

LoadRunner Enterprise

Course Summary

Description

This course is designed to teach the user how to create, run and analyze tests in Performance Center. This course covers issues related to recording web based applications in the LoadRunner VuGen program focusing on planning and recording of the test script, enhancing the test and adding custom code through advanced scripting.

Topics

- Performance Center Overview
- Building a Load Test
- Running load tests
- Run-time Settings
- Scheduling Performance Tests
- Service Level Agreements
- My Performance Center/Dashboard
- Monitors
- Timeslots
- AUT hosts and Topologies
- Analysis
- Advanced Analysis
- Advanced Analysis - Reporting
- Recording Web Scripts
- Planning a Script
- Recording a Script
- Transactions
- Verifications
- Run-Time Settings
- Parameters
- Correlation after Recording
- Manual Correlations
- Correlation during Recording
- Introduction to Advanced Scripting
- Custom Checkpoints
- String Manipulation
- Parameters
- Advanced Parameters
- Additional Attributes

Audience

This is an introductory course for Performance Engineers.

Prerequisites

Some basic programming knowledge would be useful, however it is not mandatory

Duration

Five days

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Course Outline

- I. Performance Center Overview**
 - A. HP ALM Performance Center architecture and functionality
 - B. Describe the administrator and user functions
 - C. Performance Center Terminology
- II. Building a Load Test**
 - A. Load testing overview
 - B. Upload and modify Vuser Scripts
 - C. Create load tests and edit the test options
 - D. Navigate the Test Designer
- III. Running load tests**
 - A. Understand a typical performance testing lifecycle
 - B. Create test sets
 - C. Run load tests and collect analysis data
 - D. Analyze Run Time data
 - E. Analyze Load Test Results
- IV. Run-time Settings**
 - A. Run-Time Settings overview
- V. Scheduling Performance Tests**
 - A. Schedule Overview
 - B. Create schedules by Duration, Iteration, Percentage, and Group
 - C. Schedule Run Modes
 - D. Ramp Up and Ramp Down functionalities
 - E. Initialization and Run Duration
- VI. Service Level Agreements**
 - A. Service Level Agreements overview
 - B. Create an SLA
 - C. Set load criteria
 - D. Specify load levels
 - E. Set Thresholds values
 - F. Link Test to Requirement
- VII. My Performance Center/Dashboard**
 - A. My Performance Center overview
 - B. Navigate the Test Runs and review reports
 - C. Create Trend reports
 - D. Modify Comparison type
 - E. Create a custom Perspective
 - F. Examine the various available Views
- VIII. Monitors**
 - A. Configure Monitors overview
 - B. Set up the Monitoring Environment
 - C. Create a monitor profile
 - D. Attach a monitor profile to a test
- IX. Timeslots**
 - A. Timeslots overview
 - B. Reserve a timeslot with or without a test
 - C. Manage timeslots
- X. AUT hosts and Topologies**
 - A. AUT hosts, AUT host pools, and Topologies overview
 - B. Create and design a topology
 - C. Add AUT Hosts
 - D. Configure Component Properties
- XI. Analysis**
 - A. ALM Analysis - Analysis View overview
 - B. My Performance Center Dashboard - online graphs, views trending
 - C. Analysis Tool - Graph review, graph options, Reports, Report templates
 - D. Download and analyze results
- XII. Advanced Analysis**
 - A. Web and System Resources
 - B. Web Page Diagnostics
 - C. Web Transaction Breakdown
 - D. Server Resource Monitors
 - E. Auto Correlation
 - F. SLA Summary Reports
- XIII. Advanced Analysis - Reporting**
 - A. Reporting overview
 - B. Standard Report Generation
 - C. Report Templates
 - D. Create custom reports and graphs
 - E. Create a custom analysis session
- XIV. Planning a Script**
 - A. Determining what steps to perform
 - B. Consider data and data usage
- XV. Recording a Script**
 - A. Recording Options – HTML vs. URL recording
 - B. Recording the test case

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Course Outline (con't)

XVI. Transactions

- A. Add Transactions during recording and after recording

XVII. Verifications

- A. Add a verification during recording
- B. Add a verification after recording using the keyword view screenshots

XVIII. Run-Time Settings

- A. Setting appropriate logging option
- B. Controlling the number of iterations to playback
- C. Think times and Pacing settings

XIX. Parameters

- A. Adding Parameters in the keyword view, and in the script view
- B. Create a file type parameter
- C. Examine other parameter types, e.g. Random type, date time type
- D. File parameter access methods
- E. Update Parameter value settings
- F. Simulate Parameter Usage

XX. Correlation after Recording

- A. Required Settings
- B. Run the test, examine errors
- C. Use the Scan for Correlations tool
- D. Determine which values to correlate
- E. Correlate
- F. Review the correlation functions added to the script

XXI. Manual Correlations

- A. Required settings
- B. Determine which of the values is the dynamic one
- C. Determine where the server sent the dynamic value
- D. Determine appropriate left and right boundaries and ordinal values
- E. Add the web_reg_save_param function
- F. Replace hard-coded dynamic values with the new parameter

XXII. Correlation during Recording

- A. Add a rule to the recording options
- B. Test the rule
- C. Record the script
- D. Use of the regenerate script option

XXIII. Introduction to Advanced Scripting

- A. Condition statements and loops
- B. Variable declarations
- C. Common string manipulation functions
- D. Data conversion functions
- E. LoadRunner specific functions (lr_eval_string, output messages, lr_save_string)

XXIV. Custom Checkpoints

- A. Examining the web_reg_find savecount option
- B. Capturing data using the web_reg_save_param function

XXV. String Manipulation

- A. Using the sprintf function
- B. strstr
- C. strcpy
- D. strcat

XXVI. Parameters

- A. lr_save_string and lr_save_int
- B. lr_save_datetime function
- C. lr_advance_param vs. lr_next_row

XXVII. Advanced Parameters

- A. Capturing multiple related items
- B. Randomly selecting one of the items

XXVIII. Additional Attributes

- A. Using additional attributes