TRACE
TECHNOLOGIES
Empowering Software Quality

STRESS TESTING APPROACH

- *Overview*
- *Approach*
- *Flow*
- *Attributes*
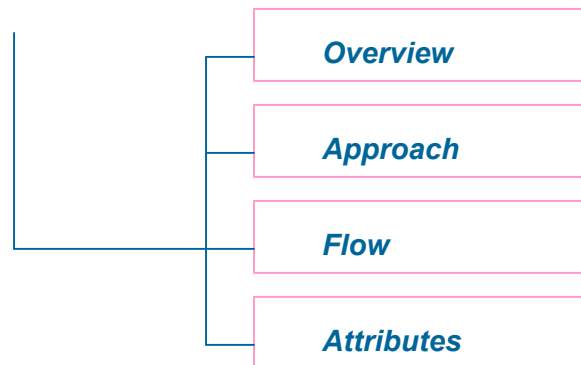
INTRODUCTION

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.

Stress testing is not just to determine stress point (when the system goes down or crashes because of increase in load) but also to determine the factors affecting the stress point.
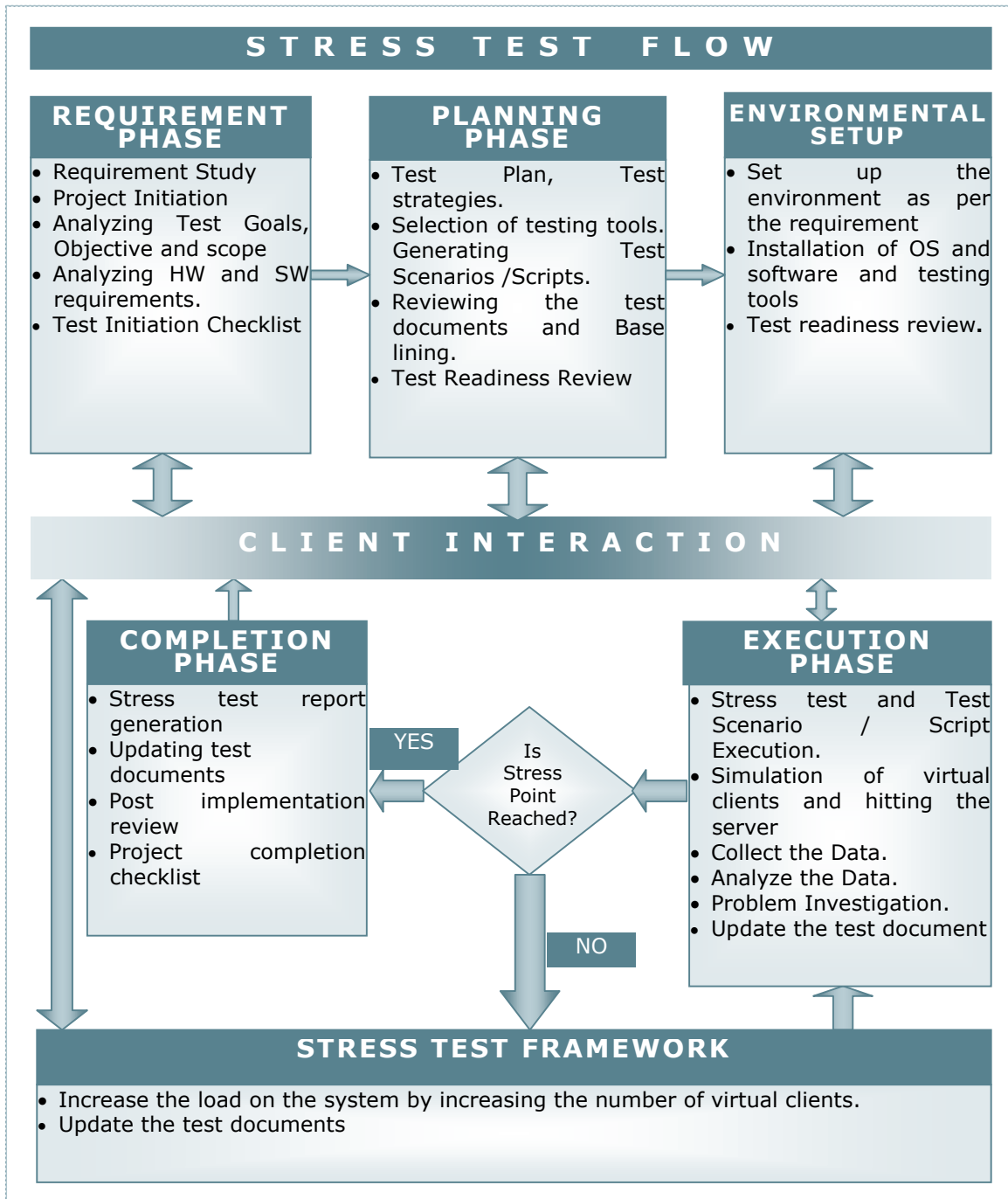
It also to determine the performance behavior of the system before reaching the stress limit.

TRACE APPROACH

TRACE provides an integrated complete end-to-end stress 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 stress testing is followed at TRACE.

The approach followed at Trace is based on determining the system behavior before reaching the stress point. This is done with a continuous iterative testing by increasing load. At each level all the performance attributes have been monitored and analyzed.

STRESS TESTING FLOW

S T R E S S   T E S T   F L O W

REQUIREMENT PHASE

- Requirement Study
- Project Initiation
- Analyzing Test Goals, Objective and scope
- Analyzing HW and SW 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

ENVIRONMENTAL SETUP

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

C L I E N T   I N T E R A C T I O N

COMPLETION PHASE

- Stress test report generation
- Updating test documents
- Post implementation review
- Project completion checklist

YES

Is Stress Point Reached?

EXECUTION PHASE

- Stress test and Test Scenario / Script Execution.
- Simulation of virtual clients and hitting the server
- Collect the Data.
- Analyze the Data.
- Problem Investigation.
- Update the test document

NO

STRESS TEST FRAMEWORK

- Increase the load on the system by increasing the number of virtual clients.
- Update the test documents

STRESS TESTING ATTRIBUTES

Attributes considered for Load Testing

Following are the only few attributes out of many that considered during Stress testing·

- ➢ 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 under load
- ➢ CPU usage
- ➢ Memory usage {Memory leakages, thread leakage}· 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}
- ➢ Web server {request and response per seconds, services succeeded and failed, server problem if any}

About TRACE

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

- o **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

- o **Software testing**
- o **Test Consultation**
- o **Test Automation**

Trace Products are

- o **LoadTracer–** a load and performance testing tool
- o **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

4