

LOAD, STRESS, PERFORMANCE AND SCALABILITY TESTING (LSPS Testing) Two-day workshop

Overview

Validating a system is not just about testing the functional aspects. It is critical to assess the system performance at real-life situations and to know the limits of the software. Is there a test design technique that will design test scenarios/cases that model real life scenarios? When do I commence performing these tests? What aspects should I consider in planning phase so that these tests are conducted smoothly?

Workshop Objective

In this workshop, we will discuss "Operational Profiling" a black box technique that can be used to design real-world like test scenarios. Non-functional requirements are most often ill stated and fuzzy, we will discuss the technique "Software Quality Factors" that allows to create verifiable non-functional requirements. LSPS issues found late in the lifecycle pose a serious risk in the meeting the delivery deadlines, we will cover aspects to test process and planning aspects that can minimize this risk. This workshop will also highlight some of the popular tools used for LSPS testing.

Topics of discussion

Introduction to Non-functional requirements

What are non-functional requirements?

Examples of some non-functional requirements

Some non-functional requirements and their definitions

Discuss some the "popular" non-functional requirements and define them clearly

Issues in testing non-functional requirements

Appreciate that the non-functional requirements are typically subjective and fuzzy

Also understand that non-functional requirements are interdependent

Describe Quality Factors as a method that makes non-functional requirements testable

How to V&V non-functional requirements

Describe here the various tests that help in validating the non-functional requirements.

List a matrix of non-functional requirements versus the V&V method

Characteristics of non-functional test cases

When to execute these tests

Test setup requirements (HW/SW/Test data)

Quality Models - ISO 9126

Discuss the various "popular" quality FURPS... models that focuses on specific non-functional requirements

Load, Volume, Stress, Performance testing

Definition and objectives of these tests

What is an operational profile, what data do we need to create and how do you go about generating an operational profile.

Using operational profile information to devise these tests

Issues to be considered in devising and execution of these tests

Scalability testing

Definition and objective

Technique for determining system configurations to be considered for scalability

How to determine that the application is scalable

How depict, analyze data to aid in system sizing

Reliability assessment

Reliability models

How to use failure data to assess reliability

Usability testing

Load/Performance testing web applications

Tools that aid in non-functional testing

Performance Engineering

Workshop benefits

At the end of this workshop, participants will have a deeper understanding of LSPS testing and be able to apply formal techniques to create real-work LSPS test scenarios.

Who should attend?

System test engineers / Test Architects

Prerequisites - Participants are expected to have practicing knowledge of software testing concepts

Delivery method

The workshop consists of classroom discussions and a problem solving/case-study session. It adopts our unique learning model. This enables participants listen to lecture on a topic, introspect using a structured questionnaire, explore the topic - hands-on session, discuss the learning after exploration and finally read the supplemental course notes.