**Load Runner Course Content**

* Day 1

**Architecture Basics:**

* What is Architecture
* The importance of Architecture for performance testing.
* Understanding servers
* Web/ APP/ DB Servers and their purpose
* What is Protocol
* Different types of protocols and understanding HTTP protocol.
* Different types of Architectures
* 2- Tier, 3- tier, n- tier architecture
* Static Content, Dynamic Content
* Day 2

**Introduction to Performance Testing:**

* What is Testing - Functional Testing and non-Functional Testing?
* What is Performance Testing?
* Why Performance Testing?
* Common Performance problems
* Performance testing process.
* Performance Testing phases / Life Cycle
* Performance testing tools
* Benefits of Performance Testing
* Types of Performance Testing (Load, Stress, Volume, Endurance & Scalability)
* Identifying the business scenarios for Performance Testing
* What is Load runner tool
* Day 3

**NFR gathering:**

* What are Non- Functional requirements
* Different types of Requirements - Product requirements & Process requirements.
* Deriving NFRs
* NFRs Verifiability.
* Performance testing requirements analysis.
* Collect performance requirements data
  + Infrastructure Data
  + Growth Data
  + Transaction Data
  + Workload pattern Data
  + Quality of Service (QoS) Data
  + Data retention Information.
* Day 4

**Introduction to LoadRunner:**

* What is LoadRunner?
* Why LoadRunner?
* LoadRunner Components
* LoadRunner Protocols
* Protocol Advisor
* LoadRunner Architecture
* How LoadRunner works?
* Load Test Process

**Vugen:**

* What is Vugen?
* Why Vugen?
* Vugen Workflow
* Vugen Recording options
* Day 5
* Vugen Demo Recording
* Vugen Execution

**Script Structure:**

* Script Structure
* Multiple action files
* Script Rules

**Transactions:**

* What are Transactions?
* Why Transactions?
* Syntax with example
* Nested Transactions with syntax and example
* Transaction naming standards

**Comments in the script:**

* Why use comments in the scripts?
* How to insert comments in the scripts?
* Day 6

**Parameterization**

* What is Parameterization?
* Why Parameterization?
* Objectives of Parameterization
* Parameter types
* Simulate Parameters
* Parameter Properties
* Parameter combinations

**Correlation:**

* What is Correlation?
* Why Correlation?
* Web\_reg\_save\_param() function
* Web\_reg\_save\_param() function with regular expression
* How to identify which values to correlate
* Correlation Rules
* Day 7

**Checkpoints:**

* What are checkpoints?
* Types of checkpoints?

**Vugen Logs:**

* Vugen logs
* Recorded log
* Replay log
* Compilation errors
* Runtime Data

**RunTime Settings**

* Run Logic
* Pacing
* Log
* Think Time
* Speed Simulation
* Browser Emulation
* Proxy
* Blocks – Multiple Actions
* Think time vs Pacing
* Day 9

**Basic C functions and LR functions**

* atoi()
* itoa()
* lr\_eval\_string()
* lr\_save\_string()
* lr\_save\_int()
* Day 10

**Script covering all topics**

* Web Tours application script which covers all the above topics.
* Advanced scripts covering following topics
  + Using correlated parameters as an array.
  + Randomly picking values from drop-down list
* How to create a File to store data?
* Day 11

**Controller:**

* What is Controller?
* Different kind of Scenario’s (Basic Schedule, Real World Schedule, by group, by scenario)
* Scenarios Creation.
* Adding Load Generators and verifying the connectivity
* Load Generators, Calculating the # of LGs for a load test.
* Run Time settings
* Executing the tests
* Post-execution activity
* Monitoring servers through controller
* Windows resources.
* Day 12

**Analyzer:**

* What is Analyzer?
* Auto Load Analysis
* Session Explorer
* 90thPercentile
* Analyzer Graphs
* Analyzer Reports
* Drill-down
* Granularity
* Auto Correlate
* Cross Results
* Merge Graphs
* Web Page Diagnostics
* Day 13

**Performance Bottleneck Analysis:**

* What are Bottlenecks?
* Sources of data
  + Traces
  + Counters
* Load Testing tool data
* Typical Parameters monitored for Bottleneck analysis
* Bottleneck Analysis – Some Heuristics

* Day 14
* Jenkin Integration
* Live project covering all the above topics.
  + The project should be completed by students within 7 days after completion of the course.
  + Key will be provided after the project submission.
* Resume guidance.
* Questions and Answers