Academic Term: Jan-April 2018

Class : S.E

Subject Name: Computer Network

Practical No:	2
Title:	Linux networking commands
Maps to CO	CO6: Use different networking commands (network tools)
Date of Performance:	
Date of Submission:	
Roll No:	
Name of the Student:	

Evaluation:

Sr. No	Rubric	Grade
1	On time submission Or completion (2)	
2	Preparedness(2)	
3	Skill (4)	
4	Documentation (2)	

Signature of the Teacher:

Date:

Aim: Understanding various networking commands like ARP, RARP, ping, tracert, telnet, nslookup

Theory

1. ifconfig

ifconfig (interface configurator) command is use to initialize an interface, assign IP Address to interface and enable or disable interface on demand. With this command you can view IP Address and Hardware / MAC address assign to interface and also MTU (Maximum transmission unit) size.
#ifconfig

2. PING Command

PING (Packet INternet Gopher) command is the best way to test connectivity between two nodes whether it is Local Area Network (LAN) or Wide Area Network (WAN). Ping sends an ICMP ECHO_REQUEST(Internet Control Message Protocol) packet to the specified host. If the host responds, you get an ICMP packet back.

You can "ping" an IP address to see if the machine is alive. If there is no response you know something is wrong.
#Ping name/IP address of machine

3. TRACEROUTE Command

Traceroute is a command which shows the path a packet takes from your computer to one you specify. It will list all the routers it passes through until it reaches to its destination or fails to and is discarded. In addition, it shows number of hops taken to reach destination.

Traceroute program can take maximum 30 hops.
#traceroute name/IP address of machine

4. NSLOOKUP Command

Displays information from Domain Name System (DNS) name server.

nslookup command also use to find out DNS related query

5. ROUTE Command

route command also shows and manipulate ip routing table. To see default routing table in Linux, type the following command.
route

6. ARP Command

On some occasions, it is useful to view or alter the contents of the kernel's ARP tables, for example
when you suspect a duplicate Internet address is the cause for some intermittent network problem.
ARP command Displays and modifies the IP-to-Physical address translation tables used by address
resolution protocol(ARP).

7. telnet

Telnet allows you to log in to a computer, just as if you were sitting at the terminal. Once your username and password are verified, you are given a shell prompt. From here, you can do anything requiring a text console. Compose email, read newsgroups, move files around, and so on.

8. **HOST**

Host command is to find the name to IP or IP to name in IPV4 or IPV6 and also query DNS records

9. HOST NAME

Hostname is used to identify in a network. Execute hostname command is use to see the hostname of your box.

10. IWCONFIG

iwconfig command in Linux is use to configure a wireless network interface. You can see and set the basic Wi-Fi details like SSID channel and encryption

Conclusion:
Experiment performed is SATISFACTORY NOT SATISFACTORY (Tick appropriate outcome)
Post Lab Assignment:
1. Write and explain the command you use to find the IP statistics for your host. 2. What type of ICMP packet is send when a ping request is initiated. 3. Observe and write the output of traceroute to find route of your PC from other PC in the network. 4. Write and explain the command that is used to check the connectivity of other machine
Write Answers here:

Signature of Faculty	Date of Completion: