

Certified Performance Engineer

JMeter

Performance Testing Basics

- Introduction to web application performance testing
- What is Performance testing?
- Performance testing types
 - Stress testing
 - Load Testing
 - Spike Testing
 - Endurance Testing
 - Volume Testing
- Identify Performance Parameters
 - Response time
 - Throughput
 - Memory
 - CPU utilization
- End To End Performance Testing Process

Requirement Gathering for a Performance Testing Project

- Questions to be asked before starting the performance testing project
- What is a real life scenario
- Creating a UserLoad/Workload Model

- Factors to consider while prioritizing the Inscope workflows

Hands-on Activity

- The Participants will create a simple userload model to be used for one real life application
- The Participants will design a questionnaire to be asked for requirement gathering

Introducing JMeter

- JMeter basics
- JMeter Terminology
- Load Testing Process

Working with HTTP Proxy server

- Recording steps on a website
- Using HTTP Proxy server
- Configuring the browser for recording the test script
- Configuring Firefox Mozilla , IE

Building a test plan

- What is a test plan?
- Recording & Playback
- Adding Users
- Adding Default HTTP Request Properties
- Adding Cookie Support
- Adding a Listener to View/Store the Test Results

Hands-on Activity

- Record and Playback a web application's workflow to validate if script is recorded properly

Enhancing Test plan

- Handling the dynamic server values
 - What is Correlation

- Why Correlation
- Regular Expression
- Using Regular Expression Extractor in JMeter Tests
- Parameterize with test data:
 - What is Parameterization
 - Why Parameterize
 - Identifying the test data on AUT
 - Using the CSV Data Config in JMeter Tests
- Adding Assertions to the test script
 - What is Assertion
 - Why Assertion
 - Handling Timers
 - What is timer?
 - Use of timers in a test plan
 - Review of Parameterization and Correlation
 - Creating a final script after correlation and parameterization for the real life application
 - Adding transaction, timers & Assertions to the script

Hands-on Activity

- The Participants will create a dynamic neoload script capable to work for multiple users running iteratively
- The Participants will enhance the script with Parametrization and make sure the script is passing different values for different users

Load test execution and Capturing Results

- Running the tests
 - Threads

- Ramp up
- Scheduler
- How to design a real life Scenario
- Running Testing using GUI
- Running Test using Non-GUI
- Listeners
 - Introduction to Listeners
 - Different types of listeners
 - Aggregate Report
 - Aggregate Graph
 - View Results Tree
 - View Results in Table
 - Summary Report
- Analyzing the Results
 - Understanding Table Results
 - Understanding Graph Results
- Introduction to Benchmarking and Bottleneck Identification

Hands-on Activity

- Prepare a script containing correlation, Parameterization, Listener, Assertion
- Execute the script for 5 users and analyses the results

Server Monitoring and Reporting

- Perfmon
 - Study of Counters
 - Capturing Perfmon data
 - Configuring Perfmon

- How To Prepare Load test execution Report
- Parameters to be presented in Performance Benchmark report