

Computer Network Lab (CS 3272)

Assignment 1: Networking basic commands

Time: 2 weeks

The aim of this assignment is to make you familiar with few network commands and tools. Prepare a report based on your understating and findings.

1. Read the man pages of `ifconfig`, `ping`, `traceroute`, `arp`, `dig`, `nslookup`, and `netstat` and write their utilities in brief.
2. Find the IP and hardware addresses of your machine using `ifconfig` command.
3. Use “`ping <AnyURL>`” command and find out
 - i. the average RTT(round trip time).
 - ii. the %packet loss.
 - iii. size of packet that is sent to `<AnyURL>` server.
 - iv. size of packet that is received by your machine.
4. Use “`dig <AnyURL>`” command and find out
 - i. the IP address of `<AnyURL>`.
 - ii. the IP addresses of local DNS servers of IEST.
5. Use “`traceroute <AnyURL>`” and find out
 - i. number of hops in between your machine and `<AnyURL>` server.
 - ii. the IP address of your network gateway of your subnet.
6. Use “`arp`” command to find out the MAC address of the device that is performing as your network gateway.
7. Use “`nslookup <AnyURL>`” command and find out the IP address of `<AnyURL>`. Use “`nslookup <IP address>`” command and perform reverse domain lookup.
8. Use `netstat` command and find out the active connections of your machine.