### Exercise 4

Simon Gehring Philipp Gampe

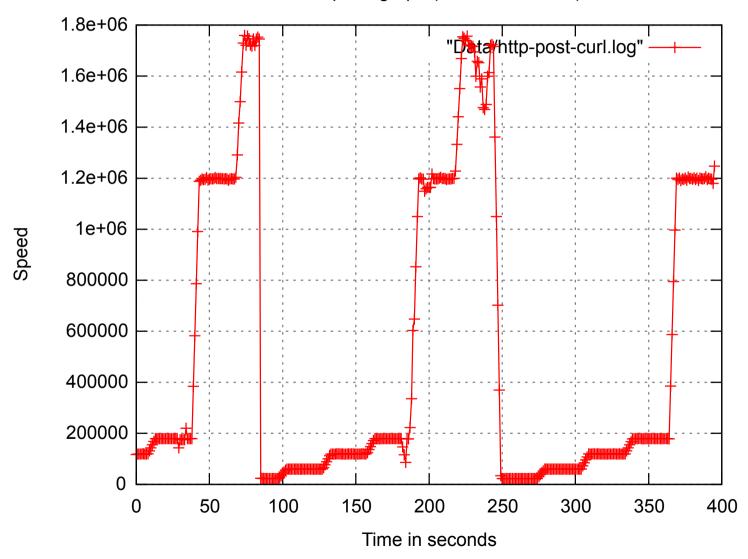
# Setup and data collection

- Tools used: bash, curl, tr, cut, cat, awk, grep, gnuplot
- Steps taken:
  - Download linux-3.9.2.tar.xz (68.7 MB) (3x)
  - Save curl progress with tr '\r' '\n' in file
  - Post process data (filter, select)
  - Plot data (gnuplot)
- Connection: Stw Bonn (PPTP to DFN) via Informatik VPN

Idea from: http://copperlight.github.io/2014/07/02/measuring-transfer-speed-over-time-with-curl/

## **Results HTTP**

FTP speed graph (three downloads)

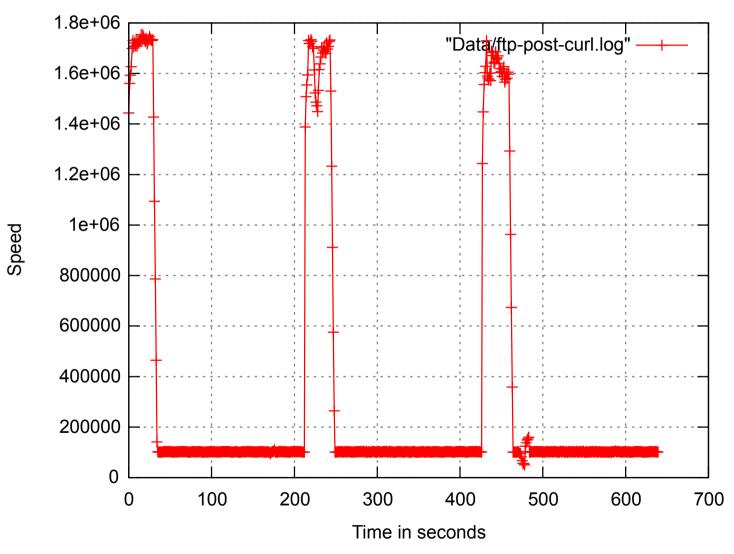


#### Results HTTP

- Changes ~ every 25-30 seconds
- Flunctuates a bit over fixed point
- Speeds:
  - ~23 KB/s
  - ~60 KB/s
  - ~116 KB/s
  - ~1 MB/s
  - − ~1,8 MB/s

## Result FTP

FTP speed graph (three downloads)



#### Results FTP

- Starts with ~ 1,8 MB/s
- After 30s reduces to 100 KB/s