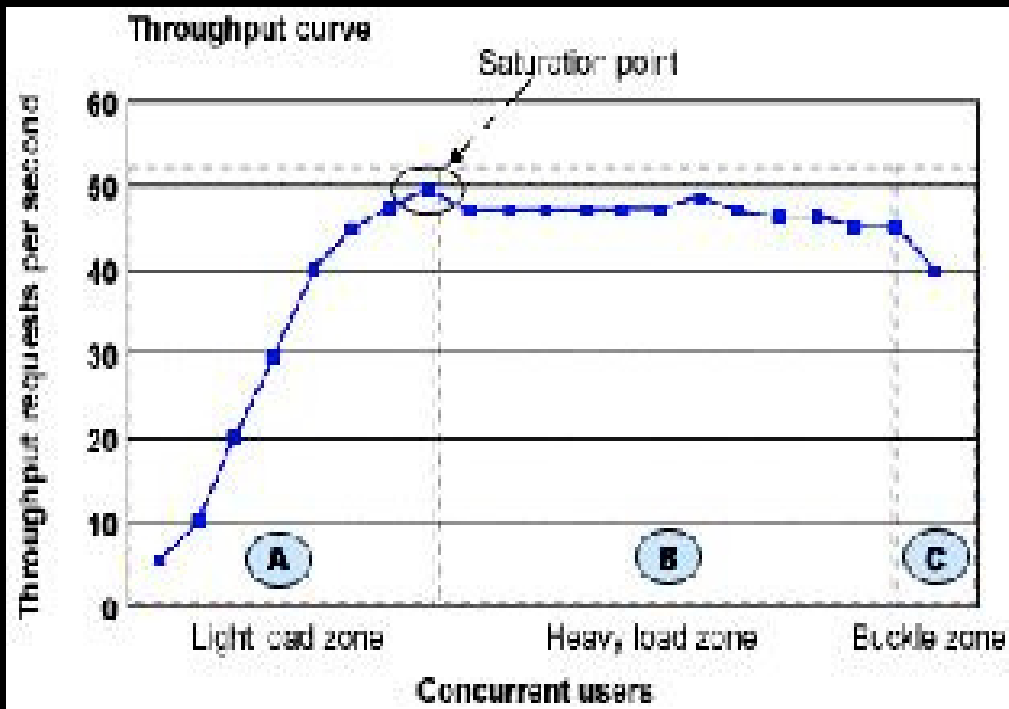


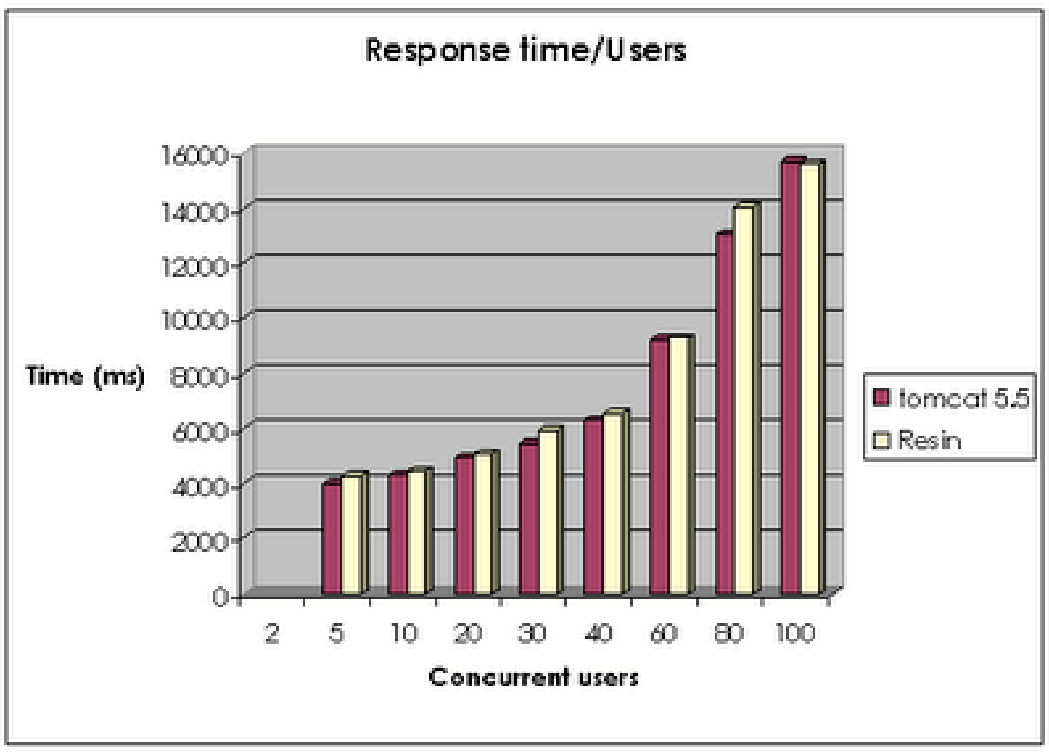
- ✓ Throughput
- ✓ Response Time
- ✓ Tuning
- ✓ Benchmarking

Throughput



- Capability of a product to handle multiple transactions in a give period.
- Throughput represents the number of requests/business transactions processed by the product in a specified time duration.
- As the number of concurrent users increase, the throughput increases almost linearly with the number of requests. As there is very little congestion within the Application Server system queues.

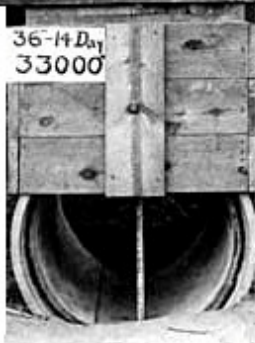
Response Time



It is equally important to find out how much time each of the transactions took to complete.

Response time is defined as the delay between the point of request and the first response from the product.

The response time increases proportionally to the user load.



- Process of exercising the system under test by feeding it the largest tasks it can operate with.
- Constantly increasing the load on the system via automated tools to simulate real time scenario with virtual users.

- Testing a word processor by editing a very large document.
- For Web Application load is defined in terms of concurrent users or HTTP connections.

- most frequently used transactions
 sum of all of the other

- As in any type of system testing, a well-defined test plan is the first essential step to successful testing.
- Planning load testing helps to:**

Planning load testing helps to:

- **Build test scenarios that accurately emulate your working environment:** Load testing means testing the application under typical working conditions, and checking for system performance, reliability, capacity, and so forth.
- **Understand which resources are required for testing:** Application testing requires hardware, software, and human resources. Before beginning testing, we should know which resources are available and decide how to use them effectively.
- **Define success criteria in measurable terms:** Focused testing goals and test criteria ensure successful testing. For example, it's not enough to define vague objectives like "Check server response time under heavy load." A more focused success criterion would be "Check that 50 customers can check their account balance simultaneously & that server response time will not exceed 1- minute"

- Determining and recording performance testing objectives involves communicating with the team to establish and update these objectives as the project advances through milestones.

OpenSTA

- Developed in C++
- HTTP Load Test Application

-

Advantages:

- Open Source Software
- A user-friendly graphical interface
- The script capture from the browser
- The monitoring functionality

Drawbacks:

- Only designed for Windows
- Only for HTTP

LoadSim

- LoadSim is an open source software developed in Java, which is designed for HTTP distributed load testing

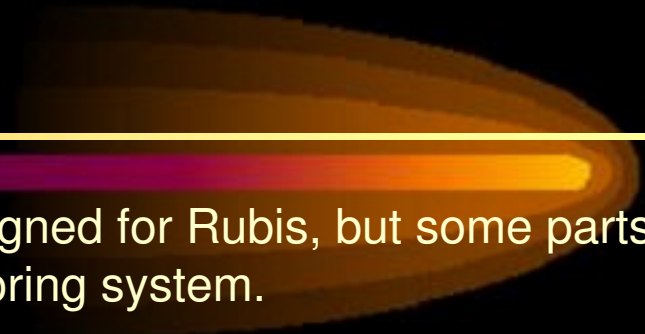
- ## Advantages:

- ## Drawbacks:

- >>>>>>>>>>>>>>>>>>> www.softwaretestinggenius.com <<<<<<<<<<<<<<<<<<<

Rubis

- Provided with some load-test tool (designed for Rubis, but some parts of code could be re-used) and a monitoring system.

- 
- igned for Rubis, but some parts
oring system.

Advantages:

- Open Source
- Monitoring capabilities
- Charts representations and automatic generation of HTML report

Drawbacks:

- Specific to Unix environment and Rubis application

