 Properties View

🖹 Problems 🔲 Properties 🕱 📃	Console 🗖 Results	
Property	Value	
Path	/web:window[@index='0' or (@title='about:blank - Microsoft Internet Exp
Url	http://localhost:7011/medrec	c/
•		•

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 2–14 Console View

Problems 🔲 Properties	🕒 Console 🛛 📄 Results 💿 🕷 🎇 🕞 🖓 🖶 🖅 📑 🗸 📬 ଟ
<terminated>OpenScript_Sc</terminated>	ipt [OpenScript Script] C:\OracleATS\OpenScript\jre\bin\javaw.exe (Oct 22, 2009 1:18:55 PM)
13:19:05,059 INFO	[EntryPoint] Started with arguments: -port 9876 -jwg C:\OracleATS
13:19:05,403 INFO	[EntryPoint] Received StartScriptEvent
13:19:05,403 INFO	[EntryPoint] Running "WebTutor"
13:19:05,700 INFO	[1] Initialized script service "oracle.oats.scripting.modules.uti
13:19:05,700 INFO	[1] Initialized script service "oracle.oats.scripting.modules.brc
13:19:05,715 INFO	[1] Initialized script service "oracle.oats.scripting.modules.fur
13:19:05,747 INFO	[1] Initialized script service "oracle.oats.scripting.modules.wek
•	

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 2–15 Results View

🖹 Problems 🔲 Properties 📮 Console 🗖 Results 🛛			💥 💥 🚮 i	
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		
	1.188	Passed		-
	7.548	Passed		
	14.331	Passed		
	5.719	Passed		-

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 Functional Testing for Web Applications Main Window Features

The Oracle Functional Testing for Web Applications main window is where you develop the Visual Scripts used for functional/regression testing, performance testing, and operational monitoring of your Web site or application. The Visual Scripts you develop using Oracle Functional Testing for Web Applications are also used by Job Scheduler, Oracle Load Testing for Web Applications, and Oracle Test Manager for Web Applications.

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

The Oracle Functional Testing for Web Applications main window consists of the menu bar, toolbar, and three panes: the Visual Script pane, Browser pane, and Playback Results Log pane.



Figure 2–16 Oracle Fuctional Testing for Web Applications Main Window

The Title bar of the window shows the program name followed by the current Workspace and Visual Script name.

The Address box directly above the Web browser pane is where you enter the URL or file location of the Web page(s) to test. The bottom of the main window includes a status line.

2.4.1 Visual Script Pane

The Visual Script pane shows the tree hierarchy of recorded Web sites and pages. When you first start Oracle Functional Testing for Web Applications, the Visual Script pane is empty. When you record Web pages, Oracle Functional Testing for Web Applications creates the Visual Script tree for you.

Figure 2–17 Visual Script Pane



Click the Plus icon to expand a branch or the Minus icon to collapse a branch.

The Visual Script tree will include any test cases you insert into the Visual Script. Each item in the tree is identified by an icon and a text description.

You can toggle the Visual Script pane width by selecting **Resize Visual Script View** from the **View** menu or by dragging the border between the Browser pane and the Visual Script pane.

The Visual Script uses additional icons in the tree to represent the following:

- Yellow flag: skip test.
- Red flag: test case failure.
- Red and yellow flags: ignore test failure.

2.4.2 Browser Pane

The browser pane contains a seamlessly integrated Web browser that you use to select the Web pages to test. It provides full navigation and Web access.

F

LIBRARY O	F CONGRESS ASK A LIBRARIAN DIGITAL COLLECT	TIONS LIBRARY CATALOGS	G0 _{Optic}
Resources for • Kids, Famil • Librarians • Publishers • Researcher • Teachers • Visitors General Infor • About the Li	Image: Second system Image: Second system Image: Second system Ima		
Calendar or <u>Jobs/Fellows</u>	hips LIBRARY HIGHLIGHTS		NEWS FROM THE LIBRARY
Test # Time	Iteration Action	Elapsed Time Res	sult Summary
EDIT Cibrary of Congress Home			2.3

Figure 2–18 Browser Pane

Enter the full path and file name of the URL or local file, or drop down the list to select from recently accessed Web pages.

2.4.3 Playback Results Pane

The Playback Results pane shows a summary of the Visual Script test playback.

Figure 2–19 Playback Results Pane

Test #	Time	Iteration	Action	Elapsed Tir	me Result	Summary	
1	10:49:39 AM 4/6/2004		 Welcome - Home SuperStores Inc. 	0.29 secs	Passed		
1	10:49:40 AM 4/6/2004		[2] Registration - Home SuperStores Inc.	0.15 secs	Passed		
1	10:49:43 AM 4/6/2004		[3] Registered - Home SuperStores Inc.	0.17 secs	Passed		
1	10:49:47 AM 4/6/2004		Resource Validation		Passed		
1	10:49:47 AM 4/6/2004		END TESTING SCRIPT: tutor2	0.61 secs			•
•							•
EDIT	🤶 End of Playback					0.2	

You can adjust the widths of the individual columns by dragging the dividers.

Icons in the Visual Script show the location of any specific failures of default tests or test cases. Resource Validation test results are listed in a separate window after playback of the script.

You can turn on and off the display of the Playback Results pane by selecting **Resize Results Window** from the **View** menu.

2.5 Job Scheduler Main Window Features

Job Scheduler is a regression testing tool used for running multiple Oracle Functional Testing for Web Applications Visual Scripts as a single job. The Job Scheduler main window is where you perform immediate or scheduled playback of a set of Oracle Functional Testing for Web Applications Visual Scripts.

The main window consists of the menu bar and toolbar. Job Scheduler has three windows that run within the main window: Current Schedule window, Current Job window, and Job Editor window.



Figure 2–20 Job Scheduler Main Window

You can open the Job Scheduler application from the Start menu or by selecting **Job Scheduler** from the **Tools** menu in Oracle Functional Testing for Web Applications.

2.5.1 Visual Script Job Pane

The Visual Script job pane list the Visual Scripts in an Job Scheduler job and the real-time playback results. You create Job Scheduler jobs and schedules using the Job Scheduler Wizard.



Script Name	Result	Duration (Seconds)	Summary
tutor1	Failed	1.3	Different HTML, 2 missing links
tutor2	Passed	2.7	
•)

2.5.2 Results Pane

The Results pane shows any log messages generated during playback of the job.

Figure 2–22 Job Scheduler Results Pane

C\OracleATS\OFT\RSWDemol\TutoJob (RSWDemol).slg i= 0 8/5/2008 11:08:22 AM-11:08:44 AM Passed	-
😺 8/5/2008 11:08:33 AM Playing page 1	
🔹 8/5/2008 11:08:38 AM Finished page 3 Duration: 0.266 seconds	-

You can customize log messages as required using the Job Scheduler Wizard.

2.5.3 Job Scheduler Wizard

The Job Scheduler Wizard provides a convenient way to build and schedule Job Scheduler jobs. The Wizard includes steps for selecting Visual Scripts, setting notification options, and scheduling playback times.

Script Sel	ection	Data Banks	
Workspace:	RSWDemo 💌	Add 💽 Without	
Script			
tutor1		i i i i i i i i i i i i i i i i i i i	
tutor2		C All Reco	rds
tutor3		C Single Ri	ecord
-Script Ord	er		
Script	Workspace	Databank Iteration	X
tutor1	RSWDemo	Without Databank	+
5			6
28			*
set.			
1 to			
			100000-000

Figure 2–23 Job Scheduler Wizard

The successive steps of the Wizard provide options for setting results notifications. When the Wizard finishes, you can add the job to any schedule.

iiii Job Scheduler: Current Schedule - Untitled * [idle] _ 🗆 🗙 ▼ 🛃 @ @ @ @ @ @ @ @ 📩 WorkSpaces Thu. Wed. Fri. Sat. Sun. Mon. Tue. 12 am 12 am 2 am 3 am 4 am 5 am 6 am 7 am 07:00 AP 8 am 10 am 11 am 12 pm 10 am 11 am 12 pm 4 pm 5 pm 6 pm 7 pm 9 pm 10 pm 11 om - Default 12 am 📃 eManager 🔁 NavEditorTemp 🗄 📋 MyTests E G RSWDemo 🔨 tutorJob1 🔨 tutorJob2 🔨 TutorJob3 🔨 tutorJobTemp 🗄 💼 Sample 02:00 PM, 11 pm Name Iterations Failures Warnings Statu: Last Error First Error Show HTMI

Figure 2–24 Job Scheduler Schedule Window

Schedules can be used with the current job or other saved jobs.

2.6 Oracle Load Testing for Web Applications Main Window Features

The Oracle Load Testing for Web Applications main window is where you perform the majority of your load/performance testing activities. Oracle Load Testing for Web Applications uses Visual Scripts that you develop using Oracle Functional Testing for Web Applications or Java-based scripts you develop using OpenScript.

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

Figure 2–25 Oracle Load Testing for Web Applications Main Window

🚰 Oracle Load Testing for Web Applications - Build	Scenarios - Microsoft Int	ernet Explorer					
File Edit View Favorites Tools Help							
😋 Back 🔹 🕥 🖌 💌 😰 🏠 🔎 Search	🔆 Favorites 🔗	• 🎍 🗷 • 🦲	12 3				
Address 🕘 http://localhost:8088/olt/BuildScenario.do						- 🔁	Go Links »
ORACLE' Load Testing for W	eb Applications	cenario 🖬 🛛 Sessic	in 🖬 🤉 Serve	rStats 🕞 👘 🦷	Fools 🚽 🛛 Manage 🚽	Help 👻	Logout 🔺
 Previous Session: SESSION0006 Current Scenario: <none></none> 			SCENARIO ACTIONS	1 6 2	RUN TEST	ISER PUP	
Build Scenarios Set up Autopilot	Watch VU Grid	View Run Graphs	Create F	Reports			
Select scripts & user-defined profiles Repository: Default v Workspace: RSWDemo v ChartPortfolio tutor1 tutor2 tutor3 tutor3 tutor4 tutor5	Configure paramet Scripts/Profiles # VUS tutor1 10 tutor2 10 tutor3 10	ers of the scenari System U: OLT Server • T OLT Server • T OLT Server • T	o ser Mode Thin Client • Thin Client •	Iteration Delay	VU Pacing (Think Time) Recorded	S 0 S 0 S 0	
Add to scenario					🔚 Add to	Autopilot	
						Local intra	anet //,

You can open the Oracle Load Testing for Web Applications application from the **Start** menu or by selecting **Oracle Load Testing for Web Applications** from the **Tools** menu in Oracle Functional Testing for Web Applications.

2.6.1 Build Scenario Tab

The Build Scenario 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.

				1 6		-			
Build Scenarios Set up Autopilot	Watch VU Grid		View Run Graphs	Create Rep	ports				
Select scripts & user-defined profiles	Configure pa	ramet	ers of the scenari	0					
Describerty Default	Scripts/Profiles	# VUs	System	User Mode	Iteration Delay	VU Pacing (Think Time)			
Repository: Default	🕼 Script1	10	e-Load Server 💌	Thin Client 💌	1	Recorded 🔹	٩	õ	×
Workspace: RSWDemo	B tutor1	10	al and Server	This Client		Recorded		8	
ComDLLVBA	Ey cacorr	110	le-road Server		<u>L</u>	Recorded _	N	9	~
🕼 GetAllLinksVBA									
Script1									
Script2									
Superstore1									
📓 tutor1									
🕼 tutor2									
US tutor3									
1 tutor4									
🛃 tutor6									
Add to scenario						Add to	Auto	pilot	

Figure 2–26 Build Scenarios Tab

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

2.6.2 Set up Autopilot Tab

The Autopilot tab is where you specify the information needed to control how the scenario starts and runs. The Autopilot controls the starting and stopping of the scenario, the rate at which new virtual users are started, and shows the total number of virtual users and the number of running virtual users.

You specify the session, start and stop times, and the virtual user rampup specifications for the Submitted Scenario Profile. It also shows the list of virtual user profiles submitted in the Oracle Load Testing for Web Applications scenario.

Figure 2–27 Autopilot Tab

Timing and eve	nt controls						
 Start the load When the star After a delay At a specific ti Synchronize V 	test t button is pres: of (hh:mm:ss) ime (hh:mm:ss) /U start up	sed 00 : 00 : 00 00 : 00 : 00	 Stop the load When the stop After each use After a delay At a specific t 	test b button is pressed er plays 0 iter of (hh:mm:ss) 00 ime (hh:mm:ss) 00	rations : 00 : 00 : 00 : 00	Virtual user (VU Add per step 10 users 10 percent) ramp-up After every © 5 seconds C 10 iterations
ServerStats Co	nfiguration					/ E	lit Configurations
Configuration: Description:	<none></none>		×	Monitors:			
Submitted Scen	ario Profiles						
Profiles	VUs 10	Remaining 10	Running 0	with Error 0	Finished 0	System e-load serve	r
					🛞 Clear /	Autopilot 🔵 🕐 P	ause Autopilot

2.6.3 Watch Virtual User Grid Tab

The Watch Virtual User Grid tab lists the currently running virtual users and the profile and playback details associated with each.

|--|

1tutor1Finished57.09localhost2tutor1Finished56.649localhost3tutor1Finished56.179localhost4tutor1Finished56.149localhost5tutor1Finished56.109localhost6tutor1Finished56.249localhost7tutor1Finished56.079localhost8tutor1Finished56.569localhost9tutor1Finished56.149localhost10tutor1Finished56.089localhost	U-ID	Profile	Status	Iterations	Failed	Last Run Time	Current Page	System	Data Bank	Current Error	Previous Error
2tutor1Finished56.649localhost3tutor1Finished56.179localhost4tutor1Finished56.149localhost5tutor1Finished56.109localhost6tutor1Finished56.249localhost7tutor1Finished56.079localhost8tutor1Finished56.569localhost9tutor1Finished56.089localhost10tutor1Finished56.089localhost	1	tutor1	Finished	5		7.09		localhost			
3tutor1Finished56.179localhost4tutor1Finished56.149localhost5tutor1Finished56.109localhost6tutor1Finished56.249localhost7tutor1Finished56.079localhost8tutor1Finished56.169localhost9tutor1Finished56.169localhost10tutor1Finished56.089localhost	2	tutor1	Finished	5		6.649		localhost			
4tutor1Finished56.149localhost5tutor1Finished56.109localhost6tutor1Finished56.249localhost7tutor1Finished56.079localhost8tutor1Finished56.569localhost9tutor1Finished56.149localhost10tutor1Finished56.089localhost	3	tutor1	Finished	5		6.179		localhost			
5tutor1Finished56.109localhost6tutor1Finished56.249localhost7tutor1Finished56.079localhost8tutor1Finished56.569localhost9tutor1Finished56.149localhost10tutor1Finished56.089localhost	4	tutor1	Finished	5		6.149		localhost			
6tutor1Finished56.249localhost7tutor1Finished56.079localhost8tutor1Finished56.569localhost9tutor1Finished56.149localhost10tutor1Finished56.089localhost	5	tutor1	Finished	5		6.109		localhost			
7tutor1Finished56.079localhost8tutor1Finished56.569localhost9tutor1Finished56.149localhost10tutor1Finished56.089localhost	6	tutor1	Finished	5		6.249		localhost			
8tutor1Finished56.569localhost9tutor1Finished56.149localhost10tutor1Finished56.089localhost	7	tutor1	Finished	5		6.079		localhost			
9 tutor1 Finished 5 6.149 localhost 10 tutor1 Finished 5 6.089 localhost	8	tutor1	Finished	5		6.569		localhost			
10 tutor1 Finished 5 6.089 localhost	9	tutor1	Finished	5		6.149		localhost			
	10	tutor1	Finished	5		6.089		localhost			

2.6.4 View Run Graphs Tab

The View Run Graphs tab lets you define graphs and view the graphs at run-time.

Build Scenarios 💦 🔨 Set up Autopilot 👘 √ Watch VU Grid 👘	View Run Graphs Create Reports
Reports & Graphs New Graph 30 0 0 0 0 0 0 0 0 0 0 0 0 0	4 0 0 0 0 0 0 0 0 0 0 0 0 0
Performance Statistics	¥

Figure 2–29 View Run Graphs Tab

You can also view the Performance Statistics report from the View Run Graphs tab. The Performance Statistics window shows a summary of the performance data for the running virtual users.

2.6.5 Create Reports Tab

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



Figure 2–30 Create Reports Tab

2.6.6 ServerStats

The ServerStats component of Oracle Load Testing for Web Applications lets you monitor 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.

Figure 2–31 ServerStats Metric Profiles Window



You can monitor specific counters in real time using the visual indicator gauges or using graphs. In addition to performance monitoring, ServerStats let you define scripts that can log warnings or alarms if a server's counter performance goes outside a defined range.

2.7 Oracle Test Manager for Web Application Main Window Features

Oracle Test Manager for Web Applications 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.

2.7.1 Requirements Tab

The requirements tab lets you work with requirements.

Oracle Test Manager for Web Applications - Microsoft I	nternet Explorer	
File Edit View Favorites Tools Help		#
🔇 Back 🔹 🕥 🖌 📩 😰 🏠 🔎 Search 🤺 F	avorites 🚱 🔗 🎍 🗷 🔹 🧾 🎎 🦓	
Address 🙆 http://localhost:8088/otm/showMainPage.do		💌 🄁 Go 🛛 Links 🌺
ORACLE' Test Manager for Web	Applications Database: otm-Install Project Project: Sample Access Project	Tools – Help – Logout
Requirements Tests Issues	Reports Dashboard 🗘	
📅 / X 🖻 🛍 🔍 🗐 🔒 🕱 🖅 🐼 🕴	🛊 Group: 🚺 None 💽 🔊 Filter: None	Goto: a
 I User authentication should be required in order to 2 Site should provide users access to account and st 3 Site should provide access to both real-time and o 4 Site should provide an online store for financial m 5 Users should be able to buy and sell stocks online 6 Main page should provide financial stories and info 	Requirement 1 ✓ Edit this requirement ✓ Print ✓ e-Mail User authentication should be required in order to access stock brokerage site. Last modified by Default User on February 03, 2002 at 3:11 PM Last modified by Default User on February 03, 2002 at 3:11 PM Created: 2/03/02 at 2:58 PM By: Default User Type: Business Requirement Owner: Default User Status: 1 - Proposed Priority: High Dacciption: Al customers should be required to login with their email and password to access brokerage site, view account and portfolio information, look up stock prices and make stock trades.	Attachments
		Local intranet

Figure 2–32 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.
- Toggle between the tree view and grid view by clicking the Tree View and Grid View buttons.

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.

2.7.2 Tests Tab

The tests tab lets you work with tests.

Figure 2–33 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.
- Toggle between the tree view and grid view by clicking the Tree View and Grid View buttons.

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

- Manual test blue with a pencil.
- Test folder blue with a spiral.
- Oracle Functional test script blue with a scroll.
- Oracle OpenScript blue with a pencil.
- Test group blue with a plus sign.
- 3rd Party test blue with two stars

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

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 Manual Test wizard or run an Oracle Functional Testing for Web Applications test.
- Click Delete Results to display the Delete Results dialog box for deleting results from particular test runs.
- For Oracle Functional Testing for Web Applications Tests, click Download Test Script to download the test script to your machine.
- Click the date in the **Run History** section to display result details for a particular run.

In the upper right corner or 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.

2.7.3 Issues Tab

The issues tab lets you work with issues.

Figure 2–34 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.
- Toggle between the tree view and grid view by clicking the Tree View and Grid View buttons.
- 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 for Web Applications 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.

2.7.4 Reports Tab

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



🚰 Oracle Test Manager for Web Applications - Microsoft Int	ernet Explorer	
File Edit View Favorites Tools Help		
🔇 Back 🔹 🕥 🖌 🗾 🛃 🏠 🔎 Search 👷 Fav	vorites 🕢 😥 🎍 🗹 🔹 🧾 🗱	
Address 🗃 http://localhost:8088/otm/showMainPage.do		💌 🄁 Go 🛛 Links 🌺
ORACLE' Test Manager for Web Ap	oplications Database: otm-Install Project Tool Project: Sample Access Project	s 👻 Help 👻 Logout
Requirements Tests Issues	Reports Dashboard \$	
🛛 🌿 🖉 🔛 🖾 🎒 🔐 Filter: None		te ita
Public Reports	Report View Data View	
Issues by Assigned To Bar Graph Issues by Assigned To Pie Chart Issues by Component and Status Table Issues by Component Bar Graph Issues by Component Pie Chart Issues by Assigned To and Status Table Issues by Platform Bar Graph Issues by Platform Pie Chart Issues by Priority Bar Graph Issues by Priority Pie Chart Issues by Severity Pie Chart Issues by Severity Pie Chart	Issues by Assigned To Bar Graph	Issues
	2.5 Administrator User Default User Generated with Gradit Ted Nanoger for Title Applications: 2016-01-01 12:31 PM Fitter. Norm	•
		Second intranet

Oracle Test Manager for Web Applications 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.

2.7.5 Dashboard Tab

The Dashboard tab lets you view an overview of reports.

Figure 2–36 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 Visual 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 a HTTP Test Script with Databanks introduces Databanks and explains how to 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 **Oracle WebLogic** from the **Oracle Application Testing Suite** menu.
- 2. Select Examples from the Weblogic Server 11gR1 submenu, then select Start Medical Records Server.
- **3.** Wait until Avitek Medical Records Sample Application starts in the Weblogic server.

4. Close the browser window after the server and sample application are stared. 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:

• Select **Programs** from the **Start** menu, then select **Oracle OpenScript** from the **Oracle Application Testing Suite** menu to start OpenScript.

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. Set the Workspace to RSWDemo.
- 6. Enter WebTutor as the script name.
- **7.** 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

□ 2 Script - WebTutor
Script - WebTutor
So Initialize
So Run
So Finish

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://localhost:7011/medrec/ into the browser Address line and press Enter.
- **3.** When the application loads, click **Start using MedRec!**. 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 Submit.
- **8.** Click the Text Matching Test button on the OpenScript floating toolbar.
- 9. Enter WebText1 as the Test name.
- **10.** Enter Successfully logged in! Click here to continue 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 Successfully logged in! Click here to continue.
- **17.** Click Logout in the Avitek Medical Records application.
- **18.** Close the Avitek Medical Records application browser window.
- **19.** 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



20. 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 [5] (/loginPatient.action) Step Group and select the WaitForPage (http://localhost:7011/medrec/loginPatient.action) node as follows:

-	💐 Script - WebTutor
	🚊 🖓 Initialize
	💮 Launch Browser
	🗄 🖓 Run
	🗄 🔛 [1] No Title (/medrec/)
	Ē 📆 [2] (/medrec/)
	🗄 📆 [3] (/index.action)
	🗄 📆 [4] (/loginPatient.action)
	🚊 📆 [5] (/loginPatient.action)
	표 🚳 WaitForPage (http://localhost:7011/medrec/loginPatient.action)
	Click element("@id='j_id_id9"")
	표 🔤 Text Matching Test: WebText
	Click link("@text='Successfully logged in! Click here to continue")
	🗄 📆 [6] (/viewLoginResult.action)
	🗄 📆 [7] (/viewRecordSummary.action)
	🖏 Finish

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://localhost:7011/medrec/loginPatient.action) 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

Think Time		
Think: 7.674	(sec)	
		 1

- **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
------------	---------------	------------------------

Look in:	All Browsers	
Path:		-
Test name:	WebText	
Text to Match	Successfully logged in! Click here to continue	
Source:	HTML Display Contents 💌	
Pass when:	Pass if present	
Match:	Exact	
Verify only	/, never fail	

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.
- 2. Expand the Results tree to view the results for each Step Group as follows:

🖹 Problems 🔲 Properties 📮 Console 🗖 Results 🕺	3		💥 💥 🚮 i 🗖 🗖		
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			
	1.188	Passed			
	7.548	Passed			
	14.331	Passed			
	5.719	Passed		-	

Figure 3–9 Script Playback Results in the Results View

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.

3. 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

Report Type: Functional Test Report Script Name: WebTutor Report Generated By: oracle.oats.scripting.modules.functionalTest.api Script Name: WebTutor Workspace: Default Date Time: 10/22/2009 13:18:55 PM Iterations: 1 Total Pages: 7 Total Failures: 0(0.00%) Overall Result: Passed Script Summary Section Section Name Uration Result Summary (sec)	🗖 Details 🕱	- 6
Script Name: WebTutor Report Generated By: oracle.oats.scripting.modules.functionalTest.api Script Name: WebTutor Workspace: Default Date Time: 10/22/2009 13:18:55 PM Iterations: 1 Total Pages: 7 Total Tests: 1 Total Failures: 0 (0.00%) Overall Result: Passed Script Summary Section Name Duration Result Summary (sec)	Report Type: Functional Test Report	-
Script Name: WebTutor Report Generated By: oracle.oats.scripting.modules.functionalTest.api Script Name: WebTutor Workspace: Default Date Time: 10/22/2009 13:18:55 PM Iterations: 1 Total Pages: 7 Total Pages: 7 Total Tests: 1 Total Failures: 0 (0.00%) Overall Result: Passed Script Summary Section Name Duration Result Summary (sec)		
Report Generated By: oracle.oats.scripting.modules.functionalTest.api Script Name: WebTutor Workspace: Default Date Time: 10/22/2009 13:18:55 PM Iterations: 1 Total Pages: 7 Total Pages: 7 Total Failures: 0 (0.00%) Overall Result: Passed Script Summary Section Name Duration Result Section Name Section Name Section Name Section Name	Script Name: WebTutor	
Iterations: 1 Total Pages: 7 Total Tests: 1 Total Failures: 0 (0.00%) Total Warnings: 0 (0.00%) Overall Result: Passed Script Summary Section Name Duration Result Summary (sec)	Report Generated By: oracle.oats.scripting.modules.functionalTest.api Script Name: WebTutor Workspace: Default Date Time: 10/22/2009 13:18:55 PM	
Section Name Duration Result Summary (sec)	Iterations: 1 Total Pages: 7 Total Tests: 1 Total Failures: 0 (0.00%) Total Warnings: 0 (0.00%) Overall Result: Passed Script Summary	
	Section Name Duration Result Summary (sec)	
Des ulte Depend	Depute Depute	

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.

- **4.** Expand the Run node in the Results view then expand the results for Step Group [5] (/loginPatient.action).
- **5.** Select the WaitForPage node under [5] (/loginPatient.action). The Details view shows the results for the specific Step Group.
- **6.** 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:

nage Compare	
Recorded	Playback
🚰 Oracle WebLogic Server - Medical R 🗖	🐴 Oracle WebLogic Server - Medical R
File Edit View Favorites Tools F	File Edit View Favorites Tools H
🔇 Back 👻 🕥 - 💌 🛃 🏠	🚱 Back 👻 🕗 – 💌 😰 🏠
Address i http://localhost:7011/medrec/l	Address Address Address Address Address
T Medical Record	T Medical Record
2	

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. Select the [2] (/medrec/) Step Group in the script tree.
- 2. Select Add from the Script menu, then select Other.
- **3.** Expand the Web Tests folder, select **Server Response Test**, and click **OK**. OpenScript opens the Server Response Test properties dialog box as follows:

Window:		•
Test name:		
Minimum:	😐 (secs)	
Maximum:	😐 (secs)	
🔽 Verify only, never fail		
🙆 Window is required		

Figure 3–12 Server Response Test Properties Dialog Box

- **4.** Click the down-arrow next to the **Window** field and select **Capture Object** from the menu. OpenScript starts the capture mode and opens a new browser window.
- **5.** Load the Medical Records Sample Application (http://localhost:7011/medrec/) into the browser.
- 6. Move the mouse over the page until the page is highlighted.
- 7. Press F10 to capture the object path in the Select Object dialog box.
- **8.** Click **OK**. The object path for the Medical Records Sample Application page is added to the Server Response Test properties.
- **9.** Type WebTimer1 as the test case name.
- **10.** Set the **Minimum** time to 0 seconds.
- **11.** Set the **Maximum** time to 5 seconds.
- **12.** Click **OK** and view the test in the script. OpenScript adds the test to the script [2] (/medrec/) 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. Select the [6] (/viewLoginResult.action) Step Group in the script tree.
- 2. Select Add from the Script menu, then select Other.
- **3.** 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
-------------	-------	------------------------	-------------------

Table Test	mTable		V	
est name:			A V	 Image: Image: Im
				Enable all Disable all Table Size Display © Tests © Recorded Values
Test Details Row: Recorded value: Value Type: Stripe	1 Colum	n: 1	Enable	
Operator: Exact Value: Solution Object is required			0	-

- **4.** Click the down-arrow next to the **Window** field and select **Capture Object** from the menu. The capture mode starts. The
- Switch to the Medical Records Sample Application (http://localhost:7011/medrec/) in the browser window (which should still be open from the previous example).
- 6. Click Start using MedRec! to navigate to the page with the table data.
- 7. Click Login under the Patient section.
- 8. Enter fred@golf.com as the Email address.
- 9. Enter weblogic as the password.
- 10. Click Submit.
- 11. Click <u>Successfully logged in! Click here to continue</u>.
- **12.** Move the mouse over the Prescriptions table so that the table is highlighted.
- **13.** Press F10 to capture the object path in the Select Object dialog box.
- **14.** Click **OK**. The object path for the Medical Records Sample Application web page table is added to the Table Test properties as follows:
| /web:window[(| Dindex='1' c | r @ti | tle='Oracle WebL | .ogic Serv | /er - Medical | ▲ ⊕ • |
|--|---|-----------------|------------------------------------|------------|------------------|-------------|
| Record Sample
Explorer']/web
est name: | Application
:document[@ | - Micr
Pinde | osoft Internet
x='0']/web:table | [@id='j_i | d_id9:prescripti | Verify only |
| 1 | | 2 | | 3 | | Enable all |
| 1 🗹 = Date | ••••••••••••••••••••••••••••••••••••••• | | = Drug | | = Dosage | Dicable all |
| - 🗹 = Jun | 30#, 1993 | M | = Codeine | | = 10 oz | |
| ? ⊻ = Jul 1 | .8#, 1999 | | = Advil | | = 100 tbls | Table Size |
| † 🗹 = Jul 1 | .8#, 1999 | ⊻ | = Drixoral | | = 16 oz | - Display |
| | | - | | | | • Tests |
| | | - | | | | C Recorde |
| | | | | | | Recorde |
| | | | | | | Values |
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| 4 | | | | | | N |
| Test Details | | | | | | |
| Test Details | Row: 1 | | | 1 | 🔽 Enabl | |
| | | | Coldmin. J 1 | | | _ |
| Recorded valu | e: Date | | | | | |
| Value Type: | String | - | | | | |
| Operator: | Exact | | - | | | |
| | | <u>entent</u> | | | | |
| Valuer | Date | | | | 0 | |

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.

- **15.** 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.
- **16.** Enter WebTable as the Test name.
- **17.** Click **OK** and view the test in the script. OpenScript adds the test to the script [6] (/viewLoginResult.action) Step Group as follows:

Figure 3–16 Table Test Added to the Script Tree

[6] (/viewLoginResult.action)
 [1]
 [2]
 [4]
 [4]
 [5] (/viewLoginResult.action)
 [5]
 [6]
 [7]
 [7]
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18. Save the script.

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

3.7 Example 5: Creating an HTTP Test Script with Databanks

This example explains how to create an HTTP test script and use a databank to drive testing. HTTP test scripts record and playback navigations performed using the HTTP protocol. HTTP script are typically used for performing load tests on an application.

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.

3.7.1 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. Set the Workspace to RSWDemo.
- **6.** Enter HTTPTutor as the script name.
- **7.** 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.** Reload the Medical Records Sample Application (http://localhost:7011/medrec/) in the browser window.
- **3.** When the application loads, click **Start using MedRec!**. 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 Submit.
- 8. Click Successfully logged in! Click here to continue.
- 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.

3.7.3 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

[4] Oracle WebLogic Server - Medical Record Sample Application

 Image: Mathematical Structure
 Mathematical Structure

 Image:

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

3.7.4 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.** Select **Configure Databanks** from the **Script** menu. The Databank properties window opens.
- 2. Click Add. The Add Databank dialog box opens for specifying a databank file.
- 3. Make sure **Repository Databanks** is selected as the **Look in** option.
- 4. Click Browse.
- **5.** Select the avitek.csv file and click **Open**. The data from the databank file appears as follows:

Figure 3–18 Add Databank Dialog Box with Databank Selected

atal	bank	avitek csv.				Browse
	burn.	Taricoldest			 	Lonom
ias		avitek				
	User	name	Password		 	
1	fred	@golf.com	weblogic	 	 	
2	larry	@bball.com	weblogic			
3	page	@fish.com	weblogic			
1	volle	y@ball.com	weblogic			

- 6. Click OK to close the Add Databank dialog box.
- **7.** Click **OK** to close the databanks properties. The databank node appears at the top of the run section of the script tree as follows:



-	े Scr	ipt - HTTPTutor
	÷\$	Initialize
	ė- %	Run
		😌 GetNextDatabankRecord: avitek
	+	🔣 [1] Avitek Medical Records Application
	+	🕼 [2] Oracle WebLogic Server - Medical Record Sample Application
	+	🕼 [3] Oracle WebLogic Server - Medical Record Sample Application
	÷	🕼 [4] Oracle WebLogic Server - Medical Record Sample Application
	÷	🕼 [5] Oracle WebLogic Server - Medical Record Sample Application
	÷	-🔀 [6] Oracle WebLogic Server - Medical Record Sample Application
	So	Finish

3.7.5 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 [4] Oracle WebLogic Server Medical Record Sample Application 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 3–20 Substitute Variable Window

🧭 Substitute Variable				
Select Variable				
Select Variable to Substitute. Original text: 'fred@golf.com'.				
Databanks Add new databank avitek Sername Password Script Variables Create new script variable				
0	< Back	Next >	Finish	Cancel

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 3–21 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,weblogic}} as follows:

Figure 3–22 Script Parameters with Multiple Mapped Databank Variables



6. Save the script.

3.7.6 Inserting a Text Matching Test

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

- Select the http://localhost:7011/medrec/loginPatient.action node under the [4] Oracle WebLogic Server - Medical Record Sample Application 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 Successfully logged in! Click here to continue 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 3–23 Script Tree with a Text Matching Test Node



10. Save the script.

3.7.7 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.

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

Figure 3–24 Iterations Dialog Box

- **2.** Make sure the **Count** is set to 4 as there are four records in the sample databank file.
- 3. Make sure Use Databanks is selected.
- 4. Click the **OK** button to playback the script with multiple iterations.
- **5.** Watch the Details view as the script plays back the script several times using a different data value for the login each time.
- **6.** View the playback results in the Results view. At the end of playback the Details view shows the results report as follows:

t Type: Http Re	esults Report				
cript Name port Generated ipt Name: HTTF rkspace: Defau :e Time: 10/28/	e: HTTPTuto d By: oracle.oats.scr PTutor dt 2009 15:04:45 PM	ripting.modules.ht	tp.api		
rations: 4 al Pages: 24 al Tests: 4 al Failures: 0 (I al Warnings: 0 erall Result: Script Su	0.00%) (0.00%) Passed				
Section	Page	Decorded Time	Dlauback Time	Decult	Summ ave
Section	Page	Recorded Time (sec)	Playback Time (sec)	Result	Summary
Section + Initialize	Page Initialize Total (sec)	Recorded Time (sec) 0.000	Playback Time (sec) 0.032	Result Passed	Summary
Section + Initialize H Iteration1	Page Initialize Total (sec) Iteration Total (sec)	Recorded Time (sec) 0.000 4.665	Playback Time (sec) 0.032 36.787	Result Passed Passed	Summary
Section + Initialize + Iteration1 + Iteration2	Page Initialize Total (sec) Iteration Total (sec) Iteration Total (sec)	Recorded Time (sec) 0.000 4.665 4.665	Playback Time (sec) 0.032 36.787 36.073	Result Passed Passed Passed	Summary
Section + Initialize + Iteration1 + Iteration2 + Iteration3	Page Initialize Total (sec) Iteration Total (sec) Iteration Total (sec)	Recorded Time (sec) 0.000 4.665 4.665 4.665	Playback Time (sec) 0.032 36.787 36.073 36.671	Result Passed Passed Passed Passed	Summary
Section + Initialize + Iteration1 + Iteration2 + Iteration3 + Iteration4	Page Initialize Total (sec) Iteration Total (sec) Iteration Total (sec) Iteration Total (sec)	Recorded Time (sec) 0.000 4.665 4.665 4.665 4.665	Playback Time (sec) 0.032 36.787 36.073 36.671 36.278	Result Passed Passed Passed Passed Passed	Summary
Section + Initialize + Iteration1 + Iteration2 + Iteration3 + Iteration4 + Finish	Page Initialize Total (sec) Iteration Total (sec) Iteration Total (sec) Iteration Total (sec) Iteration Total (sec)	Recorded Time (sec) 0.000 4.665 4.665 4.665 4.665 0.000	Playback Time (sec) 0.032 36.787 36.073 36.671 36.278 0.000	Result Passed Passed Passed Passed Passed	Summary

Figure 3–25 Results Report for Multiple Iterations

- **7.** Scroll the Results view and select one of the HTTP navigation nodes such as http://localhost:7011/medrec/index.action.
- **8.** Click the Comparison tab 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 3–26 Details View Showing the HTTP Test Comparison Tab

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

3.8 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 for Web Applications or Oracle Test Manager for Web Applications 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 Oracle WebLogic from the Oracle Application Testing Suite menu.
- 2. Select Examples from Weblogic Server 11gR1 submenu, then select Stop Medical Records Server.
- **3.** Wait until the Weblogic server stops.
- **4.** Close the command windows after the server stops.

Oracle Functional Testing for Web Applications Tutorial

This tutorial walks you through the main features of Oracle Functional Testing for Web Applications. The tutorial consists of the following examples:

- **Recording a New Visual Script** describes basic recording of Visual Scripts.
- Working with Visual Scripts describes the features and components of Visual Scripts and how to modify the default tests.
- Playing Back a Visual Script explains the procedure for playing back Visual Scripts and the option settings for playback and the results log.
- **Analyzing Test Failures** explains how to analyze the differences found between the baseline set of Web pages and a new version.
- Adding Test Cases to the Visual Script explains how to add test cases to your Visual Scripts.
- Using the Data Bank Wizard on a Search Form introduces the Data Bank Wizard and explains how to use the Data Bank Wizard to run iterative tests on a search form using data from an external file.
- Using the Data Bank Wizard on a Registration Form explains how to use the Data Bank Wizard to create automated data-driven tests.

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.

4.1 Initializing the Tutorial

The tutorial uses two versions of web pages to demonstrate the capabilities of Oracle Functional Testing for Web Applications. To make sure the initial version of the tutorial web pages is the current version, do the following:

- 1. Select **Programs** from the **Start** menu and then select **Build A Home Superstores** from the **Oracle Application Testing Suite** submenu. A command window will appear briefly as the batch file copies the Build A files.
- 2. Close the command window, if necessary.

4.2 Example 1: Recording a New Visual Script

This example illustrates the creation and recording of a Visual Script.

4.2.1 Start Oracle Functional Testing for Web Applications

- Select Programs from the Start menu and then select Oracle Functional Testing for Web Applications from the Oracle Application Testing Suite submenu to start Oracle Functional Testing for Web Applications.
- **2.** Select **Open Workspace** from the **File** menu, select RSWDemo as the Workspace, and click **OK** to get to the main window.

Note: If you installed this version of the Oracle Application Testing Suite over a previous version, your default installation directory will still be the old directory. If this version is the first time you installed the Oracle Application Testing Suite, the default installation directory is c:\OracleATS\OFT.

3. Type c:\OracleATS\OFT\rswdemo\index.htm in the URL drop down list and then press ENTER. (The tutorial assumes that you installed Oracle Functional Testing for Web Applications in the default c:\OracleATS\OFT directory. If you installed to another directory, enter the appropriate path.)

Figure 4–1 Oracle Functional Testing for Web Applications Main Window



Oracle Functional Testing for Web Applications opens the Home Superstores tutorial Web page into the Browser pane.

4.2.2 Start a Recording

- **4.** Select **New Script** from the **File** menu and select **No** if asked to save changes to Script1.
- **5.** Click the Record button on the toolbar. Oracle Functional Testing for Web Applications is now recording your actions as indicated by the REC in the status

bar. The [1] Welcome - Home Superstores Inc. title is recorded into the Visual Script pane.

4.2.3 Navigate the Web Site

- 6. Click on the <u>Kitchen and Bath</u> link on this page. The Kitchen and Bath page appears in the Browser pane and the address should show c:\OracleATS\OFT\rswdemo\kitchen.htm. You should now see [2] Kitchens Home Superstores Inc. in the Visual Script.
- 7. Click on the <u>Lighting</u> link on this page. The Lightings page appears in the Browser pane and the address should show c:\OracleATS\OFT\rswdemo\lighting.htm. You should now see [3] Lightings Home Superstores Inc. in the Visual Script.
- **8.** Click on the <u>Electronics</u> link on this page. The Home Electronics page appears in the Browser pane and the address should show c:\OracleATS\OFT\rswdemo\etronics.htm. You should now see [4] Electronics Home Superstores Inc. in the Visual Script.

4.2.4 Stop the Recording

9. Click the Stop button on the toolbar to stop the recording. The Visual Script pane should list four pages in the script.

4.2.5 Save the Script

- **10.** Select **Save Script** from the **File** menu to save the script. The autonaming feature initially defaults the name of a new script to Script1.
- 11. Type in tutor1 for the name of the script in the Save As dialog box and click Save.

4.3 Example 2: Working with Visual Scripts

This example explains the features of the Visual Script tree and how to examine the structure and content of a Web page. It also explains how to modify the built-in Oracle Functional Testing for Web Applications tests.

Before starting this example, make sure the Visual Script that you recorded in Example 1 is still displayed.

- 1. Select **Resize Visual Script View** from the **View** menu to expand the Visual Script pane.
- **2.** Click the [1] Welcome Home Superstores Inc. node in the Visual Script and then click the Plus next to the node. The script shows the Address and Frame nodes to the page tree.
- **3.** Click the right mouse button and select **Expand Page** to show the entire page tree, which should look similar to the following:

🖃 🚱 Script1 🔷
😑 🐨 🐻 [1] Welcome - Home SuperStores Inc.
🚊 🖳 Address: C:\OracleATS\OFT\RS\/Demo\index.htm
💭 Durations = Master: 0.141, Tested: 0.172, Think Time Delay: 0
🖃 🗂 Frame (Welcome - Home SuperStores Inc.)
HTML
file:///C:/OracleATS/OFT/RSWDemo/images/topnav.gif
- 🙀 file:///C:/OracleATS/OFT/RSWDemo/images/search_top.gif
file:///C:/OracleATS/OFT/RSW/Demo/images/spacer.gif
ile:///C:/OracleATS/OFT/RSWDemo/images/search_go.gif
file:///C:/OracleATS/OFT/RSW/Demo/images/spacer.gif
file:///C:/OracleATS/OFT/RSWDemo/images/top_blank.gif
file:///C:/OracleATS/OFT/RSWDemo/images/spacer.gif
file:///C:/OracleATS/OFT/RSWDemo/images/spacer.gif
file:///C:/OracleATS/OFT/RSW/Demo/images/home_special.gif
file:///C:/OracleATS/OFT/RSWDemo/images/home_welcome.gif
file:///C:/OracleATS/OFT/RSWDemo/images/footer.gif
E- Dan Image Map Map 2
file:///CI/OracleATS/OFT/RSWDemo/kitchen.htm
File:///CI/OracleATS/OFT/RSW/Demo/garden.htm
File:///CI/OracleATS/OFT/RSW/Demo/lighting.htm

Figure 4–2 Oracle Functional Testing Visual Script Tree

The [1] Welcome - Home Superstores Inc. page contains the following nodes in the tree:

- An Address node that has the recorded URL for the page.
- A Duration node under the Address node that displays how long it took to download the page and the think time delay associated with the page. The think time delay is the actual amount of time the user spent on the page before going to another page. For additional information about think time delay, see the online help.
- A Frame node that is the main frame for the entire page. Below this node are the other constituents of the page.
- An HTML node that has the HTML source for the page.
- An Images node that has all the images in the page under it.
- A Image Maps node that has all image maps in the page under it.
- A Scripts node that has all the VBScripts and JavaScripts under it.
- A Links node that has all the links in the page under it.

Note: Web pages that include Frame Sets, Anchors, Forms, Elements, Active X objects, Java Applets, etc. will have additional tree nodes displayed in a similar fashion.

4.3.1 Viewing Information About a Visual Script Item

- 4. Select the HTML node in the Visual Script.
- **5.** Click the right mouse button and select **HTML Properties**. The following dialog box is displayed:

uenerari		ок
Page:	[6] Registration - Home SuperStores Inc.	
Туре:	HTML	<u>L</u> ancel
Name:	<none></none>	<u>R</u> eset
	Execute Default Comparison Test Result: Passed	<u>H</u> elp
HTML S	ource	
<br function { }	register(url, date, fname, Iname, mail, phone) if (navigator.appName == "Microsoft Internet Explorer") event.returnValue = false location = url + "#" + escape(date) + "#" + escape(fname) + "#" + escape(lname) + return false	
function {	Initialize() var theSystemDate = new Date(); var todaysDate = ([theSystemDate.getMonth(]+1] + '/" + theSystemDate.getDate() document.theForm.TodaysDate.value = todaysDate; document.theForm.MailList.checked = true;	
<u>ب</u>	You can test for the presence or absence of certain text in the HTML on this page by adding a Text Matching Test to this page of the Visual Script. See "Adding a Text	

Figure 4–3 HTML Properties Dialog Box

You can get more information about any item in the Visual Script using the Properties option. The properties for the different items vary.

- 6. Close the Properties dialog box.
- 7. Repeat steps 5 and 6 with any other items in the tree and view the properties.

4.3.2 Turning Automatic Testing On and Off

- **8.** Select the Frame node in the Visual Script.
- **9.** Click the right mouse button and select **Don't Test Frame**. Notice a small yellow circle appears next to the Frame node to indicate that the automatic existence test for the frame is turned off, as shown below:

Figure 4–4 Visual Script Frame Node

Frame (Welcome - Home SuperStores Inc.)

10. Click the right mouse button and select **Test Frame**. The yellow circle disappears to indicate that the automatic existence test is activated.

Note: Oracle Functional Testing for Web Applications maximizes your productivity by virtually eliminating the need to program test scripts. When a Visual Script is recorded, it captures your interaction with the Web application under test. A series of default test cases are automatically generated and added to the Visual Script. These tests are designed for Images, Links, Frames, Forms, Elements, HTML, Java Applets, ImageMaps, and Active-X controls and can be customized to suit your requirements.

4.3.3 Modifying Default Tests

11. Select **Current Script (tutor1)** from the **Options** menu and then select **Content Tests** in the **Functional Tests** section.





This dialog box indicates which comparison tests will be performed on which page attributes as default tests for the current script. You can enable or disable testing of specific attributes by selecting or clearing the appropriate check box(es). You can set global defaults for all Visual Scripts by selecting **New Scripts (Global)** from the **Options** menu and then selecting **Content Tests** in the **Functional Tests** section.

- **12.** Make sure the following check boxes are selected:
 - HTML.
 - Images.
 - Scripts.
 - Links.
 - Frames.
- 13. Click OK.
- 14. Select the [1] Welcome Home Superstores Inc. node in the Visual Script.
- **15.** Click the right mouse button and select **Page Content Tests Manager**. The Content Tests Manager dialog box opens.

ge: weicome - Home SuperStores Inc.	OK
	Cancel
Enks	Basat
	<u><u> </u></u>
Port	<u>D</u> efaults
Target	Help
Port	🗖 Show Cha
Protocol	
- Forms	
Name	
Encoding	
Method	-

Figure 4–6 Content Tests Manager Dialog Box

This dialog box indicates which comparison tests will be performed on which page attributes as default test cases for a specific page. You can enable or disable testing of specific page attributes by selecting or clearing the appropriate check box(es), and clicking the **OK** button.

16. Clear the Images check box, and press the **OK** button. A yellow circle appears next to the Images node in the Visual Script for the image collection, as shown below:

Figure 4–7 Images Script Node



When the Visual Script is played back, all Image tests will be ignored.

4.4 Example 3: Playing Back a Visual Script

This example explains the procedure for playing back Visual Scripts that you have recorded. It also shows the option settings for playback and the results log.

- Select Current Script from the Options menu and then select Results Log in the Results section. Make sure the Append to log and All details radio buttons are selected.
- Select Results Report in the Results section and make sure the Automatically create report after script playback option is selected.
- Select General in the Playback section, make sure the Automatically Run Resource Validation After Playback check box is selected, and then click OK.
- **4.** Select **Resize Visual Script View** from the **View** menu to expand the Browser pane.

5. Click the Playback Script button to play back the recorded script. The pages in the script will be played back in the order recorded. The Browser navigates to each page, executes the default tests for each page, and shows the results visually in the script. At the end of the play back, Oracle Functional Testing for Web Applications runs a Resource Validation test and shows the results.

The Resource Validation test checks the integrity of the referenced resources (i.e. links, images, etc.) in your pages.

Figure 4–8	Resource	Validation	Window
------------	----------	------------	--------

Host	Resource	Status	Error	Internet S	Stats
1 Local Host	•	Finished		-	
11	C:\OracleATS\OFT\RSWDemo\index.htm	Passed		200	
11	C:/OracleATS/OFT/RSWDemo/images/topn	Passed		200	
11	C:/OracleATS/OFT/RSWDemo/images/sear	Passed		200	
11	C:/OracleATS/OFT/RSWDemo/images/spac	Passed		200	
11	C:/OracleATS/OFT/RSWDemo/images/sear	Passed		200	
11	C:/OracleATS/OFT/RSWDemo/images/top	Passed		200	
11	C:/OracleATS/OFT/RSWDemo/images/hom	Passed		200	
l 1	C:/OracleATS/OFT/RSWDemo/images/hom	Passed		200	
11	C:/OracleATS/OFT/RSWDemo/images/foote	Passed		200	
Name and the second	<u></u>				Þ

The "passed" results indicate that all referenced resources are available.

6. Click the **Close** button to close the Resource Validation window.

Oracle Functional Testing for Web Applications automatically generates a results report and opens the report in a new browser window:

Figure 4–9 Results Report Window

ress C:\OracleATS\OFT\RSWDemo1\tutor1Results\tutor1Result.htm C: C:\OracleATS\OFT\RSWDemo1\tutor1Results\tutor1Result.htm C: C: OracleATS\OFT\RSWDemo1\tutor1Results\tut	Go Link
ress C:\OracleATS\OFT\RSWDemo\tutor1Results\tutor1Result.htm Image: To help protect your security, Internet Explorer has restricted this file from showing active content that could access your computer. Click here for options cript Name: tutor1 port Generated By: Oracle Functional Testing for Web Applications 8.40.90 ript Name: tutor1 prkspace: RSWDemo te & Time: 8/2/2008 1:25:53 PM rrations: 1 tal Pages: 4 tal Testis: 129 tal Failures: 0 (0.00%) tal Failures: 0 (0.00%) tal Result: Passed Script Summary	▶ P Go Link
o help protect your security, Internet Explorer has restricted this file from showing active content that could access your computer. Click here for options ript Name: tutor1 protect By: Oracle Functional Testing for Web Applications 8.40.90 pt Name: tutor1 prkspace: RSWDemo see Time: 8/2/2008 1:25:53 PM rations: 1 rat Pages: 4 al Tests: 129 rat Failures: 0 (0.00%) rat Warnings: 0 (0.00%) rat Result: @ Passed Script Summary	k here for options
stript Name: tutor1 spt Same: tutor1 rkspace: RSWDemo se & Time: 8/2/2008 1:25:53 PM rations: 1 al Pages: 4 al Tests: 129 al Failures: 0 (0.00%) al Warnings: 0 (0.00%) erall Result: @ Passed	
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ort Generated By: Oracle Functional Testing for Web Applications 8.40.90 pt Name: tutor1 kspace: RSWDemo e & Time: 8/2/2008 1:25:53 PM ations: 1 al Pages: 4 al Tests: 129 al Faitures: 0 (0.00%) al Warnings: 0 (0.00%) rail Result: @ Passed Script Summary	
kspace: RSWDemo e & Time: 8/2/2008 1:25:53 PM ations: 1 al Pages: 4 al Tests: 129 al Faitures: 0 (0.00%) al Warnings: 0 (0.00%) rail Result: @ Passed	
e & Time: 8/2/2008 1:25:53 PM rations: 1 al Pages: 4 al Tests: 129 al Faitures: 0 (0.00%) al Warnings: 0 (0.00%) rall Result: © Passed Script Summary	
rations: 1 al Pages: 4 al Tests: 129 al Failures: 0 (0.00%) al Warnings: 0 (0.00%) rall Result: @ Passed Script Summary	
al Pages: 4 al Tests: 129 al Failures: 0 (0.00%) al Warnings: 0 (0.00%) rail Result: © Passed Script Summary	
al Tests: 129 al Failures: 0 (0.00%) al Warnings: 0 (0.00%) :rall Result: © Passed Script Summary	
al Warnings: 0 (0.00%) al Warnings: 0 (0.00%) rrail Result: © Passed Script Summary	
script Summary	
Script Summary	
Script Summary	
Scripe Summary	
Iteration Page Recorded Time (sec) Playback Time (sec) Result Sum	Result Summary
⊥ Iteration Total (sec) 0.562 0.594 ♥ Passed	Passed
[1] Welcome - Home SuperStores Inc. 0.172 0.250 Passed	Passed
[2] Kitchens - Home SuperStores Inc. 0.187 0.141 OPassed	Passed
[3] Lighting - Home SuperStores Inc. 0.125 0.078 Passed	Passed
[3] Lighting - Home SuperStores Inc. 0.125 0.078 Passed [4] Electronics - Home SuperStores Inc. 0.078 0.125 Passed	 Passed Passed
[3] Lighting - Home SuperStores Inc. 0.125 0.078 Passed [4] Electronics - Home SuperStores Inc. 0.078 0.125 Passed Script Total (sec) 0.562 0.594	 Passed Passed

Note: The Results Report uses active content. If the links in the report are not working, check if the browser shows the restricted active content security warning at the top of the browser. If so, click on the warning and select **Allow Blocked Content**. Use the browser Internet Options to set the default settings for allowing active content. Select **Browser** from the **Options** menu and click the **Advanced** tab. Select the **Allow active content to run in files...** setting under the Security section if you do not want the restricted active content security warning to appear each time the Results Report is generated.

7. Click on the page names in the Script Summary section to view the information for each page.

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.

8. Close the browser window when finished with the report.

The Results pane also shows a summary of the playback actions.

Figure 4–10 Playback Results Pane

Tes	st# Time	Iteration	Action	Elapsed Time	Result	Summary	
1	11:52:37 AM 4/5/2004 11:52:39 AM 4/5/2004		[1] Welcome - Home SuperStores Inc. [2] Kitchens - Home SuperStores Inc.	0.28 secs 0.2 secs	Passed Passed		1
1	11:52:40 AM 4/5/2004 11:52:41 AM 4/5/2004		 [3] Lighting - Home SuperStores Inc. [4] Electropics - Home SuperStores Inc. 	0.2 secs 0.17 secs	Passed Passed		
li -	11:54:15 AM 4/5/2004		Resource Validation	0.05	Passed		
Ľ	11:54:15 AM 4/5/2004		END TESTING SCRIPT: tutori	U.85 secs			-
EDI	T 🙋 End of Playback					0.2	

In the next example, you'll see how playback and the results are affected by Web page changes.

4.5 Example 4: Analyzing Test Failures

This example explains how to analyze the differences found between the baseline Web pages and a new version with changes. The Oracle Functional Testing for Web Applications tutorial includes a batch file that copies a new version of three of the pages that you recorded in Example 1.

- 1. Select **Programs** from the **Start** menu and then select **Build B Home Superstores** from the **Oracle Application Testing Suite** submenu. This runs a batch file that updates the Home Superstores page to a new version.
- **2.** If necessary, close the command window after the batch file finishes copying the files.
- **3.** Click the Playback Script button to play back the recorded script again. The pages are played back in the order recorded.

The resource validation test found one resource that failed. There is one failed image called moviei.gif. The results of the resource validation test are displayed in the output log window and the failure will be displayed under the appropriate pages with red flags.

- Click the Close button to close the Resource Validation window and close the Results Report browser window.
- 5. Notice the red circles next to the pages in the Visual Script, as shown below:

Figure 4–11 Visual Script with Failure Markers



- 🗄 🏰 [1] Welcome Home SuperStores Inc.
- 🗄 🏰 [2] Kitchens Home SuperStores Inc.
- 🗄 🖓 🐻 [3] Lighting Home SuperStores Inc.
- 🛨 🥵 [4] Electronics Home SuperStores Inc.

Note: Oracle Functional Testing for Web Applications displays errors and problems encountered during playback using simple color-coded circles in the script itself. Test results are displayed dynamically in the Visual Script tree as the script is being played back. You can double-click on any error event in the result log pane to advance to the corresponding page in the script. Errors encountered upon Visual Script playback can be rejected, ignored, or can be accepted to create a modified baseline script.

6. Select **Find Next Failure** from the **Results** menu, or press the F3 key to locate the next failure in the Visual Script. The first page [1] Welcome - Home Superstores Inc. has two places where differences are indicated: Different HTML and New Links with two new links under the Tested node. The new links are admlist.htm and adminfo.htm.

4.5.1 Ignoring Failures

Occasionally, you may want to ignore a known problem or discrepancy that does not affect the overall test being performed.

7. Locate the Master: Html node under the Different Html node.

Figure 4–12 Different Html Script Node



8. Click on the Different Html node, and then click the right mouse button and select **Ignore This Failure**. This adds a yellow circle to the Different Html node to indicate that the failure caused by the HTML change should be ignored, as follows:

Figure 4–13 Ignore This Failure Script Node Marker



9. Press the F3 key to get to the New Links item and expand the Tested node to view the new links.

Figure 4–14 New Links Script Node



10. Click on the New Links item, and then click the right mouse button and select **Ignore This Failure**. This adds a yellow circle to the New Links node to indicate that the failure caused by the presence of new links should be ignored.

Figure 4–15 New Links Script Node with Marker



4.5.2 Accepting Changes Shown in the Script

Often, you will get new versions of Web pages that you want to use as the new baseline for testing.

11. Follow the red circles in the [2] Kitchens - Home Superstores Inc. page.

The problems on this page are indicated by the presence of two nodes called Different Html and Different Script. Below the Different Html node are the recorded and tested versions of the HTML for the current page. Below the Different Script node are the recorded and tested versions of the JavaScript function that has changed for the current page.

Figure 4–16 Different Html and Different Script Nodes



- **12.** Double-click on the Different HTML node and a dialog box with the differences for the HTML opens.
- **13.** Click **Next Difference** as many times as necessary to locate the following differences between Master and Tested page HTML source.

Figure 4–17 Master and Tested Page HTML Source Differences

<TD_vAlign=top>Departments:
Kitchen & Bath
Gardening</TD></TD vAlign=top>Other Departments:
Kitchen & Bath
Gardening</TD>

Notice that the changes are textual changes to the Web page content. The Master text (baseline for testing) is shown in blue. The tested text (new version) is shown in red.

- 14. Click the Cancel button to close the window.
- 15. Repeat the same process for the Different Script node.
- **16.** Select the [2] Kitchens Home Superstores Inc. page node and select **Accept Tested Page** from the right-click shortcut menu. The red circles in the Visual Script for that page disappear. The accepted change becomes the new baseline for future testing of this page.

4.5.3 Rejecting Problems Shown in the Script

There may be times when you do not want a change to a Web page to be accepted as the new baseline for testing.

17. Follow the red circles in the [4] Electronics - Home Superstores Inc. page.

The problems on this page are indicated by the presence of two nodes called Different Html and Different Image. Below the Different Html node are the

recorded and tested versions of the HTML for the current page. Below the Different Image node are the recorded and tested versions of the image found on this page.

18. If necessary, expand the Different Image node to display the Master and Tested Image nodes. You will notice that the file name of the image file is spelled differently [movie vs. movei]

Figure 4–18 Master and Tested Image Differences

🗄 🕵 Different Image

- 🕵 Master : file:///C:/OracleATS/OFT/RSW/Demo/images/movie.jpg

- 🔩 Tested : file:///C:/OracleATS/OFT/RSWDemo/images/movei.jpg

The Master node has a red circle because playback revealed that the link to the image is no longer in the HTML. The Tested node has a red flag because the image failed the Resource Validation test.

19. Double click on the Different HTML node and you will see the same spelling change in the HTML source for the page.

Figure 4–19 Master and Tested Image Differences

<TD></TD> <TD></TD>

We wish to discard these differences and continue to use the original spelling as the baseline for testing in the Visual Script.

- **20.** Click the **Cancel** button.
- **21.** Select the [4] Electronics Home Superstores Inc. page node and select **Discard Tested Page** from the right-click shortcut menu. This causes the originally recorded baseline to be left intact. The baseline differences will be discarded and all red circles will be removed.
- **22.** Click the Playback toolbar button to play back the script again. Oracle Functional Testing for Web Applications still flags the Different HTML and the image name spelling problem in the [4] Electronics Home Superstores Inc. page of the Visual Script.
- **23.** Close the Resource Validation window and the Results Report.
- 24. Select Save Output Log As from the File menu.
- **25.** Enter the name tutor1.log and click Save.
- 26. Select Save Script from the File menu to save the changed Visual Script.
- 27. Select Clear Results Window from the View menu to clear the results log pane.

4.6 Example 5: Adding Test Cases to the Visual Script

This example explains how to add four types of test cases to your Visual Scripts. In addition to the automatic existence and resource validation tests, Oracle Functional Testing for Web Applications provides the ability to add the following test cases to the pages in your Visual Script:

- Text Matching
- Server Response

- Form Element
- Table Test
- WinForms Test
- Siebel Test

4.6.1 Record a New Script

- 1. Select **Programs** from the **Start** menu and then select **Build A Home Superstores** from the **Oracle Application Testing Suite** submenu. This batch file restores the original Web pages for the Home Superstores site.
- 2. If necessary, close the command window.
- 3. Select New Script from the File menu to create a new Visual Script.
- **4.** Reload the c:\OracleATS\OFT\rswdemo\index.htm page in the Browser pane by selecting it from the Browser drop-down list.
- 5. Click the Record button on the toolbar.
- **6.** Click on the Register link in the Browser pane. The Registration page appears in the Browser pane and the address should show c:\OracleATS\OFT\rswdemo\register.htm.
- **7.** Type Admin as the first name, enter any email address, and phone in the text area, and click the **submit my entry** button. The Browser returns the Database Authorization and Administration options of he registration page (regres.htm).

4.6.2 Stop the Recording

8. Click the Stop button on the toolbar to stop the recording. The Visual Script pane should list three pages in the script.

4.6.3 Insert a Text Matching Test Case

Text Matching test cases compare selected text from a Web page to the text you specify in the test case.

- 1. Select [3] Registered Home Superstores, Inc. in the Visual Script.
- **2.** Click the right mouse button and select **Goto Page** to open the Registered Home Superstores, Inc page in the Browser.
- **3.** Scroll the Browser pane so that the text "Database Authorization and Administration" is visible.
- 4. Highlight the "Database Authorization and Administration" text with the mouse.
- **5.** Click the Insert Text Matching Test Case button on the toolbar.

Oracle Functional Testing for Web Applications captures the highlighted text and opens the Insert Text Matching Test Case dialog box.

Page: 👖	3)Bedistered - Home SuperStores Inc.		
Type: F	Text Matching Test		Cancel
Exect	ute Test Result: Passed		<u>R</u> eset
Text Match	ing Test		<u>H</u> elp
Name:	tutortext1	Select From	
^D ass when	Selected text is present	l est Library	
Selected T	ext:	Add to Test	
Database	Authorization and Administration		
		and the second	
1			
Test on	HTML Result: Passed		
	ding a Text Matching Test to the test library a	llows you to	

Figure 4–20 Text Matching Test Properties Dialog Box

- **6.** Type tutortext1 as the test case name.
- 7. Make sure the Pass when: option is set to Selected text is present.
- **8.** Click **OK** and view the test case in the Visual Script. Oracle Functional Testing for Web Applications adds the test case to the Visual Script under the Frame node.

Figure 4–21 Text Matching Test Script Node

```
    Frame (Registered - Home SuperStores Inc.)
    Ser Defined Tests
    Text Matching Test, Name: tutortext1, Pass when present, Text= "Datab..."
```

4.6.4 Insert a Server Response Test Case

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

- 9. Select the [2] Registration Home Superstores, Inc. item in the Visual Script.
- **10.** Click the Insert Server Response test case button on the toolbar. Oracle Functional Testing for Web Applications opens the Insert Server Response Test Case dialog box.

Server Response Test Properties	X
Server Response Test Properties General Properties Page: [2] Registration - Home SuperStores Inc. Type: Server Response Test Image: Execute Test Result: Passed	OK Cancel <u>R</u> eset Help
Name: Image: The second se	
You may use this test to time multiple pages of your Visual Script by inserting separate Start and End test nodes in the respective pages. The Start and End nodes of a Server Response Test must have the same name.	

Figure 4–22 Server Response Test Properties Dialog Box

- **11.** Type TutorTimer1 as the test case name.
- **12.** Set the **Maximum Time Allowed for Playback** option to 5 seconds. Leave the **Minimum Time** at 0 seconds.
- **13.** Click **OK** and view the test case in the Visual Script. Oracle Functional Testing for Web Applications adds the test case to the Visual Script between the Address and Frame nodes.

Figure 4–23 Server Response Test Script Node

🖻 🐻 [2] Registration - Home SuperStores Inc.

- 🗉 🗄 🖳 🛃 Address#: C:\OracleATS\OFT\RSWDemo\register.htm (blur + window(index=0).link)
- 🔤 🔣 Server Response Test:TutorTimer1, Minimum: 0, 🛛 Maximum: 5

4.6.5 Insert a Form Element Test Case

Form Element test cases compare attributes and values of the elements in an HTML form.

- Select Current Script from the Options menu and then select Content Tests in the Functional Test section. Make sure the Forms and Form Elements check box are selected and click OK.
- 15. Select the [2] Registration Home Superstores, Inc. item in the Visual Script.
- **16.** Expand the page and select the TodaysDate element of the regres.htm form.

Figure 4–24 Form Element Script Nodes

🖻 📲 🐻 Forms

E-B Form theForm get regres.htm application/x-www-form-urlencoded

- 💾 Type : text, Name : TodaysDate, Value : 8/2/2008, Disabled : False
- 📳 Type : text, Name : FirstName, Value : , Disabled : False 🛛
- 🖶 Type : text, Name : LastName, Value : , Disabled : False
- 📳 Type : text, Name : Mail, Value : , Disabled : False |
- -- 🔡 Type : text, Name : Phone, Value : , Disabled : False
- --- 🔡 Type : checkbox, Name : MailList, Value : YES, Disabled : False, Checked : True
- **17.** Select **Insert Form Element Test** from the **Tests** menu. Oracle Functional Testing for Web Applications opens the Form Element Test dialog box.

Figure 4–25 Form Element Test Properties Dialog Box

💑 Form Element Test Properties	×
General Properties	OK
Page: [2]Registration - Home SuperStores Inc.	
Type: Form Element Test	<u>C</u> ancel
Execute Test Result: (none>	<u>R</u> eset
Form Element Test Properties	<u>H</u> elp
Name:	
Specify Comparison Conditions	
Select Property: Current Value:	
Type 💌 "text"	
Select Test Criteria: Property Must Satisfy Expression Specify Expression:	
Use this test criteria to specify an expression as follows: Type = "text"	
Test Expression	
Test Result	
You may modify the VBA expression used to test this form element by editing the "Expression" field above. Before clicking OK, click "Test" to ensure that your new expression is valid.	

- **18.** Type TodaysDate as the test case name.
- 19. Set the Select Property option to Value.
- 20. Set the Select Test Criteria to Property Must Satisfy Expression.
- **21.** Change the **Specify Expression** field to Value = Date.
- **22.** Click the **Test** button. Oracle Functional Testing for Web Applications should return True in the **Result** field.
- **23.** Click **OK** and view the test case in the Visual Script. Oracle Functional Testing for Web Applications adds the test case to the Visual Script under the Form Element node.

Figure 4–26 Form Element Test Script Node

🖻 📷 Forms
🗄 🐨 📷 Form theForm get regres.htm application/x-www-form-urlencoded
😑 📲 Type : text, Name : TodaysDate, Value : 8/2/2008, Disabled : False
🔤 Form Element Test, Name: TodaysDate,Value=Date
📰 Type : text, Name : LastName, Value : , Disabled : False
📰 Type : text, Name : Mail, Value : , Disabled : False
📰 Type : text, Name : Phone, Value : , Disabled : False
🔤 🔡 Type : checkbox, Name : MailList, Value : YES, Disabled : False, Checked : True

4.6.6 Insert Table Test Test Case

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

- 24. Select [1] Welcome Home Superstores, Inc. in the Visual Script.
- **25.** Click the right mouse button and select **Goto Page** to open the Welcome Home Superstores, Inc page in the Browser.
- **26.** Select **Insert Table Test** from the **Tests** menu. Oracle Functional Testing for Web Applications opens the Table Test Wizard.

😻 New Table Test Wizard Step 1 out of 3: Name your test.	×
Welcome to the Table Test Wizard	
Test Name:	
Click Next to select the table to test.	
Cancel < <u>Back</u> <u>N</u> ext> Finis	h

Figure 4–27 Table Test Wizard Welcome Dialog Box

- **27.** Type Depts as the test case name.
- **28.** Click **Next**. The Select Table Element dialog box is displayed.

Figure 4–28 Select Table Element Dialog Box

New Table Test	Wizard Step 2 out of 3: Select Table Ele 🗵
Selected Path:	
Current Path:	window(index=0).Tag[TABLE](index=2)
Cancel	< Back Next > Finish

29. Moving the cursor over the web page highlights the tables on the page. Highlight the Departments area in the upper left-hand corner of the page.

Figure 4–29 Table Element Selected Example



30. Select the table. The path is displayed in the Select Table Element dialog box. Click Next to display the Create your tests dialog box.

Figure 4–30 Create Table Test Dialog Box

A B C D 1 Image: Home Stores I Image: Home Stores I Image: Home Stores I 2 Ifile:///C:/Oracle/ Image: Departments: Image: Home Stores I Image: Home Stores I able Path: window(index=0). Tag(TABLE)(index=3) Image: Home Stores I Image: Home Stores I able Path: /// window(index=0). Tag(TABLE)(index=3) Image: Home Stores I Image: Home Stores I est Element: A1 Image: Home Stores I Image: Home Stores I Image: Home Stores I string Image: Home Stores I Image: Home Stores I Image: Home Stores I Image: Home Stores I Matches the following: Image: Home Stores I Image: Home Stores I Image: Home Stores I Image: Home Stores I Image: Home Stores I Image: Home Stores I Image: Home Stores I Matches the following: Image: Home Stores I Image: Home Stores I Image: Home Stores I Image: Home Stores I Image: Home Stores I Image: Home Stores I Image: Home Stores I Image: Home Stores I Image: Home Stores I Image: Home Stores I Image: Home Stores I Image: Home Stores I	_0
A B C D 1 Image: Home Stores Image: Home Stores 2 Image: Home Stores 3 Image: Home Stores 4 Image: Home Stores 5 Image: Home Stores 5 Image: Home Stores 6 Image: Home Stores 7 Image: Home Stores 7 Image: Home Stores 7 Image: Home Stores 7 Image: Home Stores 8 Image: Home Stores 8 Image: Home Stores 9 <th></th>	
1 Image: Home Stores 2 Ifile:///C:/Oracle/ 2 Ifile:///C:/Oracle/ 4 Image: Home Stores able Path: window(index=0): Tag(TABLE)(index=3) est Element: A1 est Type: String String Image: Home Stores Matches the following: Image: Home Home Stores Image: Exact Image: Home Home Stores Image: Home Home Stores Image: Home Hom	
2 ✓ file:///C:/Oracle/ ✓ Departments: ✓ file:///C:/Oracle/ ✓ able Path: [window((index=0): Tag[TABLE](index=3)] ✓ est Element: A1 ✓ est Type: String ✓ String ✓ ✓ Matches the following: © Exact © WildCard © Regular Expression Test Table Test	
Image: state of the	
All est Element: A1 est Type: String Matches the following: Exact C WildCard C Begular Expression Test Table Test Result:	
▲ able Path: window(index=0) Tag(TABLE)(index=3)	
able Path: [window(index=0).Tag[TABLE](index=3) est Element: A1 est Type: String String Matches the following: © Exact © WildCard © Begular Expression Test Table Test Result: Iest Details: Iest	
est Element: A1 est Type: String String Matches the following: Exact C WildCard C Begular Expression Test Table Test Result:	<u>E</u> nable
est Type: String String Matches the following: Exact C WildCard C Begular Expression Test Table Test Result: Iest Details:	
est Type: String String Matches the following: Exact C WildCard C Regular Expression Test Table Test Result: Iest Details:	
String Matches the following:	
Matches the following: © Exact © WildCard C Begular Expression Image: State	
Matches the following: © Exact © WildCard © Regular Expression Test Table Test Result: Details:	
Exact WildCard Begular Expression Image: stable Test Image: stable Test Result: Image: stable Test Details: Image: stable Test	
Test Table Test Result: Iest Details:	
Test Table Test Result: Iest Details:	
Test Table Test Result: Iest Details:	
Result:Iest	
Details:	
Cancel < <u>B</u> ack <u>Next</u> Fini	sh

31. This dialog box displays the table in a spreadsheet format, showing the data that is in each table cell. The dialog box options change depending on the type of data in the cell. Cells that are checked will be tested. Select cell B2.

Re	corded Ta	ble			
	A	В	C		D
1		⊮Ho	me Stores		
2	I IIe:///C	:/Uracle/ <mark>V</mark> De	partments:	tile:///C:/Uracle/	
					[]
able	e Path: 🛛 🔤	ndow(index=0).T	ag[TABLE](index=	3)	⊡ nable
est I	Element:	B2			
est '	Туре:	String			-
Strii	ng	1			
De	epartments:	Kitchen & Bath	Gardening		
Ma	tches the fol	lowina:	_		
	<u>E</u> xact	O <u>W</u> ild	Card C <u>R</u> e	gular Expression	
	epartments:			- -	1. S.
De			, ,		
De					
De Tes	st Table Test				<pre>constant contract of the contract of the</pre>
De Tes Re	st Table Test sult:			<u>T</u> est	
Tes Re De	st Table Test sult:			<u> </u>	
Tes Re De	st Table Test sult: tails:			<u> </u>	
Tes Re De	st Table Test sult: tails:			<u>⊥</u> est	

Figure 4–31 Create Table Test Dialog Box with Field Selected

- **32.** Make sure that Exact is selected in the Matches the following field.
- **33.** Click **Test** to display the Last Played Table Tab. The result is displayed in the Result field.
- **34.** Click **Finish** and view the test case in the Visual Script. Oracle Functional Testing for Web Applications adds the test case to the Visual Script under the User Defined Tests node.





35. Save the script as tutor2.

4.7 Example 6: Using the Data Bank Wizard on a Search Form

This example introduces the Data Bank Wizard and explains one way to use the Data Bank Wizard with the Text Matching test case to verify Search results pages. The Data Bank Wizard provides the capability to run iterative tests using data from a Data Bank file.

- 1. Select **New Script** from the **File** menu to create a new Visual Script (save the previous script if prompted).
- 2. Reload the c:\OracleATS\OFT\rswdemo\index.htm page in the Browser pane by selecting it from the Browser drop down list.

4.7.1 Recording a Search

- 3. Click the Record button on the toolbar.
- 4. Scroll the Browser pane and click the Go graphic next to Use SuperSearch.
- **5.** Enter Lamps in the **Product Name** field and click the **Search** button. Oracle Functional Testing for Web Applications records the search including the text you typed into the field.
- 6. Click the Stop Record button on the toolbar.

4.7.2 Viewing the Parameters in the Visual Script

7. Expand the [3] Results - Home Superstore, Inc page in the Visual Script. Notice the Search Parameter under the Address node of the tree.

Figure 4–33 Parameters Script Node



4.7.3 Using the Data Bank Wizard to Map Variables

8. Select Data Bank Wizard from the Edit menu.

Oracle Functional Testing for Web Applications opens the Data Bank Wizard window with the parameters from the Visual Script in the **Parameters** list.

arameters:		Variables:			
Name	Recorded Valu	Name	Туре	Add Variable	Lance
Search[3.1] Interest[3.2] Interest[3.3] Interest[3.4]	Lamps checked unchecked unchecked			Delete Variable	Help
				Add Mapping	
(F			Remove Mapping	1
appings: Parameter Name	Variable Name	Variable Value	Recorded Val	ue Tested Value	
appings: Parameter Name (Variable Name	Variable Value	Recorded Val	ue Tested Value	
appings: Parameter Name	Variable Name	Variable Value	Recorded Val	ue Tested Value	

Figure 4–34 Data Bank Wizard Variables Tab

9. Click the **Add Variable** button. The Data Bank Wizard opens a dialog box for specifying a variable name.

Figure 4–35 Add Variable Dialog Box

💑 Add ¥ariable	×
Name:	ОК
r Turan Esternal Marcha Esternal Data Causa 💌	Cancel
	Reset
Expression:	Help
Value: Evaluate	
Use the EVALUATE button to compute the curren value of the expression you have specified.	ıt

10. Type SuperSearch as the variable name, and then click **OK**.

The Data Bank Wizard adds the name to the Variables list.

		Variables:			Cance
Name	Recorded Valu	Name	Туре	Add Variable	
Search[3.1] Interest[3.2] Interest[3.3] Interest[3.4]	Lamps checked unchecked unchecked	SuperSearch	External -	Delete Variable	Help
				Add Mapping	1
	F			Remove Mapping	
r arameter in ame	Variable Name	Variable Value	Recorded Value	Tested Value	
r aldmeter NaMe	Variable Name	Variable Value	Recorded Value	Tested Value	
In admeter IN all 18 In a meter IN all 18 I	Variable Name	Variable Value	Recorded Value	Tested Value	

Figure 4–36 Data Bank Wizard with a Variable Added

11. Select the Search[3.1] item in the **Parameters** list, and then click **Add Mapping**. The Data Bank Wizard creates a mapping between the Search[3.1] parameter and the SuperSearch variable. You now need to bind the variable name to a field in a Data Bank file.

4.7.4 Using the Data Bank Wizard to Bind to a Data Bank

12. Click the **Data Binding** tab. The Data Bank Wizard opens the Data Binding options with the variable name in the **Variables** list.

)ata Bank						OK
o Data Bank Sele	ected Sele	ct Clear	Edit	Update Syn	thesize	Cance
′ariable Bindings- ariables:		Data Bank Fields	:			Help
Name	Туре			Add Bin	ding	
SuperSearch	External			Delete Bi	inding	
and the second se					And a second	
ndinas:						
indings: Variable Name	Field Name	Field Value	Field Number			
ndings: Variable Name	Field Name	Field Value	Field Number	Goto Record.		

Figure 4–37 Data Bank Wizard Data Binding Tab

Now we want to select the Data Bank file that contains the values we want to use for iterative testing.

13. Click the **Select** button. The Data Bank Wizard opens a dialog box for selecting the Data Bank file.



Figure 4–38 Select Data Bank Dialog Box

Note: The .csv file name extension may or may not be visible depending upon your system settings.

14. Select search.csv, and then click **Open**. The Data Bank Wizard adds the Field name from the Data Bank file.

ϟ Data Bank Wizard	×
Variables Data Binding	
Data Bank	ОК
search.csv Select Clear Edit Update Synthesize	Cancel
Variable Bindings Variables: Data Bank Fields:	Help
Name Type SuperSearch External Image: Character of the second secon	
Bindings:	
Current Record From Databank: 0 Fetch Record Goto Record	
Unique Vars per Page Auto-Map Auto-Bind	
Unique Vars per Page is for Auto_Map. When it is checked, the variables name will be different even in some cases that the parameters name are identical for different pages.	

Note: The Data Bank file is a comma-delimited ASCII file with the field names as column headers on the first line of the file. Subsequent lines of the file contain data. You can view the contents of any of the sample files in the c:\OracleATS\OFT\DataBank directory using Notepad or any other ASCII editor.

15. Select the Search field in the **Data Bank Fields** list and then click the **Add Binding** button. The Data Bank Wizard adds the variable name to the Bindings list.

Data Bank				OK
earch.csv	Select Clear	Edit Update	Synthesize	Cancel
/ariable Bindings- /ariables:	Data Bank Fields:			Help
Name SuperSearch	Type Search External		d Binding	
Variable Name	Field Name Field Value	Field Number		
Current Record Fro	n Databank: 0	tch Record Goto Rec	ord	

Figure 4–40 Data Bank Wizard with Bindings

16. Click **Fetch Record** to cycle through the records in the external data file.

Figure 4–41 Data Bank Wizard Fields and Records View.

1	Bindings:			
	Variable Name	Field Name	Field Value	Field Number
	var_Search	Search	Plants	1
	•			>
	Current Record From Dat	abank: 1	Fetch Record	Goto Record

- **17.** Continue clicking the **Fetch Record** button to cycle through all of the records in the file. There are five records in the sample Data Bank file.
- **18.** Click the **OK** button to close the Data Bank Wizard.

4.7.5 View the Data Bank Parameters in the Visual Script

19. Examine the Parameters node under the Address node of the Visual Script tree.

Ė⊷ 🐻 [3] Results	- Home SuperStore Inc.
🚊 🖳 🗛 Addres:	;#: file:///C:/OracleATS/OFT/RSWDemo/srchres.htm#Lamps (click +
🛛 🕗 Du	ation = 0.156, Think Time Delay: 10.516
🖻 🖷 🧮 Par	ameters
	Search <supersearch> : Recorded = "Lamps", Tested = "Lamps"</supersearch>
🖽	Interest = "checked"
🖽	Interest = "unchecked"
····· 🖽	Interest = "unchecked"

Figure 4–42 Data Bank Parameters Script Nodes

The Visual Script now includes the variable names as part of the Parameters. The check mark indicates that the parameter is mapped to a variable and bound to a field in a Data Bank file.

4.7.6 Insert a Text Matching Test Case

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

- **20.** Highlight the text "successfully found" in the search results page shown in the Browser pane.
- **21.** Click the Insert Text Matching test case button on the tool bar. Notice the text you highlighted is automatically captured by Oracle Functional Testing for Web Applications.
- **22.** Type VerifySearch as the case name, make sure **Pass when:** is set to **Selected text is present**, and then click **OK**.
- **23.** Select the HTML node in the Visual Script. Notice the yellow flag next to the HTML node. Oracle Functional Testing for Web Applications automatically turns off the HTML comparison test when you insert a Text Matching test.

Since the search criteria will be different for each search during iterative play back, we know the HTML and product images on the page will be different from the recorded master each time. Instead of testing the HTML and images, the Text Matching test case will be used to verify a successful search.

24. Save the Visual Script as tutor3.

4.7.7 Play Back the Script with Iterations

25. Select **Playback** from the **Run** menu and then select **Iterate**. Oracle Functional Testing for Web Applications opens the Iterations dialog box.



Figure 4–43 Iterations Dialog Box

- 26. Select Playback with Data Bank and Use All Records.
- **27.** Click the **OK** button to playback the Visual Script.
- **28.** Watch as Oracle Functional Testing for Web Applications plays back the script several times using a different data value for the search each time.

4.7.8 Analyzing a Playback Failure

29. Close the Results Report.

Notice the Results log indicates that the search using the Furniture value (record 3) fails. We now need to analyze this failure.

- 30. Select Data Bank Wizard from the Edit menu.
- **31.** Click the **Goto Record** button. The Data Bank Wizard opens a dialog box for entering the record number.
- 32. Enter 3, and then click OK.
- **33.** Click **OK** to close the Data Bank Wizard.
- **34.** Click the Playback button on the toolbar to play back this one record.
- **35.** Scroll the Browser pane to view the Search Results page. Notice that the page indicates there is no product information for Furniture. Oracle Functional Testing for Web Applications was able to find this problem because the Text Matching test case you added to test for a successful search produced a failure.
- Make sure the [3] Results Home Superstore, Inc page is still selected in the Visual Script.
- **37.** Click the right mouse button and select **Discard Tested Page** from the shortcut menu. The red circles are removed from the Visual Script. The Master version of the Visual Script is still the baseline to use for testing of the Web page.
4.7.9 Save the Script and the Results Log

- **38.** Save the Visual Script.
- **39.** Save the Output Log as tutor3.log.
- **40.** Select **Clear Results Window** from the **View** menu to clear the results log for the next test.

4.8 Example 7: Using the Data Bank Wizard on a Registration Form

This example explains how the Data Bank Wizard makes it easy to create automated data-driven tests. Data Banks are used to hold unlimited amounts of input data that can be fed automatically into your Web application.

- 1. Select New Script from the File menu to create a new Visual Script.
- **2.** Reload the c:\OracleATS\OFT\rswdemo\index.htm page in the Browser pane by selecting it from the Browser drop-down list.

4.8.1 Recording Information in a Form

- **3.** Click the Record button on the toolbar.
- **4.** Scroll the Browser pane and click the <u>Register</u> link. The Registration page contains a form for entering Name, Email Address, and Phone number information.
- **5.** Enter your own information into the form and click the **submit my entry** button. The Results page returns showing the information you entered with a "successful registration" message.

4.8.2 Inserting a Text Matching Test Case

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

- 6. Highlight the text "Your registration has been added" in the search results page.
- **7.** Click the Insert Text Matching test case button on the tool bar. Notice the text you highlighted is automatically captured by Oracle Functional Testing for Web Applications.
- **8.** Type VerifyRegistration as the test case name, make sure **Pass when:** is set to **Selected text is present**, and then click **OK**.
- 9. Click the Stop Record button on the toolbar.
- 10. Select Save Script As from the File menu and save the file as tutor4.

4.8.3 Viewing the Parameters in the Visual Script

11. Expand the [3] Registered - Home Superstore, Inc page in the Visual Script. Notice the Parameters under the Address node of the tree.



12. Make sure the [3] Registered - Home Superstore, Inc page is selected in the Visual Script.

4.8.4 Using the Data Bank Wizard to Map Variables

13. Select Data Bank Wizard from the Edit menu.

Oracle Functional Testing for Web Applications opens the Data Bank Wizard window with all the parameters from the Visual Script in the **Parameters** list.

🔆 Data Bank Wizard			×
⊻ariables Data Binding			
Variable Mappings:			ОК
Parameters:	Variables:		Cancel
Name Recorded Valu	Name Type	Add Variable	
TodaysDate[3.1] 5/28/2008 FirstName[3.2] Chris			Help
LastName[3.3] Smith			
Phone[3.5] 781-003-0000		Add Mapping	
MailList[3.6] checked			
	▲	Remove Mapping	
Mappings:			
Parameter Name Variable Name	Variable Value Recorded Value	e Tested Value	
Current Record From Databank: 0	Fetch Record	Goto Record	
🔲 Unique Vars per Page	Auto-Map	Auto-Bind	
			1
Unique Vars per Page is for Aut	_Map. When it is checked, the variable ameters name are identical for different n	es name will be different	
	anotore name are labrided for difference	agos.	
L			

Figure 4–45 Data Bank Wizard Variables Tab

14. Click the **Auto-Map** button. The Data Bank Wizard automatically creates variable names and maps the variable names to the Parameter names.

-Variable Mappings: -					ОК
Parameters: Name TodaysDate[3.1] FirstName[3.2] LastName[3.3] Mail[3.4] Phone[3.5] MailList[3.6]	Recorded Valu 9/17/2001 Chris Smith info@mypix.co 781-003-0000 checked	Variables: Var TodaysDate var_FirstName var_LastName var_Mail var_Mone var_MailList	Type External External External External External External	Add Variable Delete Variable Add Mapping	Cancel Help
Mappings:	<u> </u>				
Parameter Name TodaysDate[3.1] FirstName[3.2] LastName[3.3] Mail[3.4] Phone[3.5] MailList[3.6]	Variable Name var_TodaysDate var_FirstName var_LastName var_Mail var_Phone var_MailList	Variable Value 9/17/2001 Chris Smith info@mypix.com 781-003-0000 checked	Recorded Value 9/17/2001 Chris Smith info@mypix.com 781-003-0000 checked	Tested Value 9/17/2001 John Smith JohnS@IBM.com (603)993-0000 checked	
Current Record From	Databank: 0	Fetcl	h Record G	oto Record	
Unique Vars per P	age	Auto-M	1ap	Auto-Bind	
	per Page is for Auto	Map. When it is che	cked, the variables	name will be different	

Figure 4–46 Data Bank Wizard with Auto-mapped Parameters

You now need to bind the variable names to fields in a Data Bank file.

4.8.5 Using the Data Bank Wizard to Bind to Data Source

15. Click the **Auto Bind** button. The Data Bank Wizard opens the Data Binding options with the variable names in the **Variables** list.

Note: Auto Bind automatically creates a Data Bank file with field definitions and one record of data. It also automatically binds the fields to the variables created.

Data Bank							OK
utor4.csv	Sele	ct Clear	Edit	Update	Synthesize] [=	Cancel
/ariable Bindings— /ariables:		Data Bank Fields:					Help
Name var_LastName var_Mail var_Phone var MailList	Type External External External External External	TodaysDate FirstName LastName Mail Phone MailList		D	Add Binding		
Bindings:							
Variable Name var_TodaysDate var_FirstName var_LastName var_Mail var_Phone var_MailList	Field Name TodaysDate FirstName LastName Mail Phone MailList	Field Value 5/28/2008 Chris Smith info@mypix.c 781-003-0000 checked	Field Numbe 1 2 3 4 5 6	r			
Current Record From	n Databank: 1	Fet	ch Record	Goto F	lecord		
Unique Vars per F	age	Auto	Мар	ſ	Auto-Bind		

Figure 4–47 Data Bank Wizard Data Binding Tab

Now we want to select the data source that contains the values we want to use for iterative testing.

16. Click the **Select** button. The Data Bank Wizard opens a dialog box for selecting the Data Bank file.

Figure 4–48 Select Data Bank Dialog Box

Select DataBank							<u>? ×</u>
Look in:	🔁 DataBank			•	← 🖻 🗎	* 🎫 🕇	
History Desktop My Documents	Scustomer.csv						
My Computer	File name: Files of type:	CSV(*.csv),T)	KT(*.txt) ead-only		•] []]	Open Cancel

17. Select customer.csv, and then click **Open**.

The Data Bank Wizard automatically re-binds the appropriate data field names from the Data Bank file to the variable names.

Jata Bank	Select Clear	Edit Luc	data Sunthasiza	UK.
customer.csv				Cancel
Variable Bindings /ariables:	Data Bank Fields:			Help
Name Type var_LastName External var_Mail External var_Phone External var_MailList External	► FirstName LastName Mail Phone		Add Binding Delete Binding	
Bindings:				
Variable Name Field Na var_TirstName FirstNan var_LastName LastNar var_Mail Mail var_Phone Phone	me Field Value e John ne Smith John S@IBM.c (603)993-0000	Field Number 1 2 3 4		
Current Record From Databan	c 1 Fe	ch Record	Goto Record	
Unique Vars per Page	Auto	-Map	Auto-Bind	_

Figure 4–49 Data Bank Wizard with Bound Parameters

Note: The Data Bank file is a comma-delimited ASCII file with the field names as column headers on the first line of the file. Subsequent lines of the file contain data. You can view the contents of any of the sample files in the c:\OracleATS\OFT\DataBank directory using Notepad or any other ASCII editor. The following illustration shows how Data Banks map to variables and Visual Scripts.

Figure 4–50 How Scripts Map and Bind to Data Bank Records



18. Click the **Fetch Record** button to cycle through the records in the Data Bank file.

Variable Name	Field Name	Field Value	Field Number
var_FirstName	FirstName	John	1
var_LastName	LastName	Smith	2
var_Mail	Mail	JohnS@IBM.com	3
var_Phone	Phone	(603) 993-0000	4
•			•
weet Deserd Free	Databasely I	Eatob Bacoro	Goto Record

Figure 4–51 Data Bank Wizard Fields and Records View

- **19.** Continue clicking the **Fetch Record** button to cycle through all of the records in the Data Bank file.
- 20. Click the OK button to close the Data Bank Wizard.

4.8.6 View the Data Bank Parameters in the Visual Script

21. Examine the Parameters node under the Address node of the Visual Script tree.

Figure 4–52 Script Nodes with Mapped and Bound Data Bank Variables

📷 [3] Registered - Home SuperStores Inc.
🚊 📮 Address#: file:///C:/OracleATS/OFT/RSW/Demo/regres.htm#8/2/2008#Chris#Smith#email@
🥖 Duration = 0.219, Think Time Delay: 28.703
🖻 🖷 🛅 Parameters
🕨 TodaysDate <var_todaysdate> = ''8/2/2008''</var_todaysdate>
— ✓ FirstName <var_firstname> : Recorded = "Chris", Tested = "Chris"</var_firstname>
√ LastName <var_lastname> : Recorded = "Smith", Tested = "Smith"</var_lastname>
✔ Mail <var_mail> : Recorded = "info@mypix.com", Tested = "info@mypix.com"</var_mail>
🕨 🕨 MailList <var_maillist> = "checked"</var_maillist>

The Visual Script now includes the variable names as part of the Parameters. The check marks indicate the parameters that are mapped to variables and bound to fields in a Data Bank file. The triangles indicate variables that are mapped, but not bound to fields in a Data Bank file.

22. Save the Visual Script.

4.8.7 Play Back the Script with Data Iterations

- **23.** Select **Current Script** from the **Options** menu and then select **Results Log**, make sure the **Failures Only** radio button in the **Results** section is selected, and then click **OK**.
- **24.** Select **Playback** from the **Run** menu and then select **Iterate**. Oracle Functional Testing for Web Applications opens the Iterations dialog box.

		<u> </u>
avhack without Data Bank	·	<u> </u>
Number of Iterations:	1	Help
Delay Between Iterations:	0 seconds	
]
ayback with Data Bank —		1
Use All Records	C Use Current Record Only	
Filename:	search.csv	
Current Record Number:	1	
Start at Record:		
End at Record:	Last	
	1	
Iterate Over Range:		
Iterate Over Range:	1	

Figure 4–53 Iterations Dialog Box

- **25.** Select **Playback with Data Bank** and **Use All Records**.
- 26. Click the OK button to play back the Visual Script.
- **27.** Watch as Oracle Functional Testing for Web Applications plays back the script several times using different data values for the registration.

4.8.8 Analyzing a Playback Failure

Notice that the Results log indicates a failure for Record 4 of the playback iteration. We now need to analyze this failure.

- 28. Select Data Bank Wizard from the Edit menu.
- **29.** Click the **Goto Record** button. The Data Bank Wizard opens a dialog box for entering the record number.
- **30.** Enter 4, and then click **OK**.
- **31.** Click the **OK** button to close the Data Bank Wizard.
- **32.** Click the Playback button on the toolbar to play back this one record.
- **33.** Close Results Report.

You can play back the current record repeatedly using **Current Script** from the **Options** menu, select the **Playback** section, and then select the **Use Current Record** option.

- **34.** Scroll the Browser pane to view the Registration Results page. Notice that the page indicates a server error. Oracle Functional Testing for Web Applications was able to find this error because the Text Matching test case you added to test for successful registration produced a failure.
- **35.** Make sure the [3] Results Home Superstore, Inc page is still selected in the Visual Script.

36. Click the right mouse button and select Discard Tested Page from the shortcut menu. The red circles are removed from the Visual Script. The Master version of the Visual Script is still the baseline to use for testing of the Web page.

4.8.9 Save the Script and the Results Log

- **37.** Save the Visual Script.
- **38.** Save the Output Log as tutor4.log.
- **39.** Select **Clear Results Window** from the **View** menu to clear the results log.

This completes the Oracle Functional Testing for Web Applications tutorial.

Job Scheduler Tutorial

This tutorial walks you through the main features of Job Scheduler. You can follow the examples in this chapter to become familiar with the features and use of Job Scheduler.

This tutorial consists of the following examples:

- **Creating a job and schedule** describes how to create a job using the Job Scheduler Wizard and then add it to a schedule.
- Editing a Job explains how to edit a job after you have created it.
- Editing a Schedule explains how to edit a schedule after you have created it.

The tutorial is designed to be followed sequentially from beginning to end and assumes you have completed the Oracle Functional Testing for Web Applications tutorial in Chapter 3. The examples in this tutorial refer to Visual Scripts recorded in the Oracle Functional Testing for Web Applications tutorial.

5.1 Example 1: Creating a Job and Schedule

This example illustrates how to create a job using the Job Scheduler Wizard and then add it to the Current Schedule.

5.1.1 Starting Job Scheduler

- 1. Select **Programs** from the **Start** and then select **Job Scheduler** from the **Oracle Application Testing Suite** submenu to start Job Scheduler.
- 2. Select New Job from the File menu or click the Job Scheduler Wizard toolbar button. Job Scheduler opens the Wizard Welcome screen. If you do not want the Welcome screen to appear each time you run Job Scheduler, select the kip this screen in the future check box.
- 3. Click the Next button to continue to the Workspace and Scripts [Step 1 of 2] screen.

5.1.2 Specifying the Scripts

The Workspace and Scripts [Step 1 of 2] screen of the Job Scheduler Wizard is where you specify the scripts to include in the job.

Script Selecti	on	Data Banks
Workspace: RS	WDemo 💌	Add © Without
Script		C lugh
tutor1		N WINI
tutor2		C All Records
tutor3		🔤 📄 🔿 Single Record
•		
Script Order		
Script	Workspace	Databank Iteration 📉 📉
tutor1	RSWDemo	Without Databank
		+

Figure 5–1 Job Scheduler Wizard Workspace and Scripts Dialog Box

- **4.** Select the RSWDemo workspace. Note that you can include scripts from more than one workspace in a job.
- 5. Select tutor3 and click on the Add button to add the script to the Script Order list.
- 6. Select tutor4 and click on the Add button.
- **7.** Click the **Next** button to continue to the Job Notifications Log Window [Step 2a of 2] screen of the Job Scheduler Wizard.

5.1.3 Specifying the Job Notifications

The Job Notifications Log Window [Step 2a of 2] screen of the Job Scheduler Wizard is where you specify the message that will appear in the Results Pane and the Results Log if an error occurs during playback of a Visual Script.

Job Scheduler Wizard -	Job Notifications - Log Window [Step 2a of 2]	
	Specify the format of the message to be displayed in the log window.	
	Log Message Format	
E CONTRACTOR	Error was encountered at: %Time Current Data Bank:%curRecord Error Description: %errDescription	
Print 1		
Help	Cancel <back next=""></back>	

Figure 5–2 Job Scheduler Wizard Log Window Dialog Box

The default log message writes the following information to the results log if an error occurs during playback of a Visual Script:

Time of the error

- Databank record
- An error number
- A description of the error
- **8.** Click the **Next** button to continue to the Job Notifications Email [Step 2b of 2] screen of the Job Scheduler Wizard.

5.1.4 Specifying Email Notifications

The Job Notifications Email [Step 2b of 2] screen of the Job Scheduler Wizard is where you specify who to notify when the job is finished and what information to send.

Figure 5–3 Job Scheduler Wizard Email Dialog Box

- E-Mail Not - On Job F I Ser	tification Configuration	
🔽 Ser	nd HTML Summary	
Address: Subject:	Enter email addresses of recipients here Job Scheduler Job Report: %job	Test
		Mail Server
	Address: Subject:	Send Text Log Address: Enter email addresses of recipients here Subject: Job Scheduler Job Report: %job

- **9.** Select the **Send HTML Summary** check box to send the Job Report to the recipients.
- **10.** Select the **Send Text Log** to send a text version of the log.
- **11.** Enter your email address in the **Address** field. Separate additional email addresses by a comma or semicolon.
- 12. Click Mail Server. Job Scheduler opens the server configuration dialog box.

Figure 5–4 Job Scheduler Wizard Mail Server Configuration Dialog Box

Job Scheduler Mail Server Coni	iguration	and the second	
E-mail Server Type			
SMTP Server			
C MAPI server			
SMTP Information			
E-Mail Sender:			
Outgoing Mail Server (SMTP):			
Test e-mail recipient:			Test E-mail
	0r	Canad	
	OK	Cancel	Help

- **13.** Select your email server type and enter the email information for your email system. Check with your system administrator if you are not sure of the information to enter for your email configuration. You can use the **Test email recipient** address and **Test Email** button to verify email capabilities from within Job Scheduler.
- 14. Click OK to return to the Job Scheduler Wizard.
- **15.** Click the **Test** button next to the **Address** field if you want to verify the email notification from the wizard.
- 16. Click the Finish button. The Save Job As dialog box is displayed.
- **17.** Enter tutorJob1 for the job name and click **Save**.
- 18. You are then asked if you want to schedule the job. Click Yes.

5.1.5 Scheduling the Job

The Current Schedule window is displayed as well as the Edit dialog box for scheduling the job you just created.

Figure 5–5 Job Scheduler Wizard Edit Schedule Dialog Box

dit Schedule - C:\Or	acleATS\C)FT\RSWDen	no!\Tut.
Run At 💽:00 PM	-		
From Saturday	▼ Thro	ugh Saturda	, 💌
OK		Cance	

- **19.** Change the **Run At** time to 12:00 pm.
- **20.** Change the starting day in the From field to **Sunday** and the ending day in the Through field to **Thursday**
- **21.** Click **OK** to schedule the job.

📷 Job Schedu 🔻 🛛 🖪 🛛 💷	iler: Current Schei a a ist a ist a	lule - Untitled * [🐗 🐗	idle]				<u> </u>
WorkSpace	s mo siJob1	12 am 12 am 1 am 2 am 3 am 4 am 5 am 5 am 5 am 10 am 11 am 10 am 10 am 10 am 10 am 10 am 5 om 5 o	Sun. Mon	Tue, M	Aed. Thu.	Fri.	Sat.
Name	Iterations F	ailures [Warnings]	Status	Last Error	First	Error	

Figure 5–6 Job Scheduler Current Schedule Window

5.1.6 Saving the Schedule

The job file is separate from the schedule file. The job is the list of scripts to run and the notification information. The schedule file contains the information about when the scripts will be played back and which jobs will be played back.

- 1. Select Save Schedule As from the File menu.
- 2. Enter tutorSch1 for the schedule name and click Save.

The file name is displayed in the title bar of the Current Schedule window.

5.1.7 Playing Back the Job

- 1. In the Job Editor window, click the **Start** button to play back the job.
- **2.** Watch as Job Scheduler processes the Visual Scripts. A yellow bar in the row of the script indicates that the script is being processed. A red bar indicates that the script failed; a green bar indicates that the script passed.

Upon completion an email will be sent to you with the job report and text log if you used your email address when setting up the job notifications.

5.1.8 Activating the Schedule

When the schedule is activated, the scheduled jobs automatically run at the scheduled times.

- 1. Make the Current Schedule window active by clicking anywhere in it.
- **2.** Select **Activate Schedule** from the **Control** menu or click on the Activate Schedule toolbar button. The results are displayed in the Job Summary pane of the Current Schedule window.

Only one schedule can be opened or activated at any one time.

Double-click on the job name in the Job Summary pane to view Job Details as the scripts are played back.

3. Select **Deactivate Schedule** from the **Control** menu or click on the Deactivate Schedule toolbar button to deactivate the schedule.

5.2 Example 2: Editing a Job

This example illustrates how to edit a job using the Job Editor window after the job has been created with the Job Scheduler Wizard. Note that you can have more than one job open at any one time.

1. Select **Open Job** from the **File** menu to open a job or make the Job Editor window active by clicking on it to edit the currently open job.

Figure 5–7 Job Editor Window

🛠 Job Scheduler: Job Editor - RSV	YDemo - [TutorJob	01]		
▼ 🖬 ► 🗉 🖆 🔯 <	1			
TutorJob1 Scripts Kutor3 Notification Cog (True) Severity Mapping	Script Name tutor3 tutor4	Result Passed Passed	Duration (Seconds) .4 .6	Summary
	 C:\0racleATS\0 ⊕- ● 8/2/2008 3:1 	IFT\RSWDen 02:22 PM-3:0:	nol/TutosJob1 (RSWD 3:05 PM Passed	emo), sig

2. Click Scripts in the job tree to display the script selection options.

Figure 5–8 Job Editor Script Selection Window

▼ Tutorjob11 Compared by tutor2 Compared by	Script Selection Workspace: FSV Script tutor1 tutor2 tutor3) /Demo	Data Ba	i nks .t łecords
	Societ Order		Sing	le Record
	Cariat	Lutekeese	Databank Iteration	
	butor1		Without Databank	<u> </u>
	tutor2	RSWDemo	Without Databank	† +

- 3. Select the RSWDemo workspace and add the tutor2 script to the Script Order list.
- 4. Click Email in the job tree to display the email options.

Figure 5–9 Job Editor Email Window

🕵 Job Scheduler: Job Editor - RSV	YDemo - [Tutorjob11*]	_ 🗆 ×
🔻 🖌 🖿 💕 🕮 💽	<i>N</i>	
Vutoriob11 Scripts Stutor1 Stutor2 Notification Cog (True) Seventy Mapping	Specify the recipient address, subject and message to send. E-Mail Notification Configuration On Job Finished Send HTML Summary Send Text Log Address: Enter email addresses of recipients here Subject: Job Scheduler Job Report: %job	
	C Enable 💿 Disable Mail Serve	r

- 5. Select the **Disable** option button to disable sending emails on error.
- 6. Save the job by selecting **Save tutorJob1** from the **File** menu.

5.3 Example 3: Editing a Schedule

This example illustrates how to edit a schedule by adding and changing playback times of jobs. This example uses only one job but you can schedule more than one job.

1. Select **Open Schedule** from the **File** menu to open tutorSch1.mjs or make the Current Schedule window active by clicking on it to edit the currently open job.

	,		Sun	Mon	Tue	Wed	Thu	Fri	Sat
Default		12 am	- Court.	The second second		riou.			
🚔 BSWDer	mo	1 am	1.11.11.11.11	196 (196 (196)		Sec. 2 March 1		10.00	
Tutor	rloh1	2 am	and a second						ne estatut. Terretaria
C Sample		4 am	and the second second	and the second sec		and a second second			
oumpic		<u> </u>						1997 - 1997 -	1997
		<u> </u>	and the second s					1.00	
		8 am	Strate State	Sec. Law					2010
		9 am 10 am	Constant and the second					And Andrewson	
		11 am	**********	· · · · · · · · · · · · · · · · · · ·				1000	
		12 pm	12:00 PN	1.					1999 A.
		2 pm	and the second sec	and the second			an an tha an	and the fill	
		3 pm	Sec. 25						2014
		4 pm		Charles and the second se					
		6 pm		and the second second	i i i		and the second		ta a series Ta se series
		7 pm	and the second					1	
		<u>8 pm</u>	a de la companya de l La companya de la comp					• • • • • •	11
		10 pm	1	94. 19	· ·				5.
		11 pm							
	and the second sec		a a construction and a		*****	****	and a second second		
me	Iterations Fa	ailures Warnings	Status		Last Err	or	First Er	or	

Figure 5–10 Job Scheduler Current Schedule Window

2. Double-click on the job in the calendar or right-click on the job and select **Edit Schedule**.

Figure 5–11 Edit Schedule Dialog Box

Edit Schedule - C:\01	racleATS\OFT\RSWDemo!\Tu	t
Run At 1 200 PM		
From Sunday	💌 Through Thursday 💌	
ОК	Cancel	

- **3.** Change the time to 11:00 am, the starting day to **Monday** and the ending day to **Friday**.
- 4. Click on tutorJob1 in the job tree and drag it to Sunday at 6:00 pm.



Figure 5–12 Job Scheduler Current Schedule Window

5. Save the schedule by selecting **Save tutorSch1** from the **File** menu.

6

Oracle Load Testing for Web Applications Tutorial

This tutorial walks you through the main features of Oracle Load Testing for Web Applications. Oracle Load Testing for Web Applications 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 for Web Applications 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 for Web Applications.

The tutorial consists of the following examples:

- Performing a Simple Load Test shows how to use Oracle Load Testing for Web Applications 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 for Web Applications 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 for Web Applications ServerStats configurations to modify specific counters.
- Creating a Scenario with Multiple Profiles shows how to add a new Visual Script to the Oracle Load Testing for Web Applications 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 for Web Applications 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.
- Creating User-Defined Profiles explains how to create user-defined virtual user profiles.

The tutorial is designed to be followed sequentially from beginning to end and assumes you have completed the Oracle Open Script tutorial in Chapter 3 and the Oracle Functional Testing for Web Applications tutorial in Chapter 4. The examples in this tutorial refer to scripts recorded in the previous tutorials.

6.1 Example 1: Performing a Simple Load Test

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

6.1.1 Starting Oracle Load Testing for Web Applications and Specifying the Workspace

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

To start Oracle Load Testing for Web Applications:

- Select Programs from the Start menu and then select Oracle Load Testing for Web Applications from the Oracle Application Testing Suite 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 6–1 Oracle Load Testing for Web Applications Main Window



5. Select RSWDemo in the Workspace list.

6.1.2 Specifying a Scenario Profile

- **6.** Make sure the **Build Scenario** tab is displayed in Oracle Load Testing for Web Applications.
- **7.** Select tutor1 in the **Select scripts** list. These are the scripts that you record using Oracle OpenScript or Oracle Functional Testing for Web Applications. For Oracle OpenScript scripts, only load testing and general scripts appear in the list. Functional test scripts do not.
- **8.** Click the **Add to scenario** button to add tutor1 to the **Configure Parameters** list. You can also double-click the script name to add it to the **Configure Parameters** list.

Scripts/Profiles	# VUs	System	User Mode	Iteration Delay	VU Pacing (Think Time)	
🖇 tutor1	10	e-Load Server 💌	Thin Client 💌	1	Recorded	-

Figure 6–2 Configure Parameters Pane

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

9. Click the Add to Autopilot button on the Build Scenario tab.

Oracle Load Testing for Web Applications automatically opens the Set up Autopilot tab with the tutor1 Scenario Profile listed in **Submitted Scenario Profiles** list.

Figure 6–3 Autopilot Window

Timing and eve	ent controls							
 Start the load When the star After a delay At a specific t Synchronize V 	l test rt button is pres of (hh:mm:ss) ime (hh:mm:ss /U start up	ssed 00 : 00 : 00 5) 00 : 00 : 00	 Stop the load When the sto After each u: After a delay At a specific 	I test p button is pressed ser plays 0 iter of (hh:mm:ss) 00 time (hh:mm:ss) 00	rations : 00 : 00 : 00 : 00	Virtual user (VU) ramp-up Add per step After every C 10 users © 5 seconds © 10 percent C 10 iterations		
ServerStats Co	nfiguration					🖉 Edit Con	figurations	
Configuration: Description:	<none></none>			Monitors:				
Cubmitted Core								
Profiles	VUs	Remaining	Running	with Error	Finished	System		
🕼 tutor1	10	10	0	0	0	e-load server		
					🛞 Clear At	utopilot 🔵 🕼 Pause A	utopilot	

6.1.3 Running the Scenario Profile Using Autopilot

- **10.** Select **After each user plays [#] iteration** option from the **Stop the load test** group of the Autopilot tab.
- **11.** Enter 5 in the **After each user plays** edit box.
- 12. Select [#] users below Add per step in the Virtual User ramp up group.
- **13.** Enter 1 in the **Add per step [#] users** edit box.
- 14. Select [#] seconds below After every in the Virtual User ramp up group.
- **15.** Enter 10 in the **[#] seconds** edit box.
- 16. Click the Run Test button on the Autopilot tab or the toolbar.
- 17. Select Yes when asked to record session data and click OK.

Oracle Load Testing for Web Applications starts running the virtual users in the Virtual User Grid. Watch as the Autopilot starts running the tutor1 Visual Script as ten virtual users.

VU-ID	Profile	Status	Iterations	Failed	Last Run Time	Current Page	System	Data Bank	Current Error	Previous Error
1	tutor1	Finished	5		7.09		localhost			
2	tutor1	Finished	5		6.649		localhost			
3	tutor1	Finished	5		6.179		localhost			
4	tutor1	Finished	5		6.149		localhost			
5	tutor1	Finished	5		6.109		localhost			
6	tutor1	Finished	5		6.249		localhost			
7	tutor1	Finished	5		6.079		localhost			
8	tutor1	Finished	5		6.569		localhost			
9	tutor1	Finished	5		6.149		localhost			
10	tutor1	Finished	5		6.089		localhost			

Figure 6–4 Virtual User Status Grid Window

18. 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 for Web Applications 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 for Web Applications to view statistical and performance information, and how to view virtual user actions.

6.2 Example 2: Adding Data Sources

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

Oracle Load Testing for Web Applications ServerStats can monitor statistics from a variety of systems and server types. This tutorial adds counters from your local Windows 200x/XP system to demonstrate the features of Oracle Load Testing for Web Applications ServerStats. If you are not running the Oracle Application Testing Suite on a Windows 200x/XP machine, you should skip examples two and three and continue the tutorial with example 4.

To configure counters from a Windows 200x/XP data source, do the following:

- **1.** Select **Configurations** from the **ServerStats** menu. Oracle Load Testing for Web Applications opens the ServerStats Configurations window.
- 2. Click New to add a new configuration.

Figure 6–5 Add Configuration Dialog Box

Add Config	guration		
Name:			
Description:			

- **3.** Type Tutorial for the Name and the Description.
- **4.** Click **Save**. The Configuration window changes to include the Monitors configuration options.
- 5. Click New in the Monitor pane to open the Add Monitor Step 1 window.

Figure 6–6 Add Monitors Step 1 Dialog Box



6. Click the Plus icon next to Data Sources to expand the list of data sources.

Oracle Load Testing for Web Applications Web Page Dialog	2
Add Monitor: Step 1	
1onitor type	
Choose the monitor type or profile that you wish to use	
<mark>Ģ</mark> … Data Sources	
COM+	
Database	
IBM WebSphere 4.0+	
хмс	
Perfmon (Windows Performance Monitor)	
Ping	
SNMP	
Virtual Agent	
Cancel Next > Help	

Figure 6–7 Add Monitors Step 1 with Data Sources Expanded

7. Select Perfmon (Windows Performance Monitor) and click Next.

Figure 6–8 Add Monitors Step 2 Dialog Box

	ing for theo ripplications in the rage biolog	
Add Monitor:	: Step 2	
Monitor		
Type: Perfmon (W	indows Performance Monitor)	
Monitored Syster	m	🐮) Ado
Name:	OLT Server	🥒 Edit
Host Name or IP:	bed-I-risa	
Perfmon (Windo	ws Performance Monitor)	
Username:		
B		
Password:		
Password: Domain Name:		
Password: Domain Name:		
Password: Domain Name: Data Collector		🎽 Add
Password: Domain Name: Data Collector Name:	OLT Server	🐮 Ado
Password: Domain Name: Data Collector Name: Host Name or IP:	OLT Server	🎽 Add
Password: Domain Name: Data Collector Name: Host Name or IP: Port:	OLT Server • bed-I-risa 1099	≹) Add
Password: Domain Name: Data Collector Name: Host Name or IP: Port:	OLT Server 💌 bed-I-risa 1099	≹j Ado
Password: Domain Name: Data Collector Name: Host Name or IP: Port: Collection Interv	OLT Server 💌 bed-I-risa 1099	≹] Add ∥ Edit
Password: Domain Name: Data Collector Name: Host Name or IP: Port: Collection Interv	OLT Server	≹) Add
Password: Domain Name: Data Collector Name: Host Name or IP: Port: Collection Interv Collect data every	OLT Server bed-I-risa 1099 al 30 seconds	≹) Ado ∥ Edit
Password: Domain Name: Data Collector Name: Host Name or IP: Port: Collection Interv Collect data every	OLT Server bed-I-risa 1099 al 30 seconds	ૠ) Ada ∥ Edit
Password: Domain Name: Data Collector Name: Host Name or IP: Port: Collection Interv Collect data every	OLT Server bed-I-risa 1099 al 30 seconds	≹) Ada
Password: Domain Name: Data Collector Name: Host Name or IP: Port: Collection Interv Collect data every	OLT Server • bed-I-risa 1099 al 30 seconds	≹) Adr

This step lets you specify which to monitor and which system to use for the data collector.

8. Leave the default settings for Monitored System and Data Collector.

9. Click Next to select the specific counters to monitor.

ect Counters			
formance object			
VET CLR Data			
All counters		All instances	
Select counters	from list	Select instances from lis	t
SqlClient: Current SqlClient: Peak # p SqlClient: Total # f SqlClient: Total # f	# pooled connections alled connections alled commands alled connects		
unters	· · · · · · · · · · · · · · · · · · ·		Add
ounters Object	Counter	Instance	Add
unters Object	Counter	Instance	e

Figure 6–9 Add Monitors Step 3 Dialog Box

10. Select Processor in the **Performance object** list.

Figure 6–10 Add Monitors Step 3 with Processors Listed

🚰 Oracle Load Testin	g for Web Applical	ions Web Page Dialog	×
Add Monitor:	Step 3		
Select Counters			
Performance object	· · · · · · · · · · · · · · · · · · ·		
Processor			
C All counters		C All instances	
Select counters	from list	• Select instances from list	
% C1 Time % C2 Time % C3 Time % DPC Time % Idle Time % Interrupt Time Counters	, ,	D Total	Add
Object	Counter	Instance	
Cancel	Test <	Back Finish	Help

11. Select % Processor Time in the **Select counters from list** group.

12. Select the **All instances** option.

13. Click Add. The counters are added to the Counters list.

Figure 6–11 Add Monitors Step 3 with Processors Selected

) Or	acle Load Testin	g for Web Applications	Web Page Dialog	×
Ad	d Monitor:	Step 3		·
Sel	ect Counters			
Per	formance objec	ti		
Pro	ocessor	•		
С	All counters	• <i>i</i>	All instances	
œ	Select counters	from list C s	Select instances from list	
% %	Interrupt Time Privileged Time		tal	
%	User Time			
	. Transitions/sec ! Transitions/sec	-		
Cou	inters		Add	
	Object	Counter	Instance	
×	Processor	% Processor Time	0	
×	Processor	% Processor Time	_Total	
ijen.				
	Cancel	Test 🔜 < Back	Finish Help	

- **14.** Select Memory in the **Performance object** list.
- **15.** Select Available Kbytes and click **Add**.

iele Perf	ect Counters		
Perl			
	formance object	:	
Me	mory		
C	All counters	All instar	nces
•	Select counters	from list Celect in	stances from list
Co Wr	immit Limit ite Copies/sec		
Co Wr Tra	inters	ec	Add
Co Wr Tra	inters Object	ec V	Add
Co Wr Tra	interior of the second	ec Counter % Processor Time	Add Instance 0
	inters Object Processor	ec Counter % Processor Time % Processor Time	Add Instance 0 _Total

Figure 6–12 Add Monitors Step 3 with Processors and Memory Selected

16. Click **Finish** to complete adding monitors. ServerStats display a status while it verifies the counters (this may take a few moments).

When the verification is complete, the Configuration window is updated with the list of monitors.



Figure 6–13 Configurations Dialog Box with Defined Monitors

17. Click Test to test the counters.

Oracle Load Testing for Web Applications '	Web Page Di	ialog	
ſest			
lesults			· · · · · · · · · · · · · · · ·
Counter Definition 🕖	Last Value	Time Stamp	Error
OLT Server (Memory: Available KBytes)	562,476	1:34:09 PM	
OLT Server (Processor: % Processor Time: D)	37.60821	1:34:10 PM	
Total)			

- **18.** Review the results to verify the counters are working properly.
- **19.** Click **Close** to exit the test results.

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

6.3 Example 3: Editing Data Sources

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

- **1.** If not already open, select **Configurations** from the **ServerStats** menu to open the ServerStats Configurations window.
- **2.** Select the Tutorial configuration.
- 3. Click the Memory (Available Kbytes) monitor and click Edit.

Figure 6–15 Edit Monitor Dialog Box

	ing for these tipping and these tage states	
Edit Monitor		
Monitor		
Name: OLI	F Server (Memory: Available KBytes)	
Data Source: Perf	mon (Windows Performance Monitor)	
1onitored Syste	m	bbA (🎽
Name:	OLT Server	🥒 Edit
Host Name or IP:	bed-I-risa	
Perfmon (Windo	ws Performance Monitor)	
Isername:		
Password:		
Domain Name:		
ata Collector		bbA : 💥
Name:	OLT Server	🥒 Edit
Host Name or IP:	bed-I-risa	
Port:	1099	
ollection Interv	val	
Collection Interv Collect data every	val	
Collection Interv	val 30 seconds	

4. Click Add next to Monitored System.

Figure 6–16 Add Monitored System Dialog Box

🚰 Oracle Load Testing for Web Applications - Add Monitored System -	Web 🗙
Add Monitored System	
General	
Name:	
Host Name or IP:	
Perfmon (Windows Performance Monitor)	
Username:	
Password:	
Domain Name:	
OK Cancel Test Help	

If you have additional systems to monitor you can specify the information here to add the system to the ServerStats Configuration.

- 5. Click Cancel.
- 6. Change the Collection Interval to 45 seconds.
- 7. Click OK.
- 8. Click Close to close the ServerStats Configurations window.

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

6.4 Example 4: 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.

6.4.1 Adding a Virtual User Profile to the Scenario

- **1.** Click the **Build Scenarios** tab.
- **2.** Double-click tutor3 in the **Default Profiles** list to add it to the **Configure parameters of the scenario** list.
- **3.** Click the **Configure all parameters** button on the tutor3 line to display the Edit Scenario Details dialog box.
- 4. Change the **#VUs** value to 3.
- 5. Make sure the Virtual User Pacing is set to Recorded and the Maximum value is set to 1 second.
- 6. Change the Caching Emulation to Repeat User.
- 7. Change the User Mode to Thick Client.
- 8. Make sure the Use Databanks field is True.
- **9.** Leave the default settings for remainder of the attributes and click **OK**.
- **10.** Click the **Configure all parameters** button on the tutor1 line to display the Edit Scenario Details dialog box.
- **11.** Change the **# VUs** value to 6.
- **12.** Make sure the **Virtual User Pacing** is set to Recorded and the **Maximum** value is set to 1 second and click **OK**.

Notice that each profile in the **Scenario Profiles** list can have a different set of attributes.

6.4.2 Saving Data for Reporting

The data generated by a Oracle Load Testing for Web Applications Autopilot session can be saved to the Oracle Load Testing for Web Applications database for post-session analysis. The Session Start/Stop options let you specify if Oracle Load Testing for Web Applications should save the data.

13. Select Options from the Tools menu and then select Session Start/Stop.



Figure 6–17 Session Start/Stop Options Dialog Box

- 14. Set the Save data for reporting option to Yes.
- **15.** Select the **Terminate all agents at end of session** checkbox.
- **16.** Select **Scenario Defaults**.

Custom Browsers	Main	Show	w Default Value	
Download Rules	# VUs:	•	10	
Repositories	System:	•	OLT Server -	
Scenario Defaults	User Mode:	•	Thin Client 🔹	
Autophot Deraults	Iteration Delay:	•	1 (secs)	
Session Profiles	VU Pacing (Think Time):	•	Recorded	
Reporting	Minimum:		0 (secs)	
Data Bank Defaults	Maximum:		10 (secs)	-
General	Use Data Bank:		True -	
	Browser Settings			
	Browser Emulation:		Default	•
	Connection Speed Emulation:		True Line Speed 💌	
	Cache Emulation:		Do Not Cache 💌	
	Use IP Spoofing:		False 🔹	
	Use Download Manager:		False 💌	
	Use Wininet:		False 🔹	
	Enable Cookies:		True -	
	Eutoacibilitu			
	Specify the main settings and the default values for	to sho all Sc	w in the Build Scenarios enario settings.	tab

Figure 6–18 Scenario Defaults Options Dialog Box

- 17. Set View All Responses in the VU Display section to Always.
- **18.** Scroll down the screen and set **Auto generate timers for all resources** in the Reporting section to True.
- **19.** Click **OK**.

6.4.3 Saving the Scenario

- 20. Select Save As from the Scenario menu.
- **21.** Leave the filename as LoadTest1 and click **OK**.

6.5 Example 5: Running Multiple Profiles

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

6.5.1 Running the Scenario Profiles Using Autopilot

- **1.** Make sure the Scenario from the previous example is still shown in the Build Scenarios tab.
- 2. Click the Add to Autopilot button on the Scenario tab or the toolbar.
- **3.** Oracle Load Testing for Web Applications automatically opens the Set Up Autopilot tab with the tutor1 and tutor3 Scenario Profiles listed in **Submitted Scenario Profiles** list.

Figure 6–19 Set Up Autopilot Options

Timing and ever	nt controls					
Start the load test Image: Stop test					user (VU) ramp-up rep After every users © 10 seconds percent C 10 iterations	
ServerStats Con	figuration					<i>I</i> Edit Configurations
Configuration: Description:	<none></none>		×	Monitors:		
Submitted Scena	ario Profiles					
Profiles	VUs	Remaining	Running	with Error	Finished	System
🕼 tutor1	6	6	0	0	0	localhost
🕼 tutor3	3	3	0	0	0	localhost
				(🛞 Clear Autopilot	Pause Autopilot

- **4.** Select When the stop button is pressed in the **Stop the load test** group of the Set Up Autopilot tab.
- Enter 3 in the edit box next to # users under Add per step in the Virtual User (VU) Ramp-up section.
- 6. Enter 5 in the edit box next to **# iterations** under **After every** in the **Virtual User** (**VU**) **Ramp-up** section.
- **7.** In **ServerStats Configuration** section, select Tutorial from the Configuration drop down list to add the configuration to the load test.
- 8. Click Save to save the Rampup Specification in the Scenario file.
- 9. Click the Run test button on the Oracle Load Testing for Web Applications toolbar.
- **10.** Oracle Load Testing for Web Applications opens the Save Session data dialog box.
- 11. Click Ok.

The Save Session data dialog box appears because we used the Ask setting in the **Session Start/Stop** options (select **Options** from the **Tools** menu). You can bypass this dialog box and use automatic or default values when running virtual users under routine testing conditions by changing the **Session Start/Stop** options.

12. Watch as the Autopilot starts running the tutor1 and tutor3 Visual Scripts as virtual users. Notice also that tutor3 is playing back records from the Data Bank.

Figure 6–20 Virtual User Grid

VU-ID	Profile	Status	Iterations Failed L	ast Run Time	Current Page	System	Data Bank	Current Error Previ	ous Error
1	tutor3	Running	9	24.876	[2] Search - Home SuperStore Inc.	localhost	Record 5:Phones		
2	tutor1	Think time delay	49	9.463	[2] Kitchens - Home SuperStores Inc.	localhost			
3	tutor1	Running	48	8.892	[4] Electronics - Home SuperStores Inc.	localhost			
4	tutor3	Iteration delay	5	31.816	[3] Results - Home SuperStore Inc.	localhost	Record 4:Cabinets		
5	tutor1	Think time delay	28	9.594	[2] Kitchens - Home SuperStores Inc.	localhost			
6	tutor1	Iteration delay	29	9.053	[4] Electronics - Home SuperStores Inc.	localhost			
7	tutor3	Starting				localhost			
8	tutor1	Think time delay	2	8.513	[2] Kitchens - Home SuperStores Inc.	localhost			
9	tutor1	Think time delay	2	7.37	[2] Kitchens - Home SuperStores Inc.	localhost			

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.

6.5.2 Viewing Performance Statistics

Oracle Load Testing for Web Applications automatically displays run time graphs in the View Run Graphs tab. Scroll to the bottom of the window until you see the Performance Statistics icon.



Figure 6–21 View Run Graphs Tab

Click on the icon to view the Performance Statistics report. The Performance Statistics window shows a summary of the performance data for the running virtual users.

Figure 6–22 Performance Statistics Report

Build Scenarios 💦 Set up /	Autopilot	Watch !	VU Grid	View P	tun Graphs Create Reports
Reports & Graphs					
New Graph Overview	Default G	raphs			
Viewu			otail Lough		
Performance Statistics			Summary Vie	w	▼ Include Think Times in Profile timers
SESSTON0001			,		
Name	Value		M	1	
Name	value	Min	Max	AVG	
Active Virtual Users	9.345	0	10	6.426	
Virtual Users with Errors	0	0	0	0	
Transactions Per Second	0.433	0.027	0.459	0.311	
Pages Per Second	1.933	0.2	2.4	1.556	
Hits Per Second	2.733	0.533	3.733	2.489	
Kilobytes Per Second	10.621	0.861	12.981	8.361	
	Totals				
Transactions	42				
Transactions with Errors	0				
Pages	210				
Hits	336				
Kilobytes	1129				
					•
•					
Refresh: 🔲 🕨					

The statistics show the values for the following performance categories:

<Session Name> Current

- 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 Visual 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 for Web Applications. If Oracle Load Testing for Web Applications 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.

<Session Name> 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 and Timer

- <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 Visual Scripts using Oracle Functional Testing for Web Applications.

Performance by Profile and VUs

• <Profile Name> # VUs - shows the time it took to run the virtual user profile with the indicated number of virtual users running. When ramping up virtual users, Performance by Profile and VUs values are added when additional virtual users start running. Once additional Performance by Profile and VUs values are added, the previous Performance by Profile and VUs values are no longer updated. For example, the statistics show elapsed time values for each profile for three, six, and nine virtual users. The profile name> 3 VUs values are updated only while three virtual users are running. Once the Autopilot ramps up to run six virtual users, the profile name> 3 VUs values stop updating and the profile name> 6 VUs values are added and are updated while six virtual users are running. Once the Autopilot ramps up to run nine virtual users, the profile name> 6 VUs values stop updating and the profile name> 9 VUs values are added and are updated while nine virtual users are running.

6.5.3 Viewing Graphs

13. Click the Overview tab in the View Run Graphs tab.

Oracle Load Testing for Web Applications provides several types of graphs that show performance, error, and statistical information for the running virtual users. Click on the graph in the Overview tab to view a larger image in the Default Graphs tab.

14. Select the Performance Vs. Users in the View dropdown of the Default Graphs tab.



Figure 6–23 Performance Vs. Users Report

This graph shows the average run time for the number of running virtual users in each profile. The plot points represent the Autopilot rampup of virtual users. In

the above graph, the first plot points for each profile shows the average run time while three virtual users were running. Once the Autopilot ramps up to run six virtual users, the plot points for three virtual users are no longer updated.

The second plot points show the average run time while six virtual users were running. Once the Autopilot ramps up to run nine virtual users, the plot points six virtual users are no longer updated.

The third plot points show the average run time while nine virtual users are running. In this example, nine virtual users is the total number of virtual users the Autopilot ramps up to run. The third plot points will be updated continuously while the nine virtual users are running.

15. Select the Users Vs. Time in the View dropdown of the Default Graphs tab.



Figure 6–24 Users Vs. Time Report

This graph shows the relative time when the virtual users for each profile started running. The graph represents the Autopilot ramp up times and the number of virtual users ramped up for each profile.

16. Select the Performance Vs. Time in the View dropdown of the Default Graphs tab.

Figure 6–25 Performance Vs. Time Report



This graph shows the average run time for the active virtual users running each profile over time.

17. Select the Statistics Vs. Time in the View dropdown of the Default Graphs tab.





This graph shows averages for virtual user hits, pages, transactions, and Kilobytes per second over time.

The error graphs show percentages of errors vs. virtual users over time.

6.6 Example 6: 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 for Web Applications.

1. Make sure the virtual users from Example 3 are still running.

6.6.1 Modifying the Run Attributes

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

Figure 6–27 Virtual User Shortcut Menu



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

View All Responses:	On Error 💌
Show Request Headers:	On Error 💌
Show Response Headers:	On Error 🔽

Figure 6–28 Modify Run Attributes Dialog Box

You can change the attributes of each virtual user individually.

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

6.6.2 Viewing Virtual User Actions

6. Select **VU Display** from the **Tools** menu or you can also use the right-click popup menu from the virtual user grid. Oracle Load Testing for Web Applications opens a browser window in which you can view the actions of the virtual user.

🏄 Oracle Load Testing for W	eb Applications - Virtual User Display - M	licrosoft Internet Exp	lorer			
Virtual User Disp	olay - SESSION0008					
🕤 🔛 × View: 🗉	😰 🛛 Auto Display: 🕨 🛚	Ite	ms 1	to 39 of 39 🚺 🖣	Refresh:	On Off
×						
						-
lose supersearch						
Home Stores	Please enter the	following product	informati	ion:		
Register						
Departments:	Product Name	:				
Kitchen & Lighting						1
Bath Electron	nics I'm most intere	ested in: 💿 Lowes	t Cost C	Highest Quality 🤇	Brand Names	
×			Search			
ID 🗡 Current Page	URL	Content Type	VU-ID It	erations Data Bank	Error Time	Size
33 Home SuperStore Inc ()	. file:C:\OracleATS\OFT\RSWDemo\sear	rch.htm unknown	3 51	Cabinets	2:00:57 PM	9130
tutor3[3] Results -	file:C:/OracleATS/OFT/RSWDemo			Record 4:	08/12/2008	
()	/srchres.htm	UNKNOWN	3 51	Cabinets	2:00:57 PM	29592
tutor3[1] Welcome -				Record 2:	08/12/2008	7006
Inc. ()	The:C:\OracleATS\OFT\RS\WDefno\filde		3 52	Paints	2:01:02 PM	7220
tutor3[2] Search - 36 Home SuperStore Inc	file:C:\Oracle&TS\OFT\BS\WDemo\cear	ch btra uakaawa	3 50	, Record 2:	08/12/2008	9130
0				Paints	2:01:02 PM	133
🕘 Displaying: 36					Second Second Second	*****

Figure 6–29 Virtual User Display Window

7. Click the Navigate to Previous Page toolbar button. The viewer shows only the previous page.

- **8.** Click the Navigate to Next Page toolbar button. The viewer shows only the next page.
- **9.** Click the Auto Mode toolbar button. The view shows new pages accessed by the virtual user as they arrive to the viewer.
- **10.** Click the Stop Accepting New Pages toolbar button. The viewer stops accepting pages from the virtual user.

Note: Because of the speed at which new pages arrive in the viewer, it may take a few moments for cached pages to stop appearing.

11. Close the window to exit the viewer.

6.6.3 Stopping an Individual Virtual User

- **12.** Click on any virtual user in the virtual user grid.
- 13. Click the right mouse-button to open the popup menu.
- **14.** Select **Stop**. Oracle Load Testing for Web Applications stops running the selected virtual user. The virtual user will complete the current Visual Script iteration and then stop.

6.6.4 Aborting an Individual Virtual User

- 15. Click on any virtual user in the virtual user grid.
- **16.** Click the right mouse-button to open the popup menu.
- **17.** Select **Abort**. Oracle Load Testing for Web Applications aborts running the selected virtual user without completing the current visual script iteration.

6.6.5 Stopping All Virtual Users

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

6.6.6 Aborting All Virtual Users

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

6.7 Example 7: Generating Reports

This example explains the automatic report generation features of Oracle Load Testing for Web Applications. The data collected by Oracle Load Testing for Web Applications and Oracle Load Testing for Web Applications ServerStats while the Autopilot is running virtual users is saved to a database when the **Save Data for Reporting** option in the Oracle Load Testing for Web Applications Session Start/Stop options is set to Yes or Ask. You can use Oracle Load Testing for Web Applications to analyze the data and generate a variety of graphs and reports.

6.7.1 Generating Reports from Oracle Load Testing for Web Applications

This example shows how to use previously saved data to create custom reports and to view Session and Scenario reports.

1. Select the **Create Reports** tab.

- **2.** The Graph 1 tab is displayed with a blank graph. Select Session0001 from the **Session** list. The data categories appear in the Available Data Series list.
- **3.** Click **Show All**.

Figure 6–30 Create Reports Tab Filters

Reports & Graphs
New Graph Overview Reports Graph 1 🗴
Session: SESSION0001
Available Data Series: 🔽 Show All 🛱 Open 🖉 Edit 🔲 Save 🗙 Clear X-Scale: Absolute Time 🔽
Hits/sec KB Rcvd/sec Number of VUs Pages Rcvd/sec Trans Failed/sec VUs with Errors B- tutor1 B- tutor3 8
B - Serverstats Monitors

- **4.** Double-click Hits/Sec, kb Rcvd/Sec, Pages Rcvd/Sec, and Trans/sec at the top of the **Available Data Series** field to add the counters to the graph. These are the overall counters. You can also select them and click the **Add Data Series** button.
- **5.** Expand the ServerStats Monitors node then double-click the Oracle Load Testing for Web Applications Server (Processor, % Processor Time, 0) node to add it to the graph.

Figure 6–31 Sample Session Report Graph



The legends show which color line represents which virtual user profile, Visual Script page, and Oracle Load Testing for Web Applications ServerStats counter. The legends for Oracle Load Testing for Web Applications data show the session, the virtual user profile, and the Visual Scripts page in the form session.profile.page[#]. The legends for ServerStats data show the session, counter object, counter instance and counter in the form session.object.instance.counter.

You can export the data to an HTML file, a comma separated value file, or a Microsoft Excel Workbook file.

6.7.2 Opening the Chart in Microsoft Excel

Note: Skip this section if you do not have Microsoft Excel installed on your system.

- 6. Click the Export to Excel button.
- 7. The File Download dialog box is displayed. Click Save.
- **8.** The Save As dialog box is displayed. Select a location to save the report and click **Save**.
- **9.** The Download Complete dialog box is displayed. Click **Open**.



Figure 6–32 Sample Excel Report Graph

- **10.** The workbook contains a chart sheet and a worksheet. You can use the features and capabilities of Microsoft Excel to change the chart format.
- **11.** Click the Data Table tab to view the actual data values.

M	licrosoft Exc	el - 115_3765,3745,3762,37	69,3791.xls						_ 8 ×
	<u>Eile E</u> dit <u>V</u> ie	ew Insert Format Tools Dal	a <u>W</u> indow <u>H</u> elp						_ 8 ×
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	D1		57 Pages Royd/sec						
	A	B	C		D	F		F	G F
1	Time	SESSION0057Hits/sec	SESSION0057Kb Rovd	SESSION0057	Pages Rovd/sec	SESSION0057	Trans/sec	SESSION0057.Processor	Total. % Proce
2	0.516667	0	0		0		0	0	-
3	0.766667	0	0		0.866666675		0.239476457	0	
4	1.016667	0	0		1.466666698		0.335020155	84.19095612	
5	1.266667	0	0		1		0.281544954	0	
6	1.516667	0	0		0.800000012		0.232385635	66.43212891	
7	1.766667	0	0		2		0.489549309	0	
8	2.016667	0	0		1.666666627		0.439875633	89.0617218	
9	2.266667	0	0		1.866666675		0.48924464	0	
10	2.516667	0	0		1.933333278		0.483719409	88.9006424	
11	2.766667	0	0		2.133333445		0.531117678	0	
12	3.016667	0	0		2.133333445		0.588385761	97.65746307	
13	3.266667	0	0		2.733333349		0.64770627	0	
14	3.516667	0	0		2.400000095		0.637961388	98.34191132	
15	3.766667	0	0		2.599999905		0.692626715	0	
16	4.016667	0	0		2.533333302		0.634567797	97.81159973	
17	4.266667	0	0		2.466666698		0.605970085	0	
18	4.516667	0	0		2.40000095		0.625144482	99.90200043	
19	4.766667	0	0		2.599999905		0.672647893	0	
20	5.016667	0	0		2.666666746		0.688855529	99.66309357	
21	5.266667	0	0		2.333333254		0.566414356	0	
22	5.516667	0	0		2.40000095		0.630684972	100	
23	5.766667	0	0		2.333333254		0.568952858	0	
24	6.016667	0	0		2.466666698		0.575444639	99.23466492	
25	6.266667	0	0		1.799999952		0.516341984	0	
26	6.516667	0	0		2.733333349		0.673134208	100	
27	6.766667	0	0		2.333333254		0.608788192	0	
28	7.016667	0	0		2.799999952		0.72966665	100	
29	7.266667	0	0		1.866666675		0.511885405	0	
30	7.516667	0	0		2.466666698		0.623806238	100	
31	7.766667	0	0		2.733333349		0.672902584	0	
32	8.016667	0	0		2.733333349		0.696171105	100	
33	8.266667	0	0		2.20000048		0.608623266	0	
34	8.516667	0	0		2.200000048		U.56425792	100	
35	8.766667	0	0		2.733333349		0.590327859	0	
	► ► ► SES	SION0057Kb Rovd_sec 🏑 S	ESSION0057Hits_sec / Gra	ph 1) Data Table		•			
Rea	idy								

Figure 6–33 Sample Excel Data Table Report

- **12.** Row one contains the counter names. Subsequent rows contain the actual data values for the chart.
- 13. Select Exit from the File menu to close Microsoft Excel.

6.7.3 Viewing Scenario and Session Reports

The report shows the current and total performance over time for the Oracle Load Testing for Web Applications scenario. The report also shows the Oracle Load Testing for Web Applications scenario settings used for the session.

- 14. Oracle Load Testing for Web Applications also generates textual reports for Oracle Load Testing for Web Applications Scenario settings and Oracle Load Testing for Web Applications and Oracle Load Testing for Web Applications ServerStats session data.
- **15.** Select the **Reports** tab.
- **16.** Select the session for which you want to view the report from the **Session** dropdown list and click **Generate**. Oracle Load Testing for Web Applications displays the report.

Build Scenarios Set u	p Autopilot	Wat	tch VU Grid View Run Graphs Create Reports			
Reports & Graphs						
New Graph Overview Reports Graph 1						
Session: SESSION0001	💽 Repo	ort: Session	n Report 🔽 🗙 Delete 🛛 🖉 Generate			
Session Performa	nce Rej	port - S	SESSION0001			
Start Time:	1/15/20	07 14:24:13	3			
End Time:	1/15/20	07 14:27:21	1	199		
Duration:	00:03:0	8 (188 sec))			
Name	Min	Max	Avg			
Active Virtual Users	0	8.723	4.626			
Virtual Users with Errors	0	0	0			
Transactions Per Second	0.009	0.483	0.246			
Pages Per Second	0.133	1.933	0.985			
Hits Per Second	0	0	0			
Kilobytes Per Second	0	0	0			
	Totals					
Transactions	48					
Transactions with Errors	0					
Pages	192					
Hits	0					
Kilobytes	0			•		
Export to: B CSV Print	Friendly		✓ Include Think Times in Profile timers			
- aport to: cov Fille						

Figure 6–34 Sample Session Performance Report

- **17.** Scroll to the end of the Session Performance Report to view the Oracle Load Testing for Web Applications Scenario Report.
- **18.** You can print the report by clicking the **Print Friendly** button and selecting **Print** from the **File** menu in the browser window.

6.8 Example 8: Creating User-Defined Profiles

This example explains how to create user-defined virtual user profiles in Oracle Load Testing for Web Applications.

- **1.** Select **User Defined Profiles** from the **Manage** menu. Oracle Load Testing for Web Applications opens a dialog for managing profiles.
- 2. Click New.

Repository: Default Workspace: RSWDemo	Name: Name: Add Sync 🖉 Edit 🗙 Delete	
🚱 ChartPortfolio	🗆 Prolog	
😼 tutor1	= Run	
💕 tutor2	🖃 Epilog	
vutor4	Errors	+ +
Add/Edit Scripts and Sync Point Testing for Web Applications.	d >	: Load

Figure 6–35 Edit User Defined Profiles Dialog Box

- **3.** The dialog box shows the section tree, the available Visual Scripts, and the default synchronization points.
- **4.** Select the workspace where you want to save the profile and enter a name for the profile in the **Name** editbox.
- **5.** The profile sections tree allows you to specify which Visual Scripts and synchronization points to include in the Sections tree of the profile.

Prolog - the Visual Scripts in this section play back only once at the beginning of the Scenario run. An example of what you may add to this section is a login script.

Run - the Visual Scripts in this section iterate over as many times as is specified in the Autopilot. An example of what you may add in this section is the business transaction that you wish to load test.

Epilog - the Visual Scripts in this section play back only once at the end of the Scenario run. An example of what you add to this section is a logoff script.

Errors - the Visual Scripts in this section play back only if an error occurs during the Scenario run. An example of what you may add to this section is a visual script that resets your application on an error.

6.8.1 Adding Visual Scripts to the Sections Tree

- 6. Select the section in the tree where you want to add a Visual Script.
- **7.** Double-click the Visual Script to add to the section or select the script and click the **Add** button.

The Visual Script appears as a node of the tree.



Figure 6–36 Script Added to Run Section of User Defined Profile

8. Repeat steps 4 and 5 to add additional Visual Scripts to the Sections tree.

6.8.2 Adding Synchronization Points to the Sections Tree

A sync point allows multiple virtual users to synchronize their actions and interactions with the application under test. Sync points provide the ability to create realistic multi-user situations that may expose resource conflicts such as deadlocks. When you specify a sync point, multiple virtual users executing the script will reach this sync point at various times depending on a number of factors (for example, the speed of the machine).

Sync points cause each virtual user to wait until all virtual users have reached that sync point. Each of the virtual users notifies the master upon reaching the sync point. The master waits for all of the virtual users to notify it and then issues the go-ahead for all the virtual users to continue past that sync point.

9. Select the section in the tree where you want to add a Sync point and click **Add Sync**.

The Sync point appears as a node of the tree.



Figure 6–37 Sync Point Added to Run Section of User Defined Profile

10. Repeat steps 7 and 8 to add additional Sync points to the Sections tree.

6.8.3 Moving Items in the Sections Tree

When you have multiple items under any section of the tree, you can move the items up and down within that section.

- **11.** Select the item to move in a section.
- **12.** Click the up or down button as appropriate.



Figure 6–38 Edit User Defined Profile Dialog Box

- **13.** Click the **OK** button when you finish defining the profile.
- **14.** The new profile appears in the **Select scripts and user-defined profiles** list of the **Build Scenarios** tab.

	Figure 6–39	Select Scripts	and User-Defined	Profiles Pane
--	-------------	----------------	------------------	---------------

Select scripts & user-defined profiles
Repository: Default
Image: ChartPortfolio Image: Vutor1 Image: Vutor2 Image: Vutor3 Image: Vutor4 Image: Vutor5
Add to scenario

You can include user-defined profiles as part of the Scenario Profiles the same way you use the default profiles.

6.8.4 Editing User-Defined Profiles

After you have created a user-defined virtual user profile, you can make changes to the profile at any time.

15. Select User Defined Profiles from the Manage menu.

/ aul (an a a a l	
orkspace:[RSWDemo 🔽
New 🥒	Edit 🗙 Delete
ame	
tor5	
🚛 Create	, edit and delete User Defined Profiles for combining

Figure 6–40 User Defined Profile Manager Dialog Box

16. Select the profile you want to edit and click **Edit**. Oracle Load Testing for Web Applications opens a dialog for editing the sections tree of the profile. The dialog box shows the current sections tree, the available Visual Scripts, and the default synchronization points.



Figure 6–41 Edit User Defined Profile Dialog Box

- **17.** Click the Plus icon to expand the nodes of the tree.
- **18.** Use the arrow buttons as necessary to add items to the sections of the tree. Select an item and click **Delete** to remove it from the sections tree.
- **19.** Click the **OK** button when you finish editing the profile.
- 20. Select Exit to close Oracle Load Testing for Web Applications.
- **21.** Click **No** if asked to save the scenario.

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

7

Oracle Test Manager for Web Applications Tutorial

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

- Adding a Requirement describes how to add a requirement.
- Adding a Test describes how to add a both a manual and automated test and how to associate a requirement with a test.
- Running a Test explains how to 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.

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.

7.1 Starting Oracle Test Manager for Web Applications

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

To start Oracle Test Manager for Web Applications:

- Select Programs from the Start menu and then select Oracle Test Manager for Web Applications - Web from the Oracle Application Testing Suite 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 Default OTM.
- 5. Make sure the **View Type** is set to All modules.
- 6. Click Login.

7.2 Opening the Sample Project

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

1. Start Oracle Test Manager for Web Applications 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 7–1 Open Project Dialog Box

🗿 Oracle T	est Manager for Web Applications Web Access - Open Pr	oject - M 🔳	
Open	Project		
Project:	Sample Access Project	ок	
		Cancel	
	I	Help	
Database	: otm-Install		

- **3.** Make sure the **otm-install** database is selected. This is the database that was created when you installed Oracle Test Manager for Web Applications.
- 4. Select the sample database.
- 5. Click OK. The main window appears as follows:.

Oracle Test Manager for Web Applications - Microsoft Internet Explorer	<u>-0×</u>				
File Edit View Favorites Tools Help	File Edit View Favorites Tools Help 🔐				
🚱 Back 🔹 🕥 - 💌 😰 🏠 🔎 Search 🤺 Favorites 🤣 🍰 🦉	• 🗔 🎎 🦓				
Address 🙆 http://localhost:8088/otm/showMainPage.do	💌 ラ Go 🛛 Links 🎇				
ORACLE' Test Manager for Web Applications Database: otm-Install Project - Tools - Help - Logout					
Requirements Tests Issues Reports Dash	board 🗘 🌣				
📅 🖉 🗶 🖆 🕰 🖼 💀 🕶 🏚 Group: None	💽 🔊 Filter: None 💽 Goto: 🧖 🍘				
 E. User authentication should be required in order to 2 Site should provide users access to account and st 3 Site should provide access to both real-time and d 4 Site should provide an online store for financial m 5 Users should be able to buy and sell stocks online 5 G Main page should provide financial stories and info 6 Main page should provide financial stories and info Created: 2/03/02 at 2:58 PM By: Type: Business Requirement Owner: Default User Status: 1 - Proposed Priority: High Description: All customers should be required to password to access brokerage site information, look up stock prices an 	this ment Image: Print I				
8	Local intranet				

Figure 7–2 Oracle Test Manager for Web Applications Main Window

The left pane contains tabs for the three modules that comprise the application. They are requirements, tests, and issues. 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.

7.3 Example 1: Adding a Requirement

This example explains how to add a requirement.

- **1.** Click the **Requirements** tab.
- 2. Expand item 1 and click item 1.4. The new requirement will be added as item 1.5.

Figure 7–3 Requirements Tab

🚰 Oracle Test Manager for Web Applications - Microsoft Internet Explorer	
File Edit View Favorites Tools Help	
🚱 Back 🔹 🕥 -> 💌 😰 🏠 🔎 Search 🤺 Favorites 🚱 🔗 - چ 🔟 + 🛄 鑬 🖄	
Address 🙆 http://localhost:8088/otm/showMainPage.do	💌 🔁 Go 🛛 Links 🌺
ORACLE' Test Manager for Web Applications Database: otm-Install Project to Project: Sample Access Project	Tools → Help → Logout
Requirements Tests Issues Reports Dashboard 🗘	
📅 🖉 🗶 📴 🔍 🗐 🔒 🕱 🚈 🚈 🍃 Group: None 🗔 🎜 Filter: None	Goto: 🛛 🖓
 ■ 1. User authentication should maintain a database of vs ■ 1.1. Application should maintain a database of vs ■ 1.2 Invalid users should not be able to access be ■ 1.3 Login verification should not take longer that ■ 2 Site should provide users access to account and st ■ 3 Site should provide access to both real-time and d ■ 4 Site should provide an online store for financial m ■ 5 Users should be able to buy and sell stocks online ● 6 Main page should provide financial stories and info 	Attachments ● Add/Edit Links ● Add/Edit Associated Tests ● Add/Edit I 1.3 Verify login after new account created Image: Count created Associated Issues Image: Count feature of the new account was created online
	Local intranet

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

Oracle Test	Manager for Web Applications Web Access - Add - Microsoft Internet Explore	
*Name: *Type: *Owner: *Status: *Priority: Description:	Select • Select • Select • Select •	Save Reset Cancel Help
* Denotes re Attachment : • File :	quired fields Browse Capture >>	
C Link :	Title : Link : ex. http://www.yoursite.com	

Figure 7–4 Add Requirement Window

- **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.

Add Rec	juirement	
*Name: *Type: *Owner: *Status: *Priority: Description:	Users should have access to the chart view of their portfolio Business Requirement Administrator User 2 - Approved Medium All customers should be able to view their portfolio in the chart view	Save Reset Cancel Help
* <i>Denotes requ</i> Attachment : © File : © Link :	uired fields Browse Capture >>	
	Inte : Link : ex. http://www.yoursite.com	

Figure 7–5 Add Requirement Window with Sample Data

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

File Edit View Pavorites Tools Help Image: Search of the search of t	🗿 Oracle Test Manager for Web Applications - Microsoft Internet Explorer	
Address Attrachments Image: Source of the source of t	File Edit View Favorites Tools Help	
Address http://localhost.8088/otm/showMainPage.do Course of the chart view of the ch	😋 Back 🔹 🕥 🖌 📓 🐔 🔎 Search 🤺 Favorites 🧭 = 🌺 🔟 👻 🗒 🕉	
ORACLE Test Manager for Web Applications Database: otm-Install Project: Sample Access Project Tools • Help * Logout Requirements Tests Issues Reports Dashboard Image: Source Status Source Stat	Address 🙆 http://localhost:8088/otm/showMainPage.do	💌 🂽 Go 🛛 Links 🌺
Requirements Tests Issues Reports Dashboard Image: Construction of the second	ORACLE Test Manager for Web Applications Database: otm-Install Project C Project: Sample Access Project	Tools - Help - Logout
Image: Solution of the solution of	Requirements Tests Issues Reports Dashboard 🗘	
 ■ 1 User authentication should be required in order to ■ 1.1 Application should maintain a database of w ■ 1.2 Invalid users should not be able to access to ■ 1.3 Login verification should not take longer that ■ 1.4 New customers should be able to create an ■ 2 Site should provide users access to both real-time and d ■ 3 Site should provide access to both real-time and d ■ 4 Site should provide in store for financial m ■ 6 Main page should provide financial stories and info ■ 6 Main page should provide financial stories and info ■ 1 A Number should provide financial stories and info ■ 4 Intervention ■ 5 Users should provide financial stories and info ■ 6 Main page should provide financial stories and info ■ 6 Main page should provide financial stories and info ■ 1 A Number Should provide financial stories and info ■ 1 A Number Should provide financial stories and info ■ 1 A Site should provide financial stories and info ■ 1 A Site should provide financial stories and info ■ 1 A Site should provide financial stories and info ■ 1 A Site should provide financial stories and info ■ 1 A Site should provide financial stories and info ■ 1 A Site should provide financial stories and info ■ 1 A Site should provide financial stories and info ■ 1 A Site should provide financial stories and info ■ 1 A Site should provide financial stories and info ■ 1 A Site should provide financial stories and info ■ 1 A Site should provide financial stories and info ■ 1 A Site should provide financial stories and info ■ 1 A Site should provide financial stories and info ■ 1 A Site should provide financial stories and info ■ 1 A Site should provide financial stories and info ■ 1 A Site should provide financial stories and info ■ 1 A Site	📑 🖉 🗶 🗿 🛍 🔍 🗎 🖀 🕱 🕶 💀 🍃 Group: None 💿 🔊 Filter: None	Goto; @
Constant Sector	I User authentication should be required in order to I 1.1 Application should maintain a database of value I 1.2 Invalid users should not be able to access to I 1.3 Login verification should not take longer that I 1.4 New customers should be able to create an I 2 Site should provide users access to account and st I 3 Site should provide an online store for financial I 3 Site should provide an online store for financial I 5 Users should be able to buy and sell stocks online I 6 Main page should provide financial stories and info	Attachments & Add/Edit Links & Add/Edit Associated Tests & Add/Edit Associated Issues

Figure 7–6 Requirements Tab with New Requirement Added

7.4 Example 2: Adding a Test

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

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 for Web Applications 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 or Oracle Functional Testing for Web Applications 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 Functional Testing for Web Applications and add it as an automated test.

7.4.1 Adding a Manual Test

This example explains how to add a manual test.

- 1. Click the **Tests** tab.
- 2. Click item 1, Login Tests.
- 3. Click Add to display the Add Test dialog box.

Add Test			
Name:		Sa	ve
уре:	Manual Test	Re	set
est File:		Browse	ncel
Owner:	Select	He	lp
unctionality:			
Priority:	Select 💌		
escription:		A	
Denotes requ	ired fields		
ttachment : -			
• File :		Browse Lapture >>	
Link:			
	Title:		
	Link:		
	ex. http://www.yoursite.com		

Figure 7–7 Add Test Window

- 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.

Oracle Test N	Yanager for Web Applications Web Access - Add - Microsoft Internet Explorer	
Add Tes	t	
*Name:	Verify customer chart view of portfolio	
Туре:	Manual Test 💽 Reset	
est File :	Browse Cancel	
Owner:	Administrator User 💽 Help	
unctionality:		
Priority:	High	
Description:	This test verifies that the chart view of the portfolio is accessible	
sttachment :	Browse Capture >>	
o nie : O nie :		
CITIK;	Title	
	Link	
	ex. http://www.voursite.com	
	on many many outside our	

Figure 7–8 Add Test Window with Sample Data

- **8.** Click **Save**. The test is added as item number 2. You are now ready to add test steps.
- **9.** Click **Add/Edit** in the Test Steps section of the right-hand pane to display the Test Steps dialog box.

Figure 7–9 Manual Test Steps Window

🗿 Test Steps - Microsoft In	ternet Explorer			_ 🗆 🗙
Manual Test Step)S			<u>^</u>
🏝 Add 🗙 Delete 💈	Move Up 🖾 Move Down			ок
# ACTION	EXPECTED RESULT	COMMENT	ADD/EDIT ATTACHMENTS	Cancel Help
Action:			*	
Evented Deputy				
Expected Result;			×	
Comment:			*	
			v	
Attachments:				
				*

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

🤌 Te	st Steps - Microsoft Internet Explorer				_ 🗆 ×
Ma	anual Test Steps				
* :)	Add 🗙 Delete 🤷 Move Up 🖾 Mo	ve Down			ок
#	ACTION	EXPECTED RESULT	COMMENT	ADD/EDIT ATTACHMENTS	Cancel Help
1	Go to http://www.fmstocks.com/	The FMStocks Customer Login pa		¢	
2				Ģ	
Ac	tion:				
Ex	pected Result:				
Co	mment:				
				-	
Att	achments:				
					Y

Figure 7–10 Manual Test Steps Window with Sample Data

14. 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.

15. Click **OK**.

7.4.2 Adding an Automated Test

Oracle Test Manager for Web Applications can run Oracle OpenScript scripts or Oracle Functional Testing for Web Applications tests that have been saved in the Oracle Test Manager for Web Applications Package format. Package format files have a .otmPKG extension. This example explains how to create a test in Oracle Functional Testing for Web Applications, add it to the Tests in Oracle Test Manager for Web Applications, and associate it with the requirement just added.

- 1. Select **Programs** from the **Start** menu and then select **Oracle Functional Testing for Web Applications** from the **Oracle Application Testing Suite** menu.
- 2. Go to http://www.fmstocks.com/fmstocks.
- 3. Select New Script from the File menu.
- **4.** Select **Record** from the **Run** menu and then select **Start** to begin recording the script.

- 5. Click Login.
- 6. Click the Chart Your Portfolio link.
- **7.** Select **Record** from the **Run** menu and then select **Stop** to stop recording the script.
- 8. Select Save Script from the File menu.
- 9. Navigate to the OracleATS/OFT/Default! workspace.
- **10.** Select Oracle Test Manager for Web Applications Package (*.otmPKG) as the format to save the file.
- **11.** Enter ChartPortfolio as the name of the script.
- 12. Click Save.
- **13.** Select **Exit** from the **File** menu to exit Oracle Functional Testing for Web Applications and return to Oracle Test Manager for Web Applications.
- **14.** Click the **Tests** tab.
- 15. Expand Customer Account Tests and click item 3.3.
- **16.** Click **Add** to display the Add Test dialog box.
- **17.** Enter "Verify customer chart view of portfolio" in the Name field.
- **18.** Select **Oracle Functional Testing Script** in the Type field.
- **19.** Click **Browse** in the Test File field.
- 20. Select ChartPortfolio.otmPKG.
- **21.** Select an owner and priority.
- **22.** Enter "This test verifies that the chart view of the portfolio is accessible" in the Description field.

Oracle Test	Manager for Web Applications Web Access - Add - Microsoft Internet Explore 	r and a second	
Add Tes	st		
*Name: Type: Test File : *Owner: Functionality: *Priority: Description:	Verify customer chart view of portfolio Oracle Functional Testing for Web Applications Script C:\OracleATS\OFT\RSWDemo!\ChartPortfolio.emePki Browse Administrator User High This test verifies that the chart view of the portfolio is	Save Reset Cancel Help	
* Denotes req	accessible		
• File	Browse Capture >>		
C Link:			
	Title:		
	Link:		
	ex. http://www.yoursite.com		

Figure 7–11 Add Test Window with Sample Automated Test

- 23. Click Save.
- **24.** The test is added as item 3.4.





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

rigule i le Accoulte llegulellelle llegul	Figure 7–13	Associate Requirements	Window
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<pre>sociate Requirements r: 3 verify customer chart view of portfolic</pre>	racle Test Manager for Web Applications Web Access - Associate Requirements - Microsoft Internet Explorer	_0
<pre>tr. 1 2 Mpf not struct what when the model is a first when the mo</pre>	ssociate Requirements	
Ind Tree View Careet <	est: 3 Verify customer chart view of portfolio	ок
(All actions affect only visible nodes) Help I Liter: authentication should be required in order to access stock brokerage site 2 Users should have access to both real-time and delayed stock quottes II S is its should provide access to both real-time and delayed stock quottes 3 Site should provide access to both real-time and delayed stock quottes II S is its should provide access to both real-time and delayed stock quottes II S is its should provide access to both real-time and delayed stock quottes II S is its should provide infancial management publications and related material II G users should be able to buy and sell stocks online II T Main page should provide financial stories and information to help user's manage their broker II Selest Secieted Nodes Select All Remover all Remover all	Find Tree View	Cancel
I Luser authentication should be required in order to access stock brokerage site 2 Users should have access to the chart view of their portfolio 3 Site should provide users access to account and stock portfolio information 4 Site should provide access to both real-time and delayed stock quotes 5 Site should provide an online store for financial management publications and related materia 6 Users should provide financial stories and information to help user's manage their broker 7 Main page should provide financial stories and information to help user's manage their broker Select All	(All actions affect only visible nodes)	Help
Image: Several control of the severa	🖅 🗐 1 User authentication should be required in order to access stock brokerage site	
Site should provide users access to account and stock portfolio information Is Site should provide access to both real-time and delayed stock quotes Is Site should provide an online store for financial management publications and related material Is O Users should be able to buy and sell stocks online If Main page should provide financial stories and information to help user's manage their brokers Select All Seciated Nodes Remove All	2 Users should have access to the chart view of their portfolio	
Site should provide access to both real-time and delayed stock quotes Image: Site should provide an online store for financial management publications and related material Image: Site should provide financial stories and information to help user's manage their broker Image: Select All Sociated Nodes Image: Remove All	🗄 🖽 3 Site should provide users access to account and stock portfolio information	
Site should provide an online store for financial management publications and related material Image: Solid be able to buy and sell stocks online Image: The should provide financial stories and information to help user's manage their broker Image: The should provide financial stories and information to help user's manage their broker Image: Solid be able to buy and sell stocks online Image: The should provide financial stories and information to help user's manage their broker Image: Solid be able to buy and sell stocks online Image: Solid be able to buy and sell stocks online Image: Solid be able to buy and sell stocks online Image: Solid be able to buy and sell stocks online Image: Solid be able to buy and sell stocks online Image: Solid be able to buy and sell stocks online Image: Solid be able to buy and sell stocks online Image: Solid be able to buy and sell stocks online Image: Solid be able to buy and sell stocks online Image: Solid be able to buy and sell stocks online Image: Solid be able to buy and sell stocks online Image: Solid be able to buy and sell stocks online Image: Solid be able to buy and sell stocks online Image: Solid be able to buy and sell stocks online Image: Solid be able to buy and sell stocks online Image: Solid be able to buy and sell stocks online	🖶 🛅 4 Site should provide access to both real-time and delayed stock quotes	
Subject Nodes Remove All	🛨 🛅 5 Site should provide an online store for financial management publications and related material	
T Main page should provide financial stories and information to help user's manage their broker Select All ssociated Nodes Remove Remove All	E E G Users should be able to buy and sell stocks online	
Select All ssociated Nodes Remove Remove All	🗄 🗉 7 Main page should provide financial stories and information to help user's manage their brokera	
Select All ssociated Nodes Remove All		
Select All ssociated Nodes Remove All		
Select All ssociated Nodes Remove All	< ▶	
ssociated Nodes Remove All	Select All	
Remove All		
	Remove Remove All	
		_

- **27.** Expand item 1 and click item 1.5.
- 28. Click Select.
- **29.** 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.

Attachments	Add/Edit
Links	♦ Add/Edit
Associated Requirements	• Add/Edit
📰 1.5 Users shoul	d have access
to the chart vie portfolio	w of their

Figure 7–14 Test Associated with Requirement

7.5 Example 3: Running a Test

This example has two parts. The first part explains how to run the manual test created in the previous example. The second part explains how to run the automated test created in the previous example, then how to view the detailed Results Report.

7.5.1 Running a Manual Test

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

- 1. Click the Tests tab and select number 2, Verify customer chart view of portfolio.
- 2. Click Run this test in the Run History section of the right-hand pane.

Figure 7–15 Run Test Info Window

Test Run	Info		2
System:	Please select 💌	Save	
Version:	Please select 💌	Cancel	
		Help	

- **3.** Select 1.0 in the **Build** field. This is the version number of the application you are testing.
- 4. Click Save.

🗧 R	un Manual Test - "2 ¥erify customer cha	art view of portfolio" - Microsoft Internet E	xplorer			_ 🗆
R	un Manual Test					
M				Make All	: Select 💌	
#	ACTION	EXPECTED RESULT	COMMENT	ATTACHMENTS	RESULT	ADD ISSUE
1	Go to http://www.fmstocks.com/fmstocks	The FMStocks Customer Login page should be displayed			Select 💌	8
2	Click Login	The Welcome to FMStocks page should be displayed.			Select 💌	1
3	Click the Chart Your Portfolio link.	The Your Portfolio page should be displayed with a spreadsheet and graphs.			Select 💌	⊿
4					Select 🔻	∠
	mmary					
	initial y.					*
						-
		OK Cancel	Help Save Run			

Figure 7–16 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 OK to display the Run Manual Test Summary window.

Figure 7–17 Run Manual Test Summary Window

Run Manu	ial Test - Summary	
Result:	Passed 💌	
ummary:		
ummary: 10 problems enco	untered with this test.	
ummary: 10 problems enco	untered with this test.	*
ummary: 10 problems enco	untered with this test.	*
ummary: no problems enco	untered with this test.	Ă
summary: no problems enco	untered with this test.	×

- 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.

7.5.2 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 Functional Testing for Web Applications Results Report.

- 1. Click the Tests tab.
- **2.** Expand item number 3 and click item 3.4.
- **3.** Click **Run this Test** in the Run History section of the right-hand pane to display the Test run Info dialog box.
- **4.** Select **OTM Server** in the **System** field. This is the machine on which the test will be run.
- **5.** Select 1.0 in the **Version** field. This is the version number of the application you are testing.
- **6.** Click **Save**. Oracle Functional Testing for Web Applications executes the script. Oracle Test Manager for Web Applications displays the Result Detail Summary when the test is finished.
- 7. Click the date of the test in the Run History section of the right pane.
- **8.** Click **View Report** in the Result Summary to display the detailed Oracle Functional Testing for Web Applications Results Report in a separate browser window.

Figure 7–18 Results Report Window

ipt Nar rt General t Name: Cl space: RS & Time: 8,	ne: ChartPortfolio ted By: Oracle Functional Testing for Web Ap hartPortfolio WDemo 18/2008 1:50:23 PM	plications 8.40.130			
tions: 1 Pages: 3 Tests: 90					
Failures: Warnings Warnings all Result:	0 (0.00%) : 0 (0.00%) Passed ummary				
Failures: Failur	0 (0.00%) : 0 (0.00%) Passed ummary Page	Recorded Time (sec)	Playback Time (sec)	Result	Summary
Failures: Failures: Warnings all Result: cript S	o (0.00%) : o (0.00%) Passed Ummary Page Iteration Total (sec)	Recorded Time (sec) 0.782	Playback Time (sec) 0.766	Result Passed	Summary
Failures: Failures: Warnings all Result: cript S	2 (0.00%) 2 0 (0.00%) Passed ummary Page Iteration Total (sec) [1] Welcome - Home SuperStores Inc.	Recorded Time (sec) 0.782 0.360	Playback Time (sec) 0.766 0.406	Result Passed Passed	Summary
Failures: 1 Warnings all Result: cript S Iteration	2 (0.00%) 2 0 (0.00%) Passed Ummary Page Iteration Total (sec) [1] Welcome - Home SuperStores Inc. [2] Registration - Home SuperStores Inc.	Recorded Time (sec) 0.782 0.360 0.234	Playback Time (sec) 0.766 0.406 0.188	Result Passed Passed Passed	Summary
Failures: 1 Warnings all Result: cript S Iteration	2 (0.00%) 2 0 (0.00%) Passed UMMARY Page Iteration Total (sec) [1] Welcome - Home SuperStores Inc. [2] Registration - Home SuperStores Inc. [3] Registered - Home SuperStores Inc.	Recorded Time (sec) 0.782 0.360 0.234 0.188	Playback Time (sec) 0.766 0.406 0.188 0.172	Result Passed Passed Passed Passed	Summary

7.6 Example 4: 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 4 failed.

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

- **1.** Click the **Issues** tab.
- 2. Click Find to display the Find dialog box.

Нер		××	Value	Operato	Field All text fields
		× ×		- Contain	All text fields
		×			
					None
				ine ""	[All text fields] conta
				1113	
				view	🔁 Navigate 🔍 Prev
	1.				
and the second second second	Sec. 1				
				VIEW	(a Naviyate 🦓 Pre

Figure 7–19 Find Window

- **3.** Select **Description** for the field to search.
- 4. Enter the value, "chart."
- 5. Make sure that **Issues** is selected in the **Search for** field and that **all** is selected in the **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 7–20 Find Window with Search Results

				the second s	
d					
Saved Filters: Last Se	earch		💽 🔚 Save 🔀 Delete		Search
Search for Issues	💽 that matc	h all 🔹 of	he following:		Close
Field	Operat	or Value			Пер
Description	💽 🔽 contai	ns 💽 chart	×		
None	•	-	×		
	in de la compañía de				
[Deceminting] contain	c "chart"				
[Description] contain	s unare		and the second		
[Description] contain	s chart				
[Description] contain					
진 Navigate Q. Prev	view]
2 Navigate Q Prev	view	t work op Windows OF s			
진 Navigate Q Prev	view o feature does not	t work on Windows 95 m	achines		
전 Navigate Q Prev	view o feature does not	t work on Windows 95 m	achines		
전 Navigate Q Prev	view	t work on Windows 95 m	achines		
전 Navigate Q Prev	view	t work on Windows 95 m	achines		
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전 Navigate Q Prev	view o feature does not	t work on Windows 95 m	achines		
진 Navigate Q Prev	view o feature does not	t work on Windows 95 m	achines		
전 Navigate Q Prev	view	t work on Windows 95 m	achines		
전 Navigate Q Prev	view o feature does not	t work on Windows 95 m	achines		

One match was found. You can click **Navigate** the Results list to display it in Oracle Test Manager for Web Applications 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.

To create an issue.

- 1. Click the **Issues** tab.
- 2. Click Add to display the Add Issue dialog box.
| Oracle Test Manaç | er for Web Applications Web Access - Add - Microsoft Internet Explorer | |
|--------------------|--|--------|
| Add Issue | | |
| *Summary: | | Save |
| *Component: | Select • | Reset |
| Version: | 1.0 • | Cancel |
| *Assigned To: | Select | Help |
| *Status: | Select • | |
| *Priority: | Select | |
| *Severity: | Select | |
| Platform: | Windows 💌 | |
| Description: | | |
| | | |
| | | |
| | | |
| | | |
| Solution: | | |
| | | |
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| | | |
| | | |
| * Denotes required | fields | |
| Attachment : | | |
| • File : | Browse Capture >> | |
| C Link : | | |
| Title | | |
| Link | | |
| LINK | ex. http://www.voursite.com | |
| | | |
| | | |
| | | |
| | | |
| | | |

Figure 7–21 Add Issue Window

- 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 High.
- **9.** Change the Severity to Medium.
- **10.** Select the Windows platform.

Oracle Test Man	ager for Web Applications Web Access - Add - Microsoft Internet Explorer	
Add 133dC		
'Summary:	Chart portfolio failed	Save
Component:	Select V	Reset
ersion:	1.0 •	Cancel
Assigned To:	Default User	Help
Status:	1 - Created	
Priority:	High	
Severity:	Medium	
atform:	Windows 🖬	
escription:		
olution:		
Denotes require	d fields	
tachment :		
File :	Browse Capture >>	
Link :		
Titl	e :	
Lin	k :	
	ex. http://www.yoursite.com	

Figure 7–22 Add Issue Window with Sample Data

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

Tracle Test Manager for Web Applications - Microsoft I	hternet Funlorer	
File Edit View Eavorites Tools Help		
	aunitar 🙆 🔿 🗽 📷 a 🥅 🚝 🚝 🥺	
	avonces 🤯 🔯 • 🔜 🔛 🐴	
Address E http://localhost:8088/otm/showMainPage.do		✓ 🔁 Go 🛛 Links 🎽
ORACLE' Test Manager for Web A	pplications Database: otm-Install Project Project: Sample Access Project	Tools = Help = Logout
Requirements Tests Issues	Reports Dashboard 🗘	
🛆 🥖 🗙 🖻 🛍 🔍 🗐 🍃 Group: None	💽 🔐 Filter: None	Goto: 🦰 🍘 🔚
Previous	Issue 24 🖉 Edit this issue 🚔 Drint 🕅 e-Mail	
21 Subtotals are incorrect on checkout page		Attachments Add/Edit
22 Errors when trying to sell more stock than availab	Chart portfolio failed	Actachiments
24 Chart portfolio failed	Last modified by Administrator User on August 08, 2008 at 1:38 PM	Links Add/Edit
	Created: 8/08/08 1:38 PM By: Administrator User	
	Closed: Component: Default	
	Version: 1.0	Associated Requirements
	Assigned To: Default User	
	Priority: High	Associated Tests & Add/Edit
	Severity: Medium	
	Platform: Windows	Associated Issues 🍄 Add/Edit
	Description:	
	Solution:	
Cone Done		Local intranet

Figure 7–23 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 item 3 and select item 3.4.

Figure 7–24 Associate Test Window with Issue Selected

E 29; 29 Chart portfolio failed	
ind Tree View	
(All actions affect only visible nodes)	ОК
🕀 📒 1 Login Tests	Cancel
📲 📝 2 Verify customer chart view of portfolio	Help
🖻 🗐 3 Customer Account Tests	
3.4 Verify customer chart view of portfolio	
🗈 📒 4 Online Bookstore Tests	
🗈 📒 5 Online Stock Trades Tests	
🗄 📕 6 Online Stock Quotes Tests	
Select All	
]
Associated Nodes	
📝 3.4 Verify customer chart view of portfolio	
Remove Remove All	

- 15. Click Select.
- **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.

itta	ch File s		
			Close
ssue	File	Location	Remove
	ChartPortfolio.log	In Database	Save Local
			Edit Link

Figure 7–25 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 7–26 Issue with File Attachments

Attachments	• Add/Edit
ChartPortfolio. 2008)	log (Aug 08,
Links	🖗 Add/Edit
Associated Req	uirements
1.5 Users shou to the chart vi portfolio	uld have access ew of their
Associated Test	s 🛛 🖗 Add/Edit
3.4 Verify cust view of portfol	:omer chart lio
Associated Issu	es 🏽 Add/Edit

7.7 Example 5: Creating Reports

Oracle Test Manager for Web Applications 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.





- **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.

Define report Define filters	Report title: Report on: Requirements • Report type: Vertical bar chart Report template: Plain •	• 2
	Available fields Sele Owner Status Priority Created By Last Modified By	ected fields +
		Help

Figure 7–28 Add Report Window

- **6.** Enter a name for the report.
- **7.** Select **Vertical bar chart** for the report type and **3D** for the report template.
- **8.** Select **Priority** from the **Available fields** and click the right arrow to add it to the **Selected fields** list.

Define report Define filters	Report title: Report on: Report type: Report template: Report data:	My Report Requirements • Vertical bar chart • 2 3D •	
	Available fields Type Owner Status Priority Created By Last Modified By	Selected fields Priority	+ +
	ОК	Cancel Apply Hel	

Figure 7–29 Add Report Window with Selected Fields

9. Click **Define filters**.

Figure 7–30 Add Report Filters Window

d Report				
Define report Define filters	Saved Filters: None Search for Requirer	nents 💌 that match all	✓ ■ Save × Delete ✓ of the follow	ing:
	Field	Operator	Value	
	Priority	not equal to	Low	• ×
	None			×

- **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 7–31 Reports Tab with Custom Reports



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

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