

## **Networking Lab: Assignment #2**

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## Problem 1

### 1. Ping another IP address

#### Commands

Open wireshark using `sudo wireshark`

list arp cache using `arp -n`

Clear cache using `arp -d ip address`

open sniffer using ping ip address

The screenshot displays the Wireshark network protocol analyzer interface. The top pane shows a list of captured packets, including ICMP Echo (ping) requests and replies. The middle pane shows the details of the selected packet, and the bottom pane shows the raw packet data. Below the Wireshark window, a terminal window shows the execution of various commands, including `sudo -e [AKns] [-C fd] [-D level] [-g groupname#gid] [-p prompt] [-u user name#uid] file ...`, `arp -n`, `arp -d 10.30.56.200`, and `ping 10.30.56.200`. The terminal output shows the results of these commands, including the ARP table and the ping results.

## Problem 2

2.Ping www.google.com

Commands

Open wireshark using sudo wireshark

Open sniffer using ping www.google.com

The screenshot displays the Wireshark 1.6.7 interface. The packet list on the left shows a series of ICMP Echo (ping) request and reply packets between 10.30.56.120 and 74.125.236.112. The packet details pane on the right shows the structure of the selected packet, including Ethernet II, Internet Protocol Version 4, and Internet Control Message Protocol. The packet bytes pane at the bottom shows the raw data of the selected packet.

Below the Wireshark interface, a terminal window shows the execution of the command `ping www.google.com`. The output displays the IP address of www.google.com (74.125.236.112) and the results of 22 ping attempts, showing the size of the data received, the source IP, and the time taken for each packet.

```
saranya@radhesh-HP-Compaq-Pro-6300-MT:~$ ping www.google.com
PING www.google.com (74.125.236.112) 56(84) bytes of data:
64 bytes from bon03s01-in-f16.1e100.net (74.125.236.112): icmp_req=1 ttl=56 time=89.0 ms
64 bytes from bon03s01-in-f16.1e100.net (74.125.236.112): icmp_req=3 ttl=56 time=82.4 ms
64 bytes from bon03s01-in-f16.1e100.net (74.125.236.112): icmp_req=4 ttl=56 time=80.0 ms
64 bytes from bon03s01-in-f16.1e100.net (74.125.236.112): icmp_req=5 ttl=56 time=54.3 ms
64 bytes from bon03s01-in-f16.1e100.net (74.125.236.112): icmp_req=7 ttl=56 time=55.2 ms
64 bytes from bon03s01-in-f16.1e100.net (74.125.236.112): icmp_req=8 ttl=56 time=65.3 ms
64 bytes from bon03s01-in-f16.1e100.net (74.125.236.112): icmp_req=9 ttl=56 time=93.0 ms
64 bytes from bon03s01-in-f16.1e100.net (74.125.236.112): icmp_req=10 ttl=56 time=82.2 ms
64 bytes from bon03s01-in-f16.1e100.net (74.125.236.112): icmp_req=11 ttl=56 time=166 ms
64 bytes from bon03s01-in-f16.1e100.net (74.125.236.112): icmp_req=12 ttl=56 time=72.4 ms
64 bytes from bon03s01-in-f16.1e100.net (74.125.236.112): icmp_req=13 ttl=56 time=58.8 ms
64 bytes from bon03s01-in-f16.1e100.net (74.125.236.112): icmp_req=14 ttl=56 time=56.4 ms
64 bytes from bon03s01-in-f16.1e100.net (74.125.236.112): icmp_req=15 ttl=56 time=64.5 ms
64 bytes from bon03s01-in-f16.1e100.net (74.125.236.112): icmp_req=16 ttl=56 time=55.2 ms
64 bytes from bon03s01-in-f16.1e100.net (74.125.236.112): icmp_req=17 ttl=56 time=151 ms
64 bytes from bon03s01-in-f16.1e100.net (74.125.236.112): icmp_req=18 ttl=56 time=54.7 ms
64 bytes from bon03s01-in-f16.1e100.net (74.125.236.112): icmp_req=19 ttl=56 time=74.6 ms
64 bytes from bon03s01-in-f16.1e100.net (74.125.236.112): icmp_req=20 ttl=56 time=53.7 ms
64 bytes from bon03s01-in-f16.1e100.net (74.125.236.112): icmp_req=21 ttl=56 time=87.2 ms
64 bytes from bon03s01-in-f16.1e100.net (74.125.236.112): icmp_req=22 ttl=56 time=...
```