Assignment Four

WebDAV server

Set: *3rd of June 2014*
Due: *12th of June 2014 @ 23:55 CEST*

Synopsis:
Implement a WebDAV server that works with your favorite Web-
DAV client.

Introduction

This is the last of four assignments in the *Datanet* course. The assignments are pratical in nature, and will give you you a hands-on approach to some of the technology that we all use and depend on as a part of our daily life.

In this fourth assignment you will build a functional WebDAV server, that works with your favorite WebDAV client.

Implementation

The WebDAV protocol is a extension to the HTTP protocol, so you may build upon your webserver from assignment two. You are also allowed to use a HTTP aware library, e.g. Python's *SimpleHTTPServer*, as a starting point.

The server should present a local folder as a WebDAV folder, allowing users to connect to the server, list the current files, as well as uploading and downloading files.

Please make sure that you do not inadvertently expose the service to the internet, as that would allow other people to read and write files on your machine.

Limitations

You are expected to read the WebDAV specification as found in the resources section, and describe your own limitations of the protocol.

Your server *MUST* support at least the following verbs: `PROPFIND`, `GET`, `PUT`, and `DELETE`.

Experiment

You should conduct *at least* the following experiments:

- Estimate the maximum upload and download bandwidth

- Profile the bottleneck in transfer speed

- Profile request latency in the server

Resources

The WebDAV specifications can be found at `http://www.webdav.org/specs/`.

Your Report

Your report *MUST* be written in ACM format. An ACM template for LaTeXand Microsoft Word is available for download via Absalon.

Your reports should contain:

- An abstract describing the contents of your report

- A description of your server design (including libraries and frameworks used)

- A description of server limitiations and how you dealt with imprecise specifications

- A description of what experiments you have performed and their outcomes

- A description of potential bottlenecks and other issues with the network

- A description of limitations and upper limits for the network

- Answers to theory questions

Deliverables for This Assignment

You are encouraged to work in informal groups for this assignment, for the purpose of discussing implementation details and limitations. We strongly encouraged you to come to the exercise classes, where we will use time to discuss the design, implementation etc. The implementation and report that you hand in must however be **your own individual work**.

You should submit the following items:

- A single PDF file, A4 size, no more than 3 pages, in ACM format, describing each item from report section above

- A single ZIP/tbz2 file with all code relevant to the implementation

Handing In Your Assignment

You will be handing this assignment in using Absalon. Try not to hand in your files at the very last-minute, in case the rest of the Datanet students stage a DDoS attack on Absalon at the exact moment you are trying to submit. **Do not email us your assignments**.

Assessment

The assignment will be scored on a scale of 0-10 points. There will be **no re-submission** for this assignment. In order to participate in the exam, you must obtain a total of 24 points over the four assignments.