

Writeup

Using the httpserver from assignment 1, the time it took was 20.906 seconds to get eight 360Mb files. Using the http server from assignment 2, the time it took without logging and with eight threads was 8.034 seconds. Using the http server from assignment 2, the time it took with logging was 28.36 seconds.

The bottleneck in the system is likely due to the logging as can be seen with the time taken to transfer files above. Although `pwrite()` is used, threads still have to wait till the other threads are done before they have permission to write to the log file. This combined with the cost of writing to disk negatively affects the throughput of the system. Also, each character had to be converted to hex and written to the file, which made the writes about 3 times larger than the original file. Logging the whole file would not be practical in real life, as it leads to extra complexity and slows down the throughput of the system.