

Assignment 1

The aim of this assignment is to make you familiar with basic network commands and tools.

1. Read the man pages of `ifconfig`, `ping`, `tracert`, `arp`, `dig` and `nslookup`.
 - (a) Find the IP address of your machine using “`ifconfig`” command.
 - (b) 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.
 - (c) Use “`dig <AnyURL>`” command and find out
 - i. the IP address of `<AnyURL>`.
 - ii. the IP addresses of local DNS servers of IEST.
 - (d) Use “`tracert <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.
 - (e) Use “`arp -an`” command to find out the MAC address of the device that is performing as your network gateway.
2. Install [Wireshark](#) tool and analyse the packet exchanges while performing above experiments (1.(b-e)). Make a note of your understanding and capture respective packet captures for future discussion.