Computer Networks
Jacobs University Bremen
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Course: 320301
Date: 2016-11-28
Due: 2016-12-05

Problem Sheet #6

Problem 6.1: *web traffic trace analysis* (1+1+2+2+2+1+1 = 10 points)

A web browser has been used to fetch the web page `http://cnds.eecs.jacobs-university.de/`. The browser was started, the web page was fetched, and afterwards the browser was closed. The network traffic was recorded on the host running the web browser and the trace is provided in pcap format on the course web page. Analyze the trace and answer the following questions.

a) What are the two TCP endpoints involved in the main HTTP GET request to fetch the `http://cnds.eecs.jacobs-university.de/` resource?

b) Which web browser was used on which operating system? When was the web page fetched? What was the preferred language?

c) What are the different resources that were fetched from `cnds.eecs.jacobs-university.de` in order to render the web page?

d) Does the HTTP interaction with the `cnds.eecs.jacobs-university.de` server use persistent connections? Does the server use chunked encoding? Explain why or why not.

e) What are the HTTP protocol versions used on top of the first two TCP connections? Which services are being accessed on the TCP endpoints?

f) To which service names does the X.509 certificate apply that is presented by the server in the second TCP connection?

g) What is the purpose of the 3rd and 4th TCP connection?