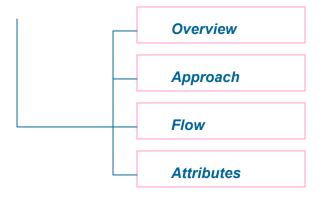


PERFORMANCE TESTING APPROACH





INTRODUCTION

Software Testing

Testing is not just finding out the defects. Testing is not just seeing the requirements are satisfied. Testing is a process of verifying and validating all wanted requirements are there in products and also verifying and validating any unwanted requirements are there in the products. It is also seeing any latent effects are there in the product because of these requirements.

Testing is not just a phase in SDLC, but it is to be addressed in all phases.

Performance testing is not just to determine performance attributes like response time, throughput it also to determine the performance problems (like bottlenecks, memory, disk, process, processor, cache, network, etc.) or any memory leakage is present in system when application is running in normal scenario. This testing also identifies the system's behavior when the application is communicating with other application in the system. It is also to evaluate the compliance of a system or component with specified performance requirements

TRACE APPROACH

TRACE provides an integrated complete end-to-end performance testing solution to its customers with its defined methodology and in-house testing tools. A well-defined end to end metric based process with proper entry and exit criteria focusing on the entire aspects of performance testing is followed at TRACE.

The approach followed at Trace is based on performance objective. The performance objective differs from clients to clients and projects to projects like system integrity, performance benchmarking, performance enhancement, performance problem diagnosing.



PERFORMANCE TESTING FLOW

REQUIREMENT PHASE

- Requirement Study
- Project Initiation
- Analyzing Test Goals and Objective
- Determining test scope
- Analyzing HW and requirements.
- Test Initiation Checklist

PLANNING PHASE

- Test Plan, Test strategies.
- Selection of testing tools.
 Generating Test Scenarios /Scripts.
- Reviewing the test documents and Base lining.
- Test Readiness Review

EXECUTION PHASE

SW

- Performance Test Scenario / Script Execution.
- Collect the Data.
- Analyze the Data.
- Problem Investigation like bottlenecks (memory, disk, processor, process, cache, network, etc.) resource usage like (memory, CPU, network, etc.,)
- Generate the Performance analysis reports containing all performance attributes of the application.
- Create Recommendation report based on the analysis.
- Repeat the above test for the new build received from client after fixing the bugs and implementing the recommendations

ENVIRONMENTAL SETUP

- Set up the environment as per the requirement
- Installation of OS and software and testing tools
- Test readiness review.

COMPLETION PHASE

- Performance
- Test Report Generation
- Updating test documents
- Post implementation review
- Project completion checklist



PERFORMANCE TESTING ATTRIBUTES

Attributes considered for PERFORMANCE Testing

Following are the only few attributes out many that considered during performance testing

- CPU usage
- Memory usage {Memory leakages, thread leakage}
- > All gueues and IO waits
- ➤ Bottlenecks {Memory, cache, process, processor, disk and network}
- Network Usage {Bytes, packets, segments, frames received and sent per sec, Bytes Total/sec, Current Bandwidth Connection Failures, Connections Active, failures at network interface lever and protocol level}
- > Database Problem {Settings and configuration, Usage, Read/sec, Write/sec, any locking, queries, compilation error}
- Web server {request and response per seconds, services succeeded and failed, server problem if any}
- Response Time
- > Throughput
- > Screen transition
- > Time {Session time, reboot time, printing time, transaction time, task execution time}
- ➤ Hits per second, Request per seconds, Transaction per seconds
- > Performance measurement with number of users.
- > Performance measurement with other interacting application or task



About TRACE

Trace Technologies, is a Software Testing Company, serving Software companies

- To minimize the businesses risks
- o To minimize the cost of producing Good Quality Software
- **o** To minimize Time to Market.

The spectrum of Trace services is

- Software testing
- Test Consultation
- Test Automation

Trace Products are

- LoadTracer- a load and performance testing tool
- **Tracer** an effective tool for the automation of functional and regression testing.
- o **Tracktest-** a complete web based test management tool

For more information call 91-44-23741823 / 9444160581 Or visit our Web site at: www.tracet.net