

The LNM Institute of Information Technology, Jaipur
Computer Networks Lab
Lab Assignment 2

Objective: Introduction to the different networking tools used in setting and configuration of the networks.

Task 1: Physical and Data Link Layer

1. Find out the network cards in your machine. What is the speed? (lspci)
2. What is the current speed of the network interface? What offload features are enabled? (ethtool)
3. What is the MAC address of your machine? (ip link, arp)
4. How many bytes did your eth0/eth1 interface receive since booted? (ifconfig)
5. What is the MTU setting for eth0/eth1? (ip link, ifconfig)

Task 2: Network Layer

1. What is the network address of your machine? What is the default gateway (IP address and MAC address) of your network? (ip route, route, ip neighbour)
2. Show the ARP entries in your machine. (arp ip neighbour)
3. Perform a traceroute/mtr to any web address. Provide the full traceroute/mtr output. (mtr, traceroute)
4. How many IP packets are received by your machine after current boot process? (netstat)

Task 3: Transport Layer

1. Find the active TCP connection on your machine? (netstat)
2. How many sockets are currently opened on your machine? (netstat)
3. How many applications are accessing network services on your machine? Also, identify their access protocol. (lsof)

Submission Instructions:

1. Execute the network commands taught in the lab and write the answers to the questions with screenshots of your results in a pdf.
2. Submit the pdf with filename as “rollno.pdf” on Google Classroom.
3. No other form of submission will be accepted for evaluation.
4. Submit it by the deadline, failing which 4 marks will be deducted.