

HPE PC120 – ALM Performance Center 12.0 Essentials

Overview

This five-day course introduces students to ALM Performance Center 12.0 and the Virtual User Generator (VuGen) application, which is a scripting tool used to record and run user actions on an application to be load tested. The topics include how to schedule tests, run tests, and analyze test results. Students learn how to effectively and efficiently plan, create, schedule, and run a simple test based on the goals determined at the planning phase and to interpret analysis graphs and achieve set performance testing goals. They also focus on planning, creating, and enhancing Virtual User (Vuser) scripts using VuGen in the web environment. All topics are supported by hands-on labs, designed to provide you with the knowledge necessary to create scripts in the web environment.

The class is appropriate for both experienced and new product users and others responsible for or involved in performance testing with Performance Center and/or VuGen scripting.

Learning method

You will receive expert instruction from a ALM Performance Center 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 ALM Performance Center 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 ALM Performance Center who need to create scripts to load test their web applications and run those scripts in the ALM Performance Center environment
- Users of 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:

- Describe the Performance Center (PC) architecture
- Manage user accounts
- Assign user privileges

- Manage multiple projects
- Oversee server resources
- Manage test executions
- Monitor and analyze error information
- Produce various reports
- Plan load test effectively
- Describe the user site's functionality
- Create, configure, and execute load tests
- Use analysis graphs to determine whether the test achieved the set goals
- Record scripts in the web environment using VuGen
- Measure steps and business processes using transactions
- Parameterize scripts to vary user input data
- Customize scripts by adding VuGen and basic C functions
- Correlate scripts to process server-generated data.

Course Content

Module 1: Course Overview for Performance Center 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 Application Lifecycle Management (ALM) Performance Center (PC) 12.0

- Describe the basic PC architecture and functionality
- Identify the steps of the load testing process
- Provide an overview of HPE Application Lifecycle Management (ALM) PC sites
- Explain roles and tasks of PC team members

Module 3: What's New in PC 12.0

- Identify the key new features of PC 12 including:
 - Enhanced Mobile Testing
 - Continuous Testing
 - User experience and miscellaneous enhancements
 - Building community
 - Provision cloud hosts for performance testing
 - My PC updates
 - Performance Application Lifecycle (PAL) enhancements
 - PC Representational State Transfer (REST) Application Programming Interface (API) reference
 - Analysis template customization

Module 4: Using the ALM PC User Site

- Explain the purpose and advantages of the ALM PC user site
- Explore the ALM PC user site
- Describe the privilege levels and access rights for a project

Module 5: Planning an Effective Load Test

- Analyze the Application Under Test (AUT)
- Gather preliminary information before load testing your system
- Organize system information effectively
- Use the gathered information to plan load tests

Module 6: Working with Vuser Scripts and Reserving Timeslots

- Prepare and modify Vuser scripts
- Connect VuGen to an ALM Session
- Upload Vuser scripts to ALM
- Define timeslots
- Reserve and manage timeslots successfully

Module 7: Configuring the Load Test Settings

- Configure load test settings
- Create monitor profiles
- Define Service Level Agreements (SLAs)

Module 8: Working with Load Tests

- Create a test set
- Configure scheduling options for the test
- Set load test goals using SLAs
- Run the test

Module 9: Running Load Tests

- Configure the project settings and PC Controller options
- Explain the performance test run flow
- Monitor the flow of the performance test run
- Monitor the performance test run
- Analyze the performance test results

Module 10: Using the Dashboard Page

- Explain the views available on the Dashboard page
- Create and configure reports in the Analysis view
- Create and configure graphs in the Analysis view
- Create and configure the Project dashboard pages

Module 11: Using the PC Analysis

- Collate and analyze the load test data
- Generate reports and graphs for a test set
- Download the load test results files
- Upload the files and reports
- View and manage tests using the system perspectives

Module 12: Raising Application Defects in ALM

- Create new defects
- Link defects and other entities
- Monitor and track defects in ALM
- Assign, repair, and update defects
- Analyze defects and generate defect reports
- Export defect reports

Module 13: Configuring Hosts and Topologies

- Add, configure, and reboot hosts in ALM
- Provision cloud hosts
- Create AUT hosts
- Reboot servers and check host connectivity
- Create topologies
- Create monitors for web servers

Module 14: Creating Requirements and Business Models

- Explain requirements and their advantages
- Explore the options in the Requirement view
- Create requirements
- Explain and import business models
- Link requirements and tests to model entities

Module 15: Using the Lab Management Website

- Explore the Lab Settings module in the Lab Management website
- Explore the Cloud Settings module in the Lab Management website
- Explore the Lab Resources module in the Lab Management website
- Explore the Performance Center module in the Lab Management website
- Explore the Servers module in the Lab Management website

Module 16: Using the Site Administration Website

- Create projects using the Site Administration website
- Create domains using the Site Administration website
- Explore the tabs on the Site Administration website

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 of 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 in 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 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 HPE

Related Courses

- LR120 - LoadRunner 12.0 Essentials