

Datanet Practicals - Week 2 (18)

Chapter 1

- Try the traceroute program
The program is called “tracert.exe” on Windows and “traceroute” on Linux and OSX.
If you cannot use/find/install traceroute on your own machine, try <http://traceroute.org/> or use an Amazon EC2 instance.
Try to trace the route to “www.diku.dk” and “www.cs.washington.edu”.
- Calculate how long it takes light to travel a foot (30,48cm). Light travels appx. 300.000 km/s in vacuum.
- Calculate how long it takes light to travel the around the globe in fiberoptics.
Use a circumference of 40.000 km and 220.000 km/s.
- P6 page 98 explores transmission and propagation times.
A staircase analogy: d_{prop} is the time it takes for a person to ascend the stairs.
 d_{trans} is the time it takes to get a group of people (the data package) to ascend.
- P25,26,27,28 page 102 also explores transmission and propagation times.
- Can you explain these terms to others and position them in the network stack:
Router, Switch, Hub, Message, Segment, Datagram, Frame og Bit
- Can you explain these terms to others:
WLAN, Bluetooth, SMS, W3C, WAP, RFC, PDU, GSM, UMTS, GPRS, FDM, TDM, client, server, protocol, PDA, bandwidth, intranet, LAN, WAN, link, flow- control, congestion control, packet switching, circuit switching, host, packet, datagram-network, virtuel circuit, modem, DSL=digital subscriber line, DSLAM=digital subscriber line access multiplier, HFC=hybrid fiber coaxialcable=cable network
- Talk-assignment: P1 page 96

Chapter 2

- Review question R13 page 196, Web caching
- Read <http://www.ietf.org/rfc/rfc2109.txt> to learn more about cookies.
Reading RFCs are important because that is how new ideas are presented
- Try to use the telnet program to connect to a webserver.
Note that not all machines have telnet, but you can use an Amazon EC2 instance where you can install telnet

Other

- Help with using Amazon EC2
- Help with LaTeX
- Help with Python
- Help with “Academic writing style”