

INF3190 Group lecture

Lecture #1

Jan Anders Bremer

UiO - IFI

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Contact information

Phone: 91125994

Mail: janabr@ifi.uio.no

IRC: [janabr at irc.ifi.uio.no](irc://irc.ifi.uio.no) (currently in [#ping.uio.no](irc://irc.ifi.uio.no/#ping.uio.no) and [#cyb](irc://irc.ifi.uio.no/#cyb), but you can always `/msg me`)

Feel free to send questions, suggestions and feedback.

- Learning some basic UNIX/Linux-commands
- Learning how to use simple tools to debug certain problems or get certain kinds of information.

There's no place like 127.0.0.1

- ifconfig
- /etc/hosts
- hostname
- arch, uname -a
- Works on UNIX(-like) systems

- Measures RTT
- Network-debug
- Packet size is adjustable

- -i
- -r
- Useful for finding active connections

traceroute (tracert)

- 1 $j = \text{ttl}$ $j = 30$
- ICMP
- Sometimes blocked (filtered)
- UDP

ARP (address resolution protocol)

- Distributed
- Used to find MAC addresses
- Vulnerable

- Easier to read and remember
- dig
- One name - multiple IPs
- Distributed

- 4 byte addresses (rep: 4x1 byte)
- Subnetting
- Port forwarding
- Gateway
- My home network (demo)

- 128 bit addresses (rep: 8x4 hexadecimal)
- Approx. $3.402e+38$ addresses
- No need for subnetting and port forwarding
- Security and privacy?

Other (fun) tools

- ssh & telnet (some modems have interfaces written for telnet)
- netcat
- iptraf/iftop
- sshfs
- ssh -CX
- ip