

Performance Testing Fundamentals

Course Description

This course explains the fundamentals of performance testing throughout the software development life cycle (SDLC). It provides a theoretical framework for selecting, motivating, implementing and maintaining performance testing within your organisation.

Intended Audience

The course is relevant to test automators of all experience levels, business analysts and developers.

Course Content

The course covers the following areas:

- **Performance Testing Life Cycle**
This section defines performance testing and its processes. It touches on why performance testing is done and how performance risk is mitigated. It addresses the issue of where and how performance testing can be implemented in traditional and Agile SDLCs.
- **Performance Test Planning**
This section defines and explains the following activities and concepts for performance test planning:
 - Objectives
 - Approach
 - Deliverables
 - Test and Production Environment Comparative Analysis
 - Assumptions
 - Performance Requirements and Acceptance Criteria
 - Resource Requirements and Scheduling
 - Risk and Contingencies
 - Tool Selection
 - Cost and Budget
- **Performance Test Design**
This section defines and explains the following activities and concepts for performance test design:
 - Collection of functionalities or features to be tested
 - Quantitative acceptance criteria
 - Performance test type(s)
 - Test data requirements
 - Duration and number of iterations of the load executed
- **Performance Test Preparation**
This section defines and explains the following activities and concepts for performance test preparation:
 - Performance test scripts for the selected performance testing tool
 - Preparation of test data
 - Configuring application and physical test environment
 - Setup and configuring of performance test monitoring tools

- **Performance Test Execution**
This section defines and explains the activities and concepts for performance test execution.
- **Analysing Performance Test Results**
This section defines and explains the following activities and concepts for analysing performance test results:
 - Highest/Lowest/Average throughput
 - Network latency
 - Memory leaks
 - Pass/fail information comparison with acceptance criteria for test scenarios
 - Statistics of quantitative results
 - Finding performance bottlenecks and suggestions
- **Performance Test Reporting**
Report and delivery of performance test reports to the relevant project stakeholders.
- **Skills and Experience**
This section will discuss the skills and experience required for different levels of performance test automation specialists.

Course Description

- **Prerequisites**
Although this is a high level course, it would be beneficial for candidates to have some level of software development or networking experience.
- **Course presentation and duration**
An experienced performance testing practitioner will present the course. The course duration is one day. It runs from 8:00 to 17:00. This includes a lunch and two tea breaks daily.
- **Training style**
The course is conducted in a classroom style. Candidates use practical tasks to consolidate theoretical concepts. Any testing-related problems encountered in the workplace can be discussed in the course.
- **Course materials, certification and assessment**
Comprehensive course notes are provided. Practical exercises, which are completed during the course, are handed in for evaluation.
- **Training Venues**
Test and Data Services presents courses at several well-established training facilities in Midrand (near Johannesburg and Pretoria), Cape Town and Durban. Training can be arranged at the client's premises depending on adequate facilities and candidate numbers.

Contact

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