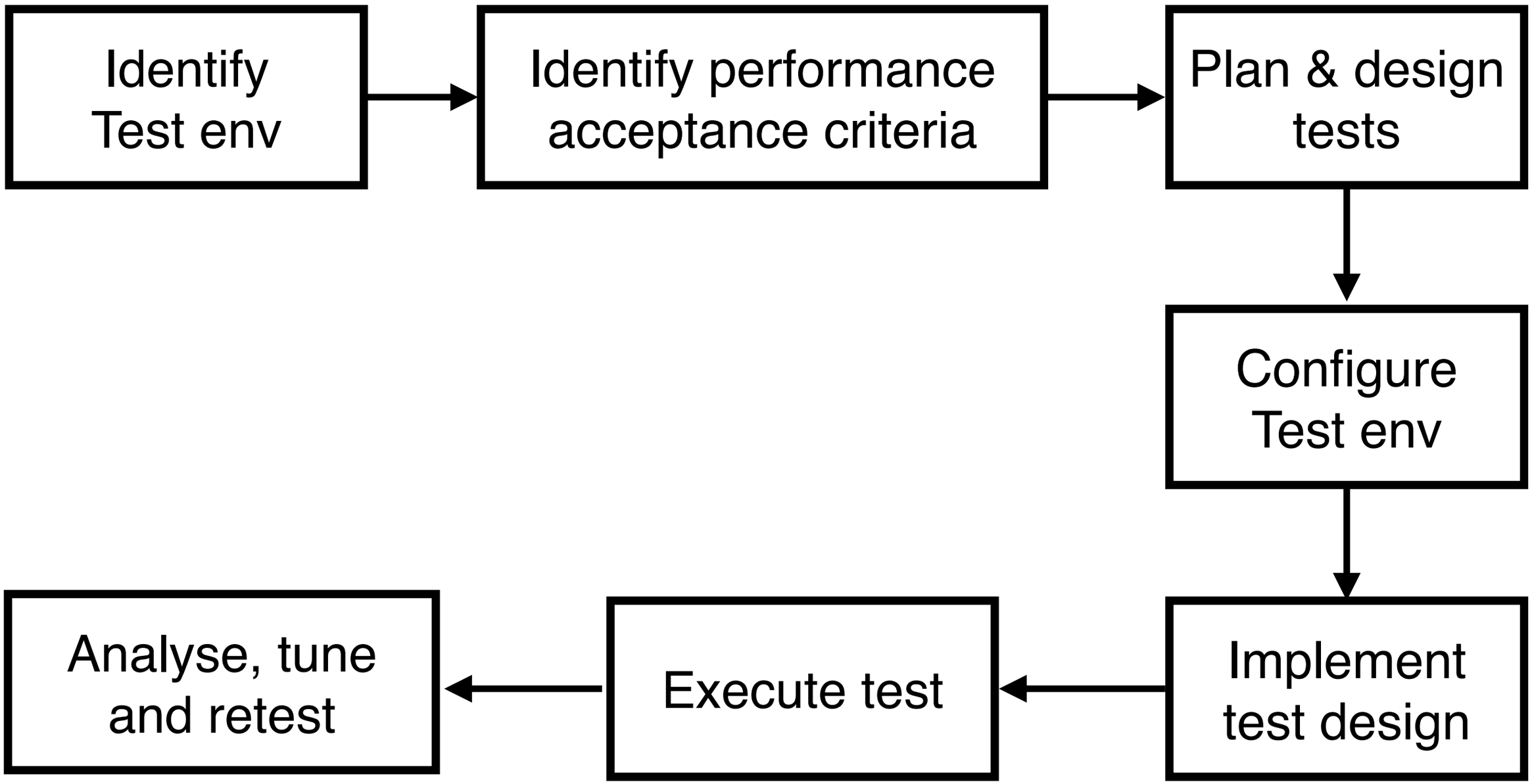
สยามชำนาญกิจ
SIAM CHAMNAN KIT

Performance Testing

Performance testing process

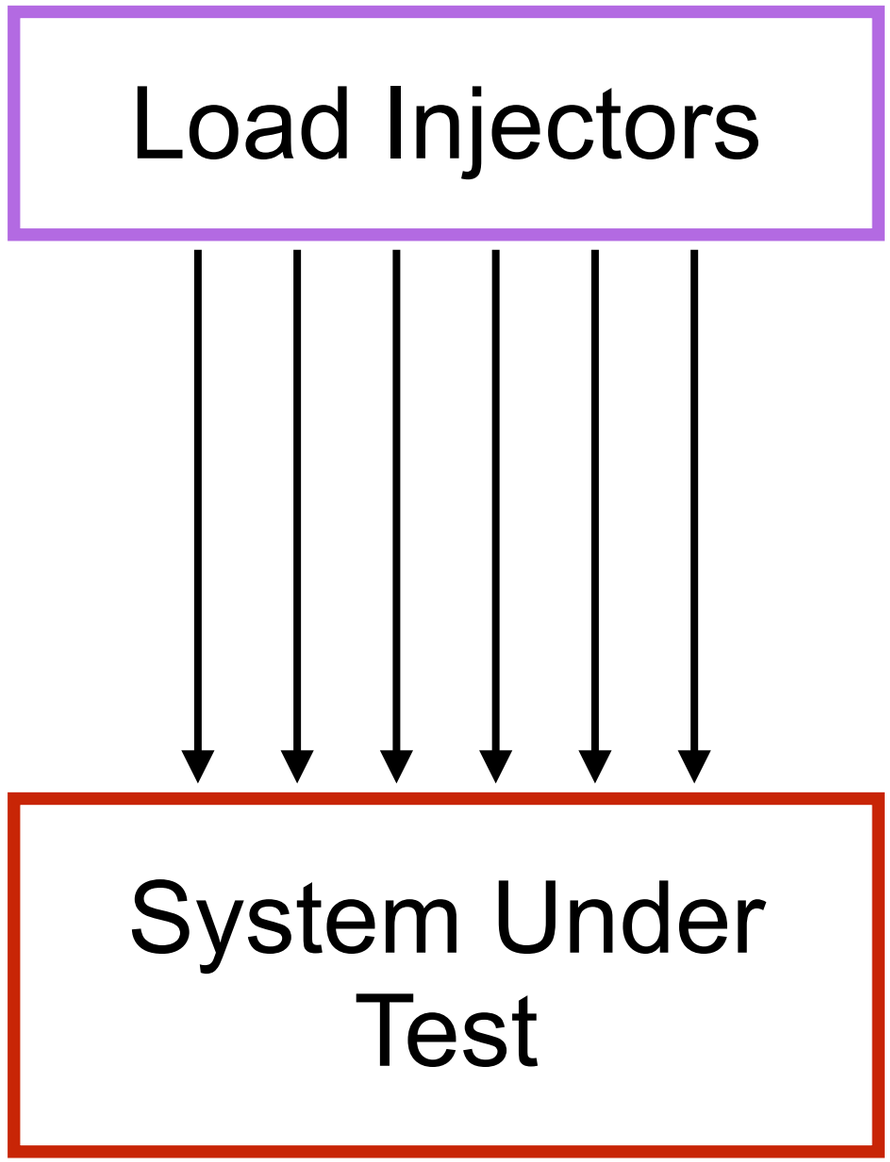
Process

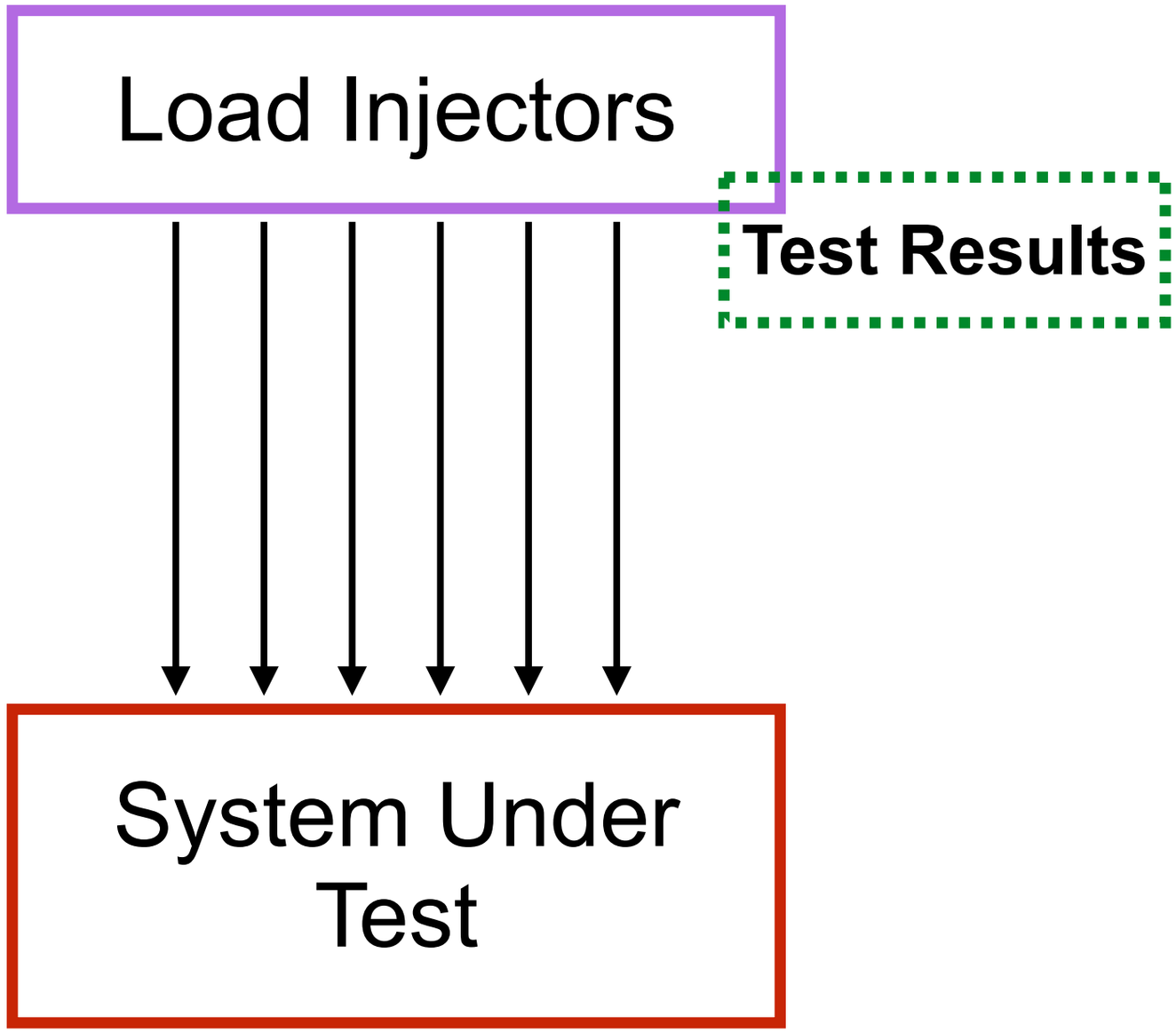


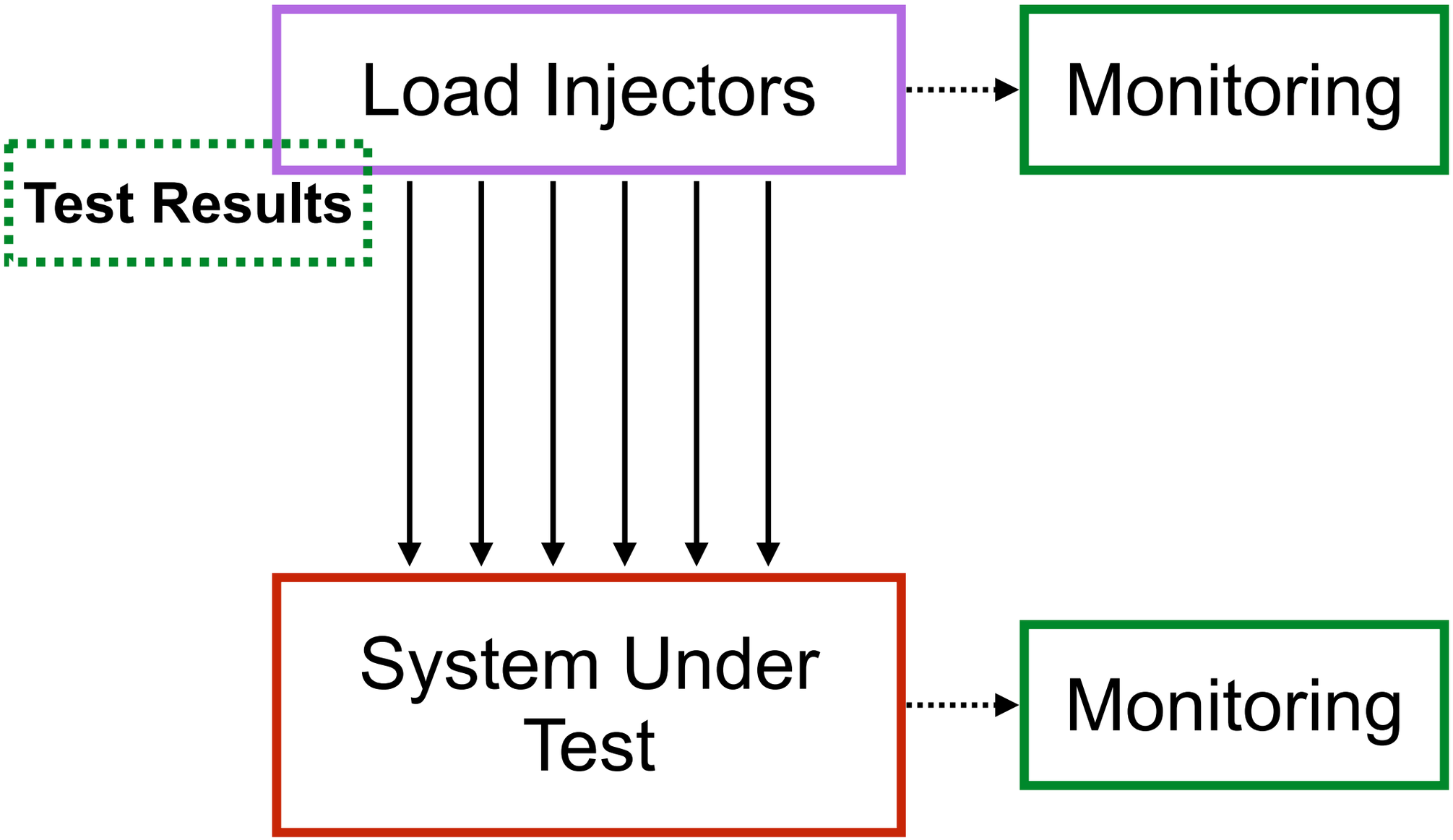
1. Identify your testing environments

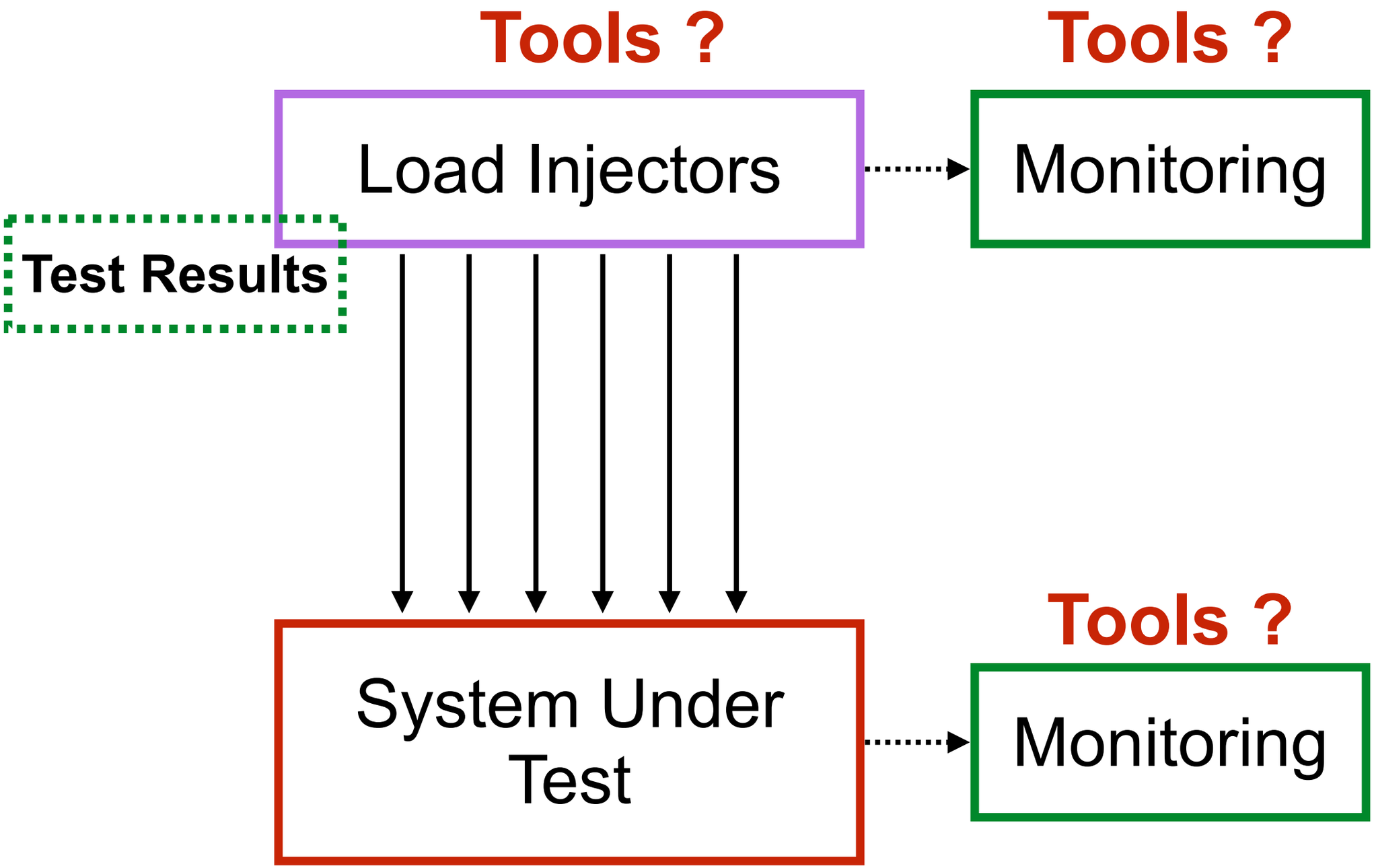
Environments

System Under Test or production-like
Test environments
Testing tools
Hardware
Software
Network configurations









2. Identify the performance acceptance criteria

Goals of testing ?

Throughputs
Response times
Resources allocation
etc …

With number of concurrent users ?

Pattern of concurrent user ?

Load testing
Stress testing
Spike testing
Endurance/soak testing
Scalability testing
Volume testing

Pattern of concurrent user ?

Load testing

Stress testing

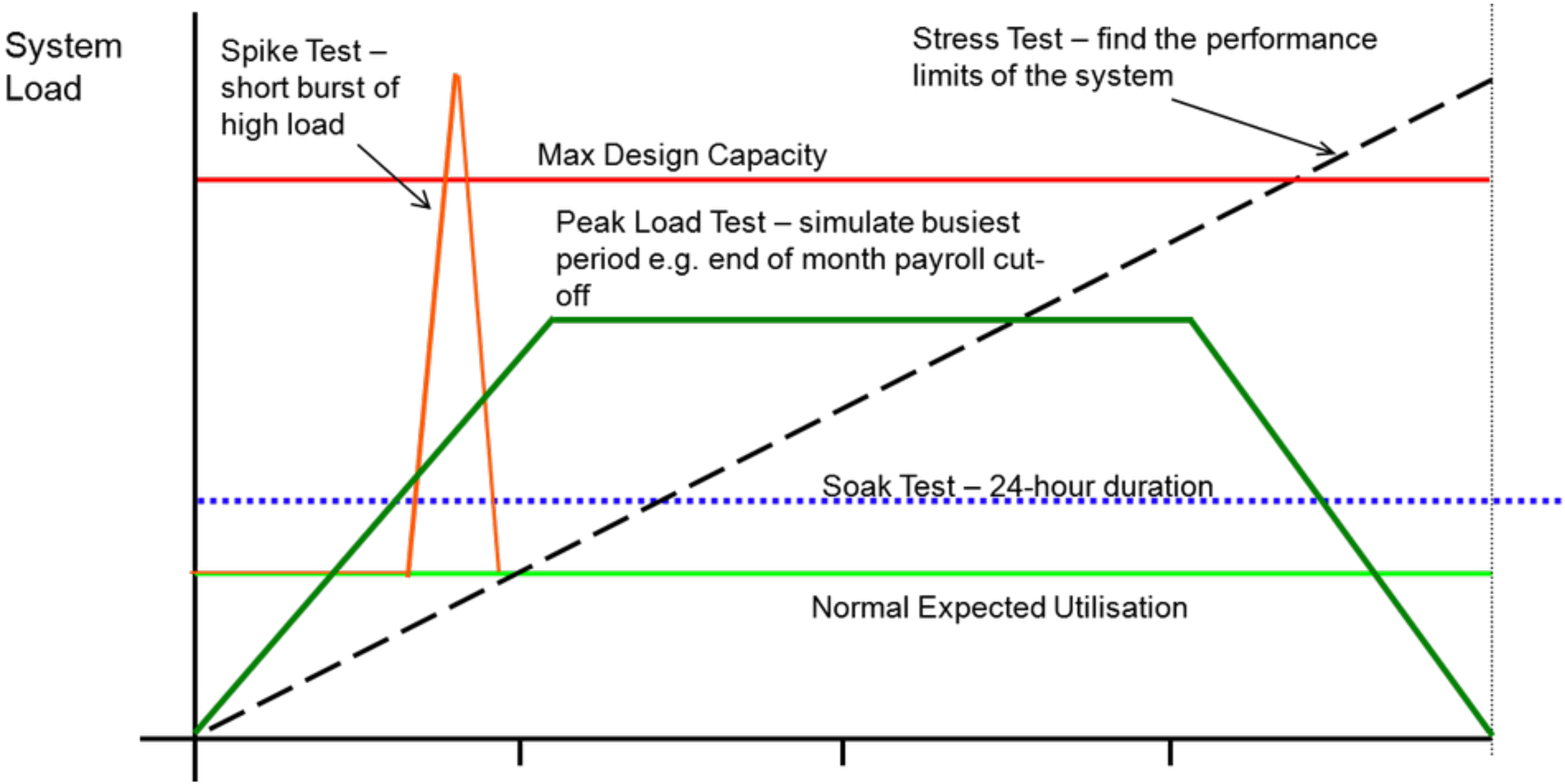
Spike testing

Endurance/soak testing

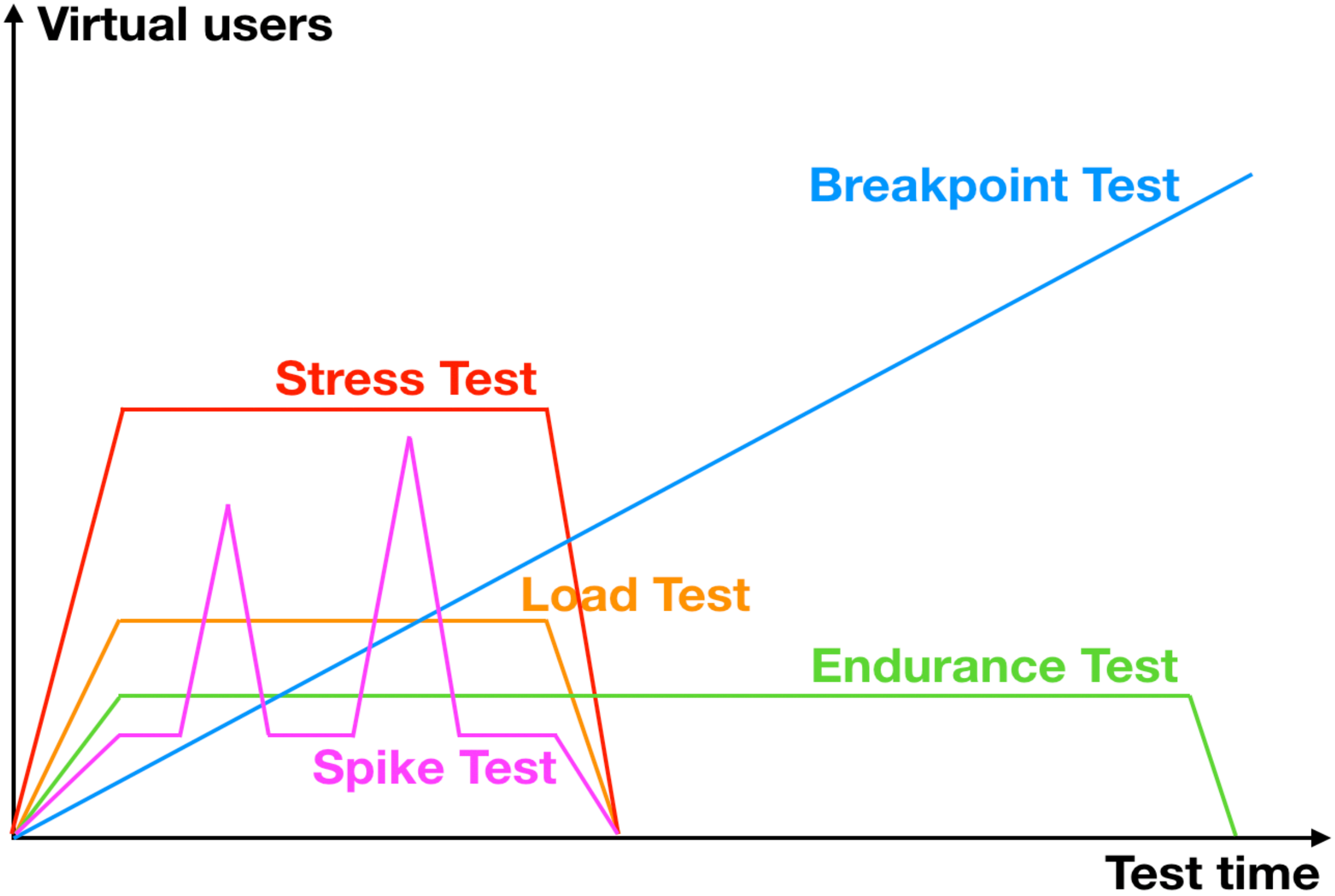
Scalability testing

Volume testing

Pattern of concurrent user ?



Pattern of concurrent user ?



3. Plan and design performance tests

Test scenarios ?

Key scenarios to test
Number and pattern of users
Plan performance test data
Collect all **metrics** what you need !!

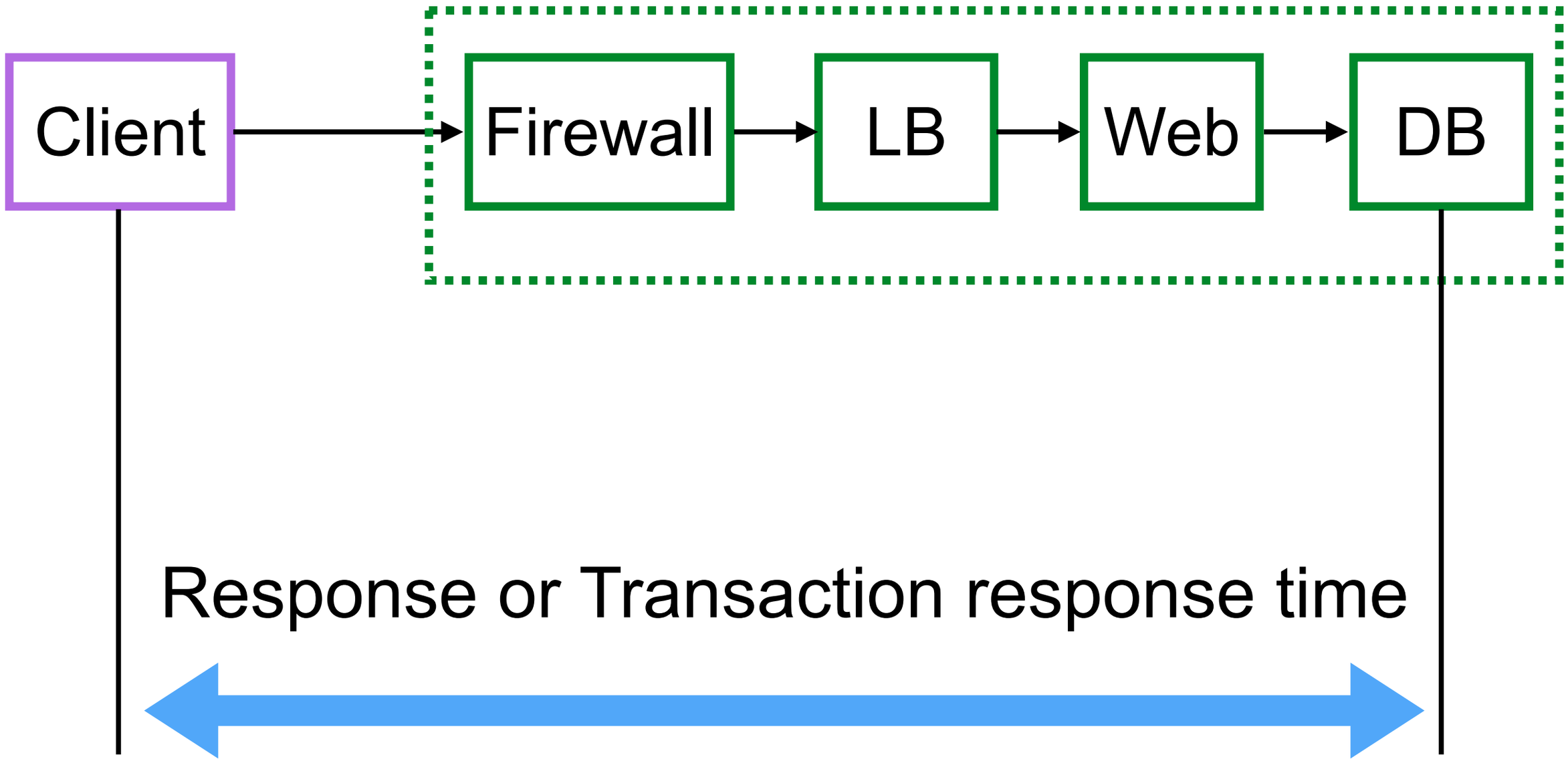
Performance testing metrics (1)

CPU usage
Memory usage
Disk usage
Network usage (**bandwidth**)
Latency

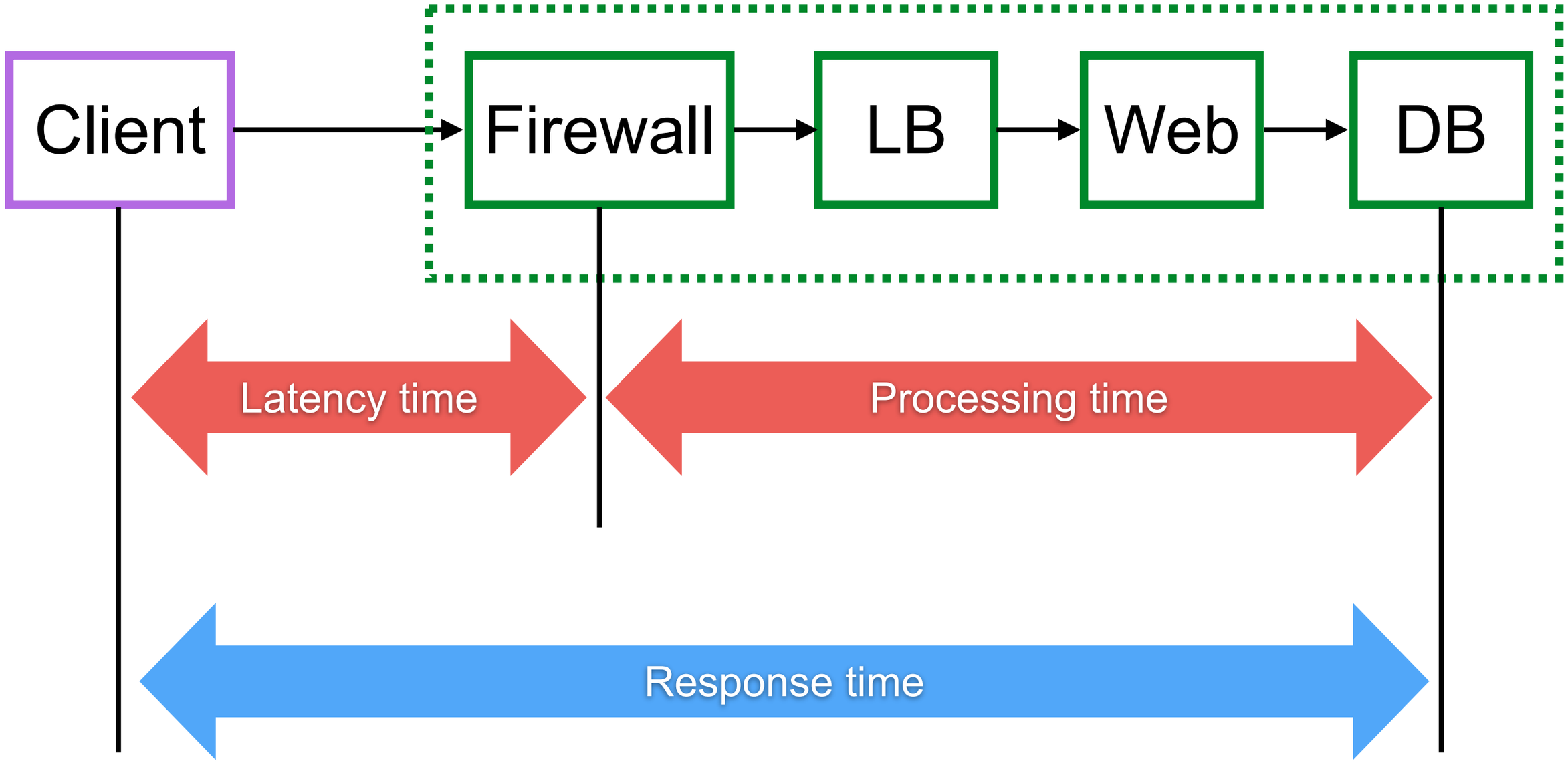
Performance testing metrics (2)

Throughput
Response time
Active connections/sessions
Amount of connection pools
Hit per second
Waiting time
Thread counts
Garbage collection

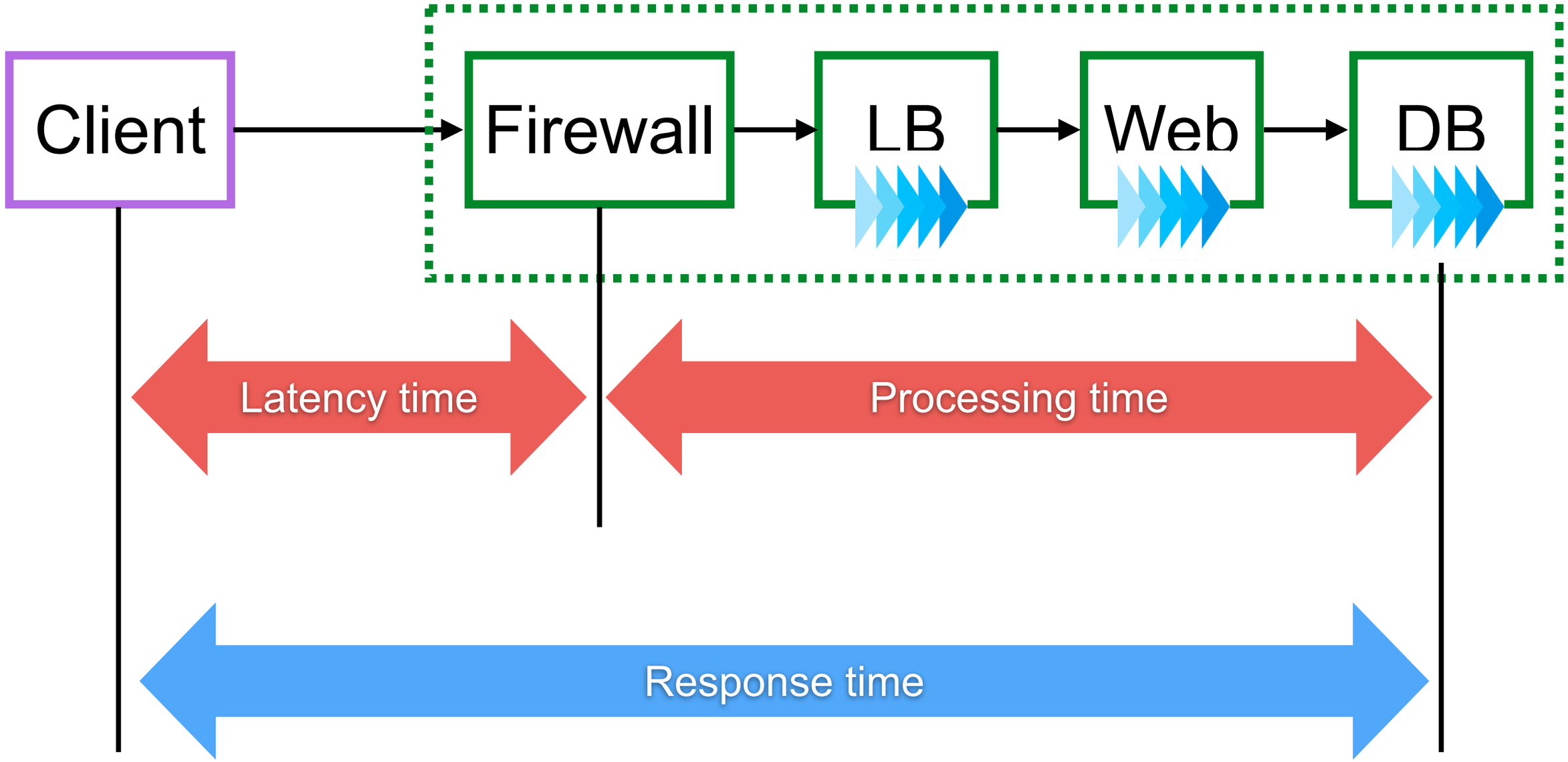
Response time



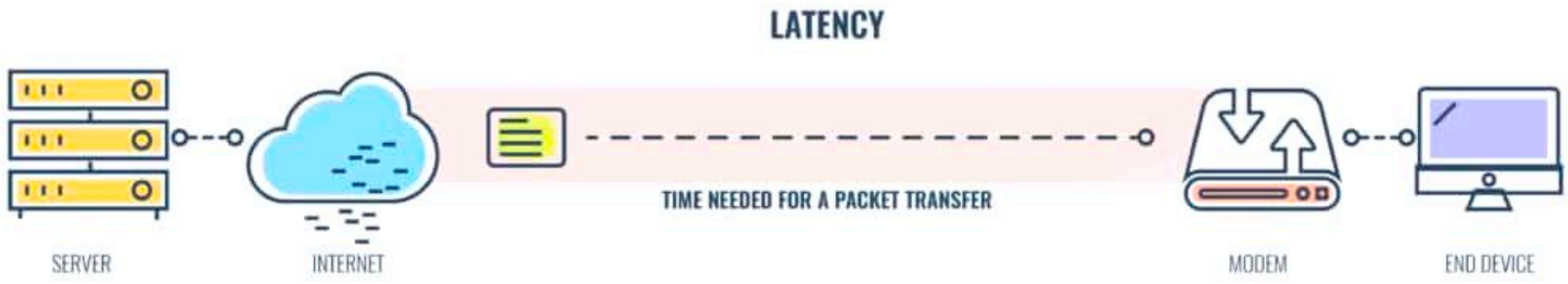
Response time = Latency + Processing



Queuing time !!

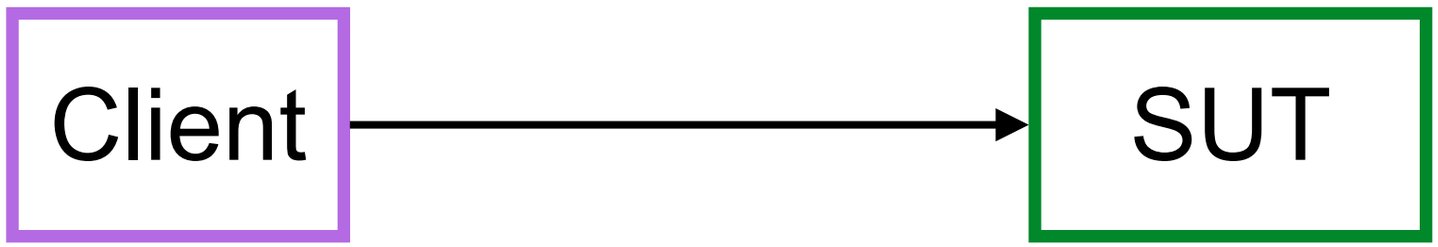


Latency vs Throughput



Throughput ?

How many messages/requests are arriving at destination successfully



Good way to measure the performance of network connection

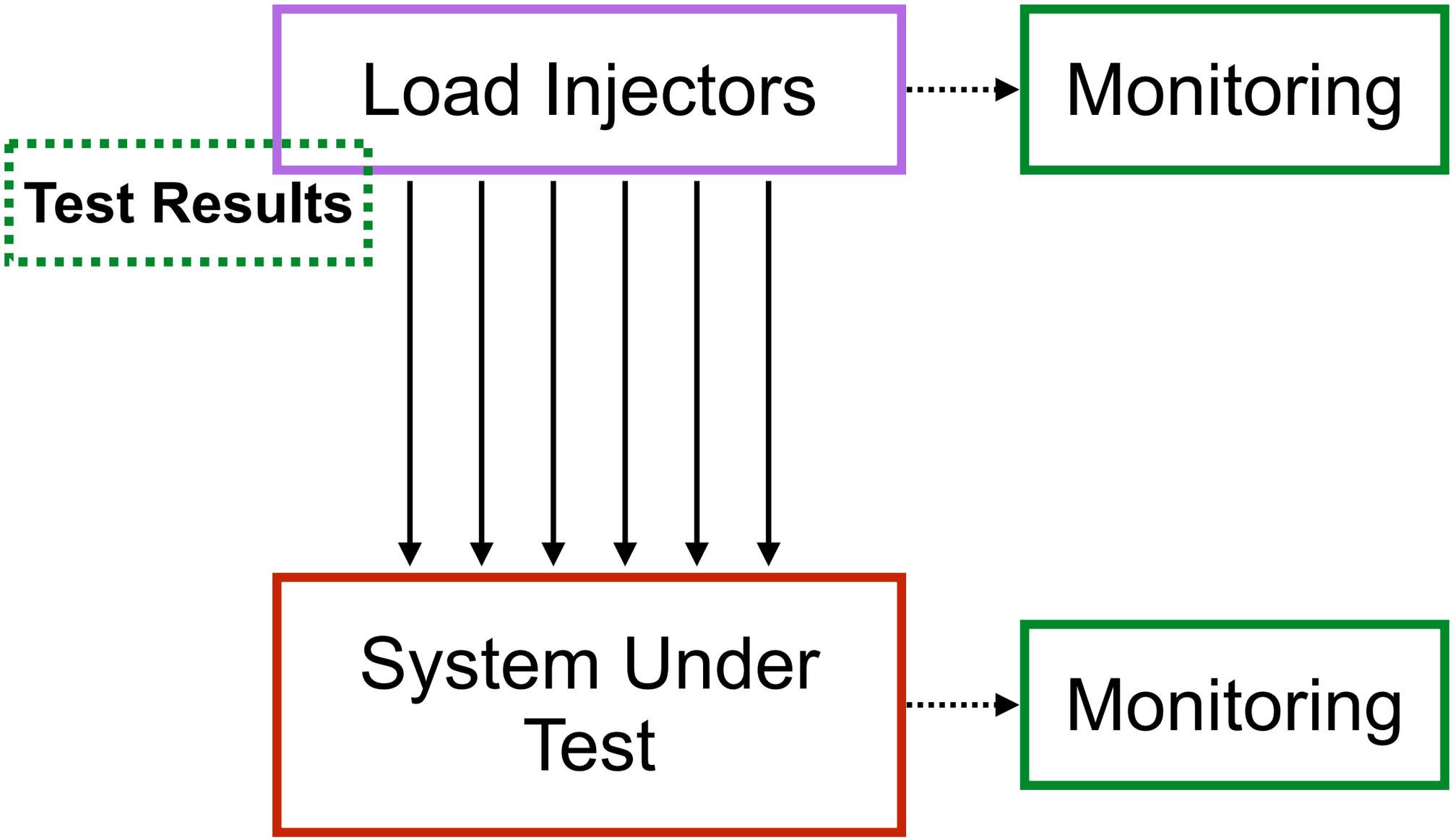
Throughput ?

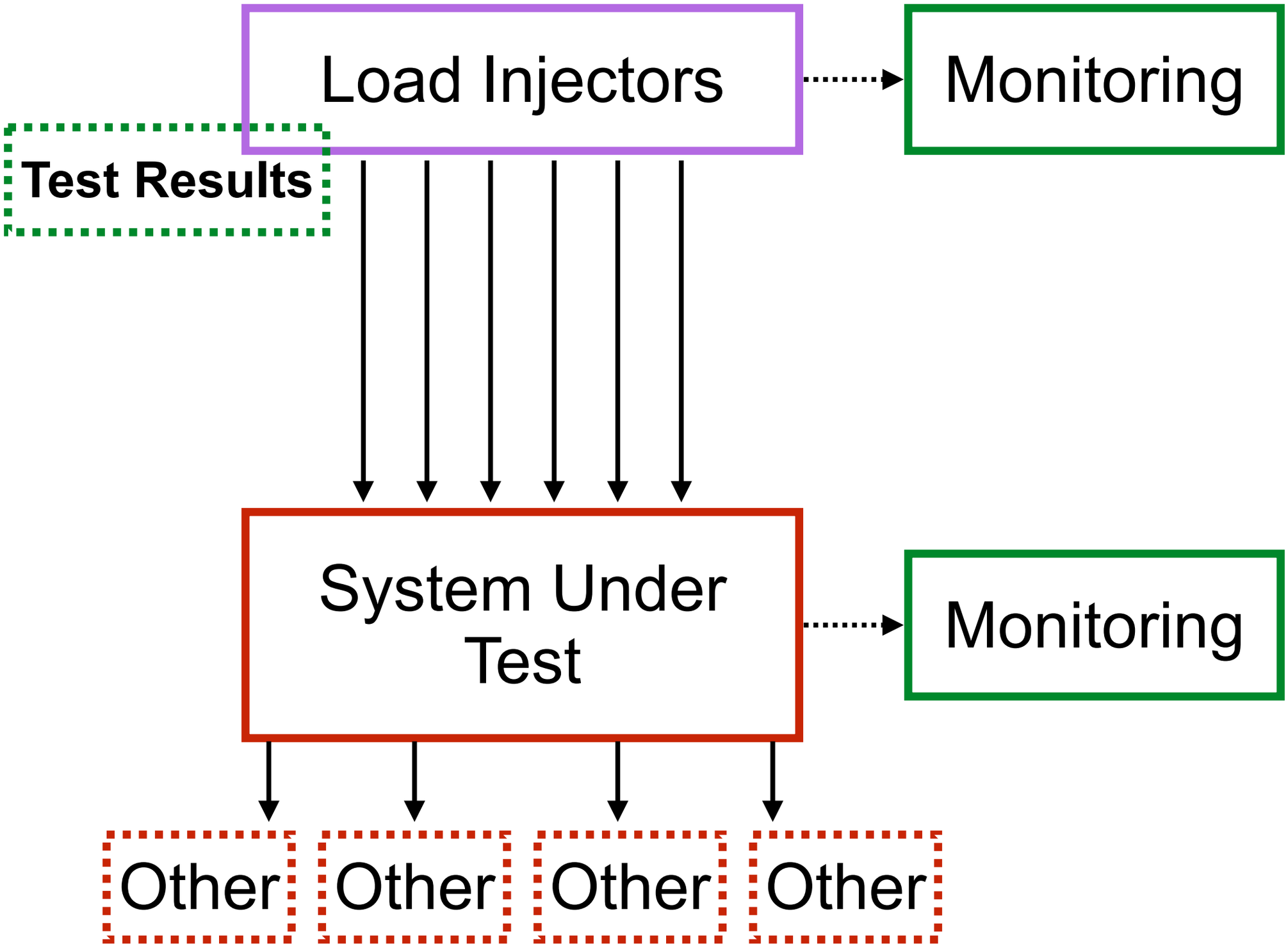
How many messages/requests are arriving at destination successfully

Bandwidth of network
Size of message
Response time

Good way to measure the performance of network connection

4. Config the test environment





5. Implement test design

6. Run the tests + monitor

7. Analyse, Tune and Re-test

Start with design