LTAT.06.007 Distributed Systems
Practical Seminar 4

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Recap

• Installed JMeter
  ▪ Produced load (aka Test plan) on a server using different types of Classes
  ▪ Induced load provides insights about server behavior
Agenda

• **Goal:** To learn how to extract and estimate performance metrics from log files.

• **Content:**
  - Manual inspection
    - Exercise 1
  - Generating reports and graphs (using JMeter modular dashboard)
    - Exercise 2
    - Exercise 3

• **Quiz**

After this lecture, you should be able to:

• Understand how to interpret performance metrics from log files
Session Content

Exercise 1
Extracting arrival rate and response time of different workload classes

Exercise 2
Generate reports of response time and throughput using JMeter

Exercise 3
Changing the overall APDEX (Application Performance Index) to analyze a different user satisfaction level

Observation
Instructions to complete this practical session can be found in the course website: https://courses.cs.ut.ee/2021/ds/spring/Main/Instructions
Arrival Rate

Arrival rate is the arrivals per unit time at a resource.

\[
\text{Arrival Rate} = \frac{A}{T}
\]

Where A is total number of service requests (i.e., arrivals)
Response/Elapsed Time

- Measures the time from just before sending the request, until just after the last chunk of the response has been received.
- RTT
Utilization

Utilization of a resource,

\[ U = \frac{B}{T} \]

Where, \( B \) = Total busy time in observation time \( T \)

\( T \) = Observation time
Seminar 4: Analyzing log files and extracting performance metrics

**Goal:** In this practical exercise, you will learn to extract and estimate performance metrics from log files. By using these metrics, it is possible to understand the runtime behavior of a server component in a distributed system. We will use the CSV log files produced by JMeter. We will also learn to generate reports from log files using the modular dashboard extension of JMeter.

**The log file:** the CSV file produced by JMeter contains the following information.

- timestamp:
Hands-on session
Quiz

Content

• Lecture 3 and 4 (Processes)
• Two attempts
  ▪ One in Seminar Session
  ▪ Next available until Monday 23:50 (Deadline)
• Open Quiz in Moodle
• Total Quiz Points = 100

Observation

Quiz feedback is available after the quiz is closed
Questions?

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