

HPE LR120 – LoadRunner 12.0 Essentials

Overview

This five-day course introduces students to HPE LoadRunner 12.0, including the usage of Virtual User Generator (VuGen), Controller and Analysis tools. This course is designed to give you a foundation in basic load testing tasks.

You create and run load test scenarios using the Controller. The Analysis tool is used to analyze load test results. You learn to work with the graphs to display data after a test is executed.

The hands-on labs are designed to provide you with the knowledge necessary to create scripts in VuGen, execute scenarios in the Controller, and view the results in the Analysis tool. The course consists of focused, task-oriented lectures, text, and a series of detailed hands-on labs to teach the course material to the student. The hands-on labs use version 12.0 of the software.

Learning method

You will receive expert instruction from a HPE LoadRunner 12.0 specialist who will present the course using slide presentation and facilitated discussion. At the end of each chapter there will be review questions followed by a hands on exercise to ensure understanding of each lesson.

Each student will receive a copy of the HPE LoadRunner 12.0 manual. This manual is used throughout the course and proves a useful reference tool upon completion of the course.

Duration: 5 days

Who will benefit from this course?

This course is recommended for:

- Quality Assurance and Performance Engineers
- Users of HPE LoadRunner who need to create scripts to load test their web applications
- Executives involved in any aspect of the load testing process

Course prerequisites

For best success with this course, students should have working knowledge of:

- Windows
- Testing concepts
- Web sites and browsers
- Fundamental understanding of C programming is helpful, but not required.

What you can expect to gain from this course?

After completing this course, you should be able to:

- Identify the information you need for load testing
- Identify the components of HPE LoadRunner
- Apply the recommended workflow to create a basic LR scenario



- Assign scripts, run-time settings, performance monitors, Load Generators (LGs), and Virtual User (Vusers) to a LR scenario based on your load testing goals
- Perform a load test on your application by running a scenario
- Record scripts in the web environment using the Virtual User Generator (VuGen)
- Measure steps and business processes using transactions
- Parameterize scripts to vary user input data
- Customize scripts by adding VuGen and basic C language functions
- Correlate scripts to process server-generated data

Course Content

Controller and Analysis (3 days)

Module 1: Course Overview of LoadRunner 12.0 Essentials

- Identify the contents and objectives of the course
- Define the class schedule and class logistics
- Identify the related courses
- Discuss the lab environment details

Module 2: Introduction to HPE LoadRunner (LR) 12.0

- Explain the need for load testing
- Describe various types of performance test objectives
- Identify the steps of the LR methodology
- Define a scenario in the context of LR
- Identify strategies for creating effective scenarios

Module 3: What's New in LR 12.0

- Identify the key new features of LR 12.0, including:
- Enhanced mobile testing
- Continuous testing
- Deploying Load Generators (LGs) in the cloud
- Building a community
- Communication interface enhancements
- User experience and miscellaneous enhancements

Module 4: Planning an Effective Load Test

- Define measurable goals for your load test
- Gather preliminary information before load testing your system
- Organize system information effectively
- Use gathered information to plan load tests

Module 5: Installing LR Components

- Describe the LR architecture
- Determine where to install the LR components
- Identify the software and hardware required for installation
- Troubleshoot LG connectivity issues
- Configure the Network Virtualization (NV) settings

Module 6: Introduction to Scenarios

- Describe the elements of a LR scenario
- Explain the basic steps for creating a scenario
- Configure a LG in the scenario

Module 7: Using Run-Time Settings

- Define run-time settings for load testing
- Describe the difference between run-time settings for scripts and scenarios
- Configure run-time settings based on load testing goals

Module 8: Scheduling Scenarios

- Configure scenario scheduling
- Describe the scheduling by scenario and by group options
- Describe the real-world schedule and basic schedule run modes
- Manage schedules using the actions grid and the scenario interactive graph
- Stop a scenario

Module 9: Using Performance Monitors

- Describe the value of performance monitors
- Select performance monitors to achieve load test goals
- Add measurements for performance-based goals

Module 10: Running a Scenario

- Prepare for a scenario run
- Define the scenario running process
- Identify the best practices for running a scenario efficiently
- Run a scenario
- Discuss common run-time errors

Module 11: Using the Analysis Tool

- Describe the analysis tool and the categories of analysis graphs
- Describe the value of analyzing results
- Use graphs to display data
- Describe graph data and raw data
- Apply granularity to many graphs, merge graphs, and perform auto-correlation
- Use service-level agreement (SLA) reports
- Run report generation utilities

VuGen (2 Days)

Module 1: Course Overview of Virtual User Generator 12.0 Essentials

- Identify the contents and objectives of the course
- Define the class schedule and class logistics
- Identify the related courses
- Discuss the lab environment details

Module 2: Introduction to Virtual User Generator (VuGen) 12.0

- Define Virtual User (Vuser) and VuGen
- Explore the new look and feel of the VuGen UI
- Explain how to use the step navigator and solution explorer
- Discuss the script workflow
- Create scripts using VuGen
- Record business processes with VuGen

Module 3: What's New in VuGen 12.0

- Explore the new look and feel of the VuGen UI
- Describe the user experience and protocol enhancements
- Build a community and describe the concept of flexible delivery

Module 4: Recording Scripts for Web Applications

- Access and use the protocol advisor for recording
- Create VuGen scripts by recording user steps
- Save scripts in HPE Application Lifecycle Management (ALM)
- Create a Vuser script template
- Create business process reports

Module 5: Replaying the Vuser Scripts

- Recognize the debugging tools available in VuGen
- Identify and configure the appropriate web run-time settings for replaying scripts
- Replay and debug the script in VuGen

Module 6: Inserting Transactions into the Script

- Explain the use of transactions in a script
- Add a transaction into a script during recording
- Insert a transaction into a script after recording

Module 7: Parameterizing a Script

- Define parameterization
- Determine when to parameterize a script
- Create and modify parameter lists
- Create new parameters
- Work with parameter properties
- Configure run-time settings for parameters

Module 8: Verifying the Vuser Scripts

- Identify the need to use verification in scripts
- Define verification for scripts
- Add text checkpoints during and after recording of scripts

Module 9: Creating Actions for a Web Script

- Define an action for a web script
- Record a script with multiple actions
- Create action blocks

Module 10: Using the VuGen Editor

- Work with the VuGen Editor
- Send customized output messages to the Replay Log
- Identify basic C code including statements, variables, and functions
- Apply basic debugging techniques in VuGen

Module 11: Using the Advanced Scripting Techniques for Vuser Scripts

- Explain the general LR functions
- Explain the protocol-specific functions

Module 12: Auto Correlation After Recording

- Describe correlation
- Work with the Correlation Studio
- Correlate dynamic values after recording a script

Module 13: Using Manual Correlation

- Explain the manual correlation process
- Configure the parameters for correlation
- Correlate a script manually by:
 - Using the WDiff utility
 - Adding the web_reg_save_param_ex correlation function
 - Parameterizing the dynamic value in the script

Module 14: Auto Correlation during Recording

- Create correlation rules to auto correlate during recording
- Regenerate and record scripts
- Import and export correlation rules

Related Courses

- PC120 – ALM Performance Center 12.0 Essentials