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JMETER 5.1 TRAINING

2 days (14 hours)

Presentation

JMeter is a benchmark for JVM load testing. Extremely rich in functionalities, it is part of the open-source software managed by the APACHE foundation, which ensures its continuity and constant evolution.

The need for acceptable response times means that performance tests must be carried out before software is released. JMeter is the tool of choice, enabling automation that is virtually impossible to achieve manually. JMETER is there to meet this need and ensure the "availability" quality criterion. This course introduces JMeter to the world of load and performance testing and illustrates its relevance. We start with the different ways of installing JMeter.

In order to avoid getting bogged down in the complex and necessary richness of the tool, we present a basic scenario implementing the most important functionalities. We'll then take a closer look at the JMeter ecosystem. We then move on to an analytical examination of all the components as they appear in the user interface. This is followed by a methodological approach to preparing scenarios, transcribing them into test plans, recording them, running them and exploiting the results. We then turn to the advanced elements of JMETER that can be used to meet the constraints of the scenarios. We conclude with continuous integration, where JMeter has its rightful place.

As with all our training courses, we'll be teaching you the latest version of the tool, [JMeter 5.6](#).

Objectives

- Master JMeter
- Develop load tests in a WEB and JAVA environment
- Graphical analysis of results
- Continuous integration with unit and functional testing

Target audience

- Developers, Architects, Lead Developers

Prerequisites

- Basic knowledge of Java / JVM or object-oriented languages

JMETER training program

Introduction to load testing and JMeter

- The importance of load testing
- The diversity of load tests
- Results and balance sheets
- The need for automation
- Overview of load testing tools
- Introducing JMeter

JMeter tool installation

- Resource requirements
- Available distributions
- Product installation
- Graphics mode
- Command line mode

Recording and launching a basic test scenario

- Model creation
- Browser proxy configuration
- HTTP link to the application under test
- Scenario recording settings
- Script recording
- Load test settings
- Start load test
- Review of load test results

Components of a test scenario

- Test plan
 - User variables
 - HTTP parameters
 - HTTP cookie manager
- Unit group
 - Controller Recorder
 - Income statement
- Test recorder

Methodology for relevant load and performance tests with JMeter

- Preparation of scenarios close to actual software use
- Transcription of scenarios into test plans
- Scenario recording
- Launching JMeter online scenarios
- Graphical processing of results

Advanced elements of JMeter

- Type of tests; HTTP, HTTPS, FTP, TCP, LDAP...
- Receivers
- Listeners
- Post and pre-processor
- Logic controllers
- Assertions
- Timers
- Variables and functions
- Online ordering
- Debug
- Monitoring tests
- Association with JMX and Jconsole

Continuous integration

- The role of load testing in continuous integration
- Junit & JMeter
- Selenium & JMeter
- Jenkins & JMeter

Practical work

- TP 01: JMeter installation
- TP 02: Basic scenario with JMeter
- TP 03: Scenario setup
- TP 04: Receptors
- TP 05: Listeners
- TP 06: Logic controllers
- TP 07: Assertions

- TP 08: Timers
- TP 09: Variables and functions
- TP 10: Debugging
- TP 11: Monitoring
- TP 12: Control mode
- TP 13: Graphic results

Companies concerned

This training course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.