

# HPE LR320 – Advanced Analysis for LoadRunner 11.x

## Overview

This three day course introduces students to advanced concepts and usage of the LoadRunner Analysis tool. Using the Analysis tool to its best advantage includes the ability to verify the scenario execution, measure results against known success criteria and pin point performance problems. Other topics of the course include using the Analysis tool to conduct advanced report analysis and identify best practice approaches for test design and result investigation. Skills such as the performance of root cause analysis, monitoring and analyzing error information are refined, as is the ability to collaborate effectively with testing team members to conduct effective report analysis. The course uses lecture, text, and a series of hands-on labs to teach the course material to the student.

**Duration:** 3 days

## Learning Method

You will receive expert instruction from a LoadRunner 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 Advanced Analysis for LoadRunner manual. This manual is used throughout the course and proves a useful reference tool upon completion of the course.

## Who will benefit from this course?

- Quality Assurance Engineers
- Performance Engineers
- Experienced users of ALM Performance Center or LoadRunner who need to strategically plan load tests with established goals and analyze whether those goals are met.

## Prerequisites for this course

Working knowledge of:

- Windows
- Web sites and browsers
- Testing concepts
- Good knowledge of Load testing (either ALM PC or LoadRunner)

## What can you expect to gain from this course?

At the end of the course, you will be able to:

- Describe performance testing
- Identify and explain the types of performance testing
- Discuss load testing and its benefits
- Summarize the HPE solution for load testing
- Discuss the various phases of load testing
- Strategically create scenarios in LoadRunner
- Create, configure, and execute load tests based on determined testing goals
- Use the Analysis tool to conduct advanced report analysis
- Identify best practices for test design and result investigation

- Identify the root cause analysis (RCA) for test errors
- Monitor and analyze error information in LoadRunner
- Generate various reports in LoadRunner
- Collaborate effectively with testing team members to resolve test errors

## Course Content

### Module 1: Course Overview and Introduction to Advanced Analysis in LoadRunner

- Discuss performance testing and types of performance testing
- Describe load testing and benefits of load testing
- Summarize the HPE solution for load testing
- Describe HPE Performance Center (PC)
- Explain the advantages of HPE Application Lifecycle Management (ALM) in performance testing and how ALM integrates with PC
- Describe the contents of the course and different phases of load testing

### Module 2: Collecting Data Using the Controller

- Identify the Controller action during Scenario Execution
- Identify the types of data that can be collected for analysis
- Examine the Scenario Execution Process
- Explain various scenario types
- Define the concept of “ramping up”

### Module 3: Introduction to the Analysis Tool

- Explain the analysis process
- Identify the two types of analysis files
- Explain the analysis session storage structure
- Identify two categories of analysis graphs
- Explain the functionality of different analysis graphs
- Explain the impact of graphs
- Describe granularity properties
- Explain the impact of granularity
- Describe filtering and its impact

### Module 4: Anatomy of a Successful Design and Execution of a LoadRunner Test

- Define basic load test rules against which results may be measured
- Use base graphs to verify the concepts of a test match of preliminary results
- Review common design faults

### Module 5: Defining Success Criteria

- Describe the goals for the success criteria for your analysis
- Illustrate the proper way to define success criteria for your analysis
- Explain Service Level Agreements (SLAs) and Non-Functional Requirements (NFRs)
- Define an SLA in the Controller

### Module 6: Analysis of a Test Failure – Inefficiency

- Explain why tests fail
- Examine the basic factors that might cause test failure:
  - Slow transactions
  - Errors
  - Geographical considerations

- Network speed
- Software component inefficiency
- Hardware component inefficiency

#### Module 7: Analysis of a Test Failure – Resources

- Define the term resources
- Describe various resource limitations
- Summarize what occurs during a resource failure
- Identify methods and tools used to investigate resource failures

#### Module 8: Using Deep Diagnostic Graphs

- Discuss the uses of Deep Diagnostics graphs
- Define the different types of Deep Diagnostics graphs
- Describe the user request life cycle
- Enable the Web Page Diagnostics feature
- List the elements of the Web Page Diagnostics screen
- Explain about Java 2 Enterprise Edition (J2EE) and .NET Deep Diagnostics graphs
- Explain the types of Enterprise Resource Planning (ERP)/Customer Relationship Management (CRM) Deep Diagnostics

#### Module 9: Generating Cross Results Graphs

- Explain how to cross results from a number of different result files
- Describe when you should cross results
- Explain the extra features and limitations of crossed results
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#### Module 10: Reporting Analysis and HTML Reports

- Describe effective reporting
- Identify available reports in the Analysis tool
- Examine What You See Is What You Get (WYSIWYG) reporting graphs
- Discuss Hyper Text Markup Language (HTML) reports
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#### Module 11: Reporting Templates

- Explain how to use the Report template
- Create a new template
- Run a report and view the report results
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#### Module 12: Production Monitoring

- Identify drawbacks of performance testing
- Explain why production monitoring is useful
- Describe how load is applied during production monitoring
- Describe the benefits of using HPE SiteScope

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## Related Courses

- LR 230 – Protocol Library for LoadRunner 11.5