



# תקשורת

מטלה 4

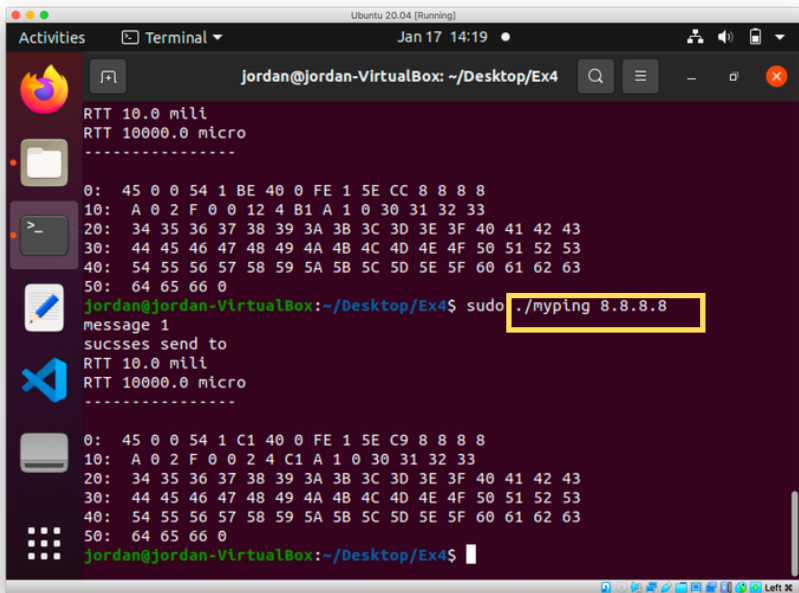
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# PARTIE 1

אקלן' - myping

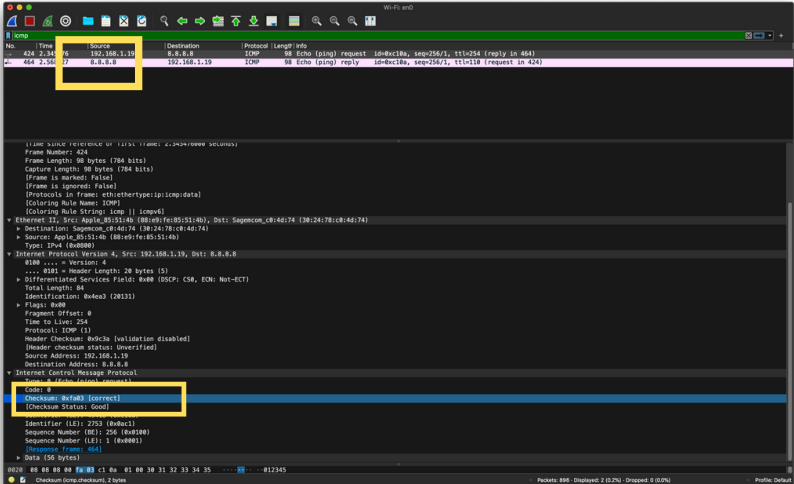
Send Ping with myping.c



```
RTT 10.0 milli
RTT 10000.0 micro
-----
0:  45 00 05 54 1B E0 0F E1 5E CC 88 88
10: A0 2F 00 12 4B 1A 10 30 31 32 33
20: 34 35 36 37 38 39 3A 3B 3C 3D 3E 3F 40 41 42 43
30: 44 45 46 47 48 49 4A 4B 4C 4D 4E 4F 50 51 52 53
40: 54 55 56 57 58 59 5A 5B 5C 5D 5E 5F 60 61 62 63
50: 64 65 66 00
jordan@jordan-VirtualBox:~/Desktop/Ex4$ sudo ./myping 8.8.8.8
message 1
succsses send to
RTT 10.0 milli
RTT 10000.0 micro
-----
0:  45 00 05 54 1C 10 0F E1 5E C9 88 88
10: A0 2F 00 12 4C 1A 10 30 31 32 33
20: 34 35 36 37 38 39 3A 3B 3C 3D 3E 3F 40 41 42 43
30: 44 45 46 47 48 49 4A 4B 4C 4D 4E 4F 50 51 52 53
40: 54 55 56 57 58 59 5A 5B 5C 5D 5E 5F 60 61 62 63
50: 64 65 66 00
jordan@jordan-VirtualBox:~/Desktop/Ex4$
```

*Send ping to 8.8.8.8*

# Capture packets with Wireshark



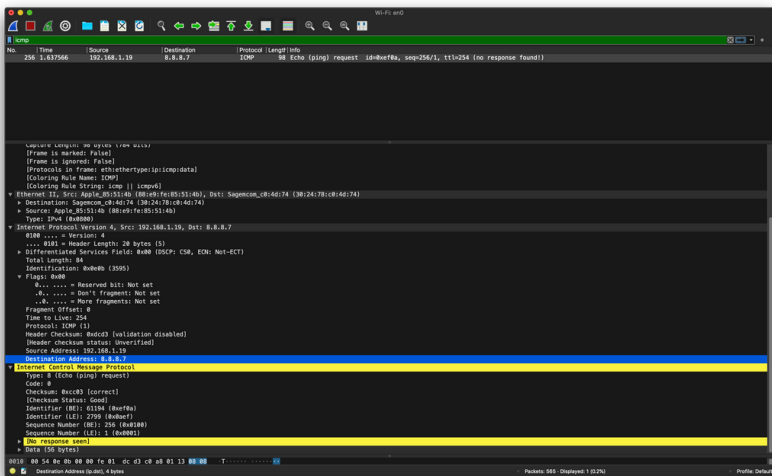
*Packets ICMP well sniffed , CheckSum  
Correct ,Destination is 8.8.8.8*

# Send Ping (Another try).

```
Activities Terminal Jan 17 14:21
Jordan@jordan-VirtualBox: ~/Desktop/Ex4

20: 34 35 36 37 38 39 3A 3B 3C 3D 3E 3F 40 41 42 43
30: 44 45 46 47 48 49 4A 4B 4C 4D 4E 4F 50 51 52 53
40: 54 55 56 57 58 59 5A 5B 5C 5D 5E 5F 60 61 62 63
50: 64 65 66 0
Jordan@jordan-VirtualBox:~/Desktop/Ex4$ sudo ./myping 8.8.8.8
message 1
succsses send to
RTT 10.0 mili
RTT 10000.0 micro
-----
0: 45 0 0 54 1 C1 40 0 FE 1 5E C9 8 8 8 8
10: A 0 2 F 0 0 2 4 C1 A 1 0 30 31 32 33
20: 34 35 36 37 38 39 3A 3B 3C 3D 3E 3F 40 41 42 43
30: 44 45 46 47 48 49 4A 4B 4C 4D 4E 4F 50 51 52 53
40: 54 55 56 57 58 59 5A 5B 5C 5D 5E 5F 60 61 62 63
50: 64 65 66 0
Jordan@jordan-VirtualBox:~/Desktop/Ex4$ sudo ./myping 8.8.8.7
message 1
succsses send to
RTT 45.0 mili
RTT 45000.0 micro
^C
Jordan@jordan-VirtualBox:~/Desktop/Ex4$
```

*Send ping to 8.8.8.7*

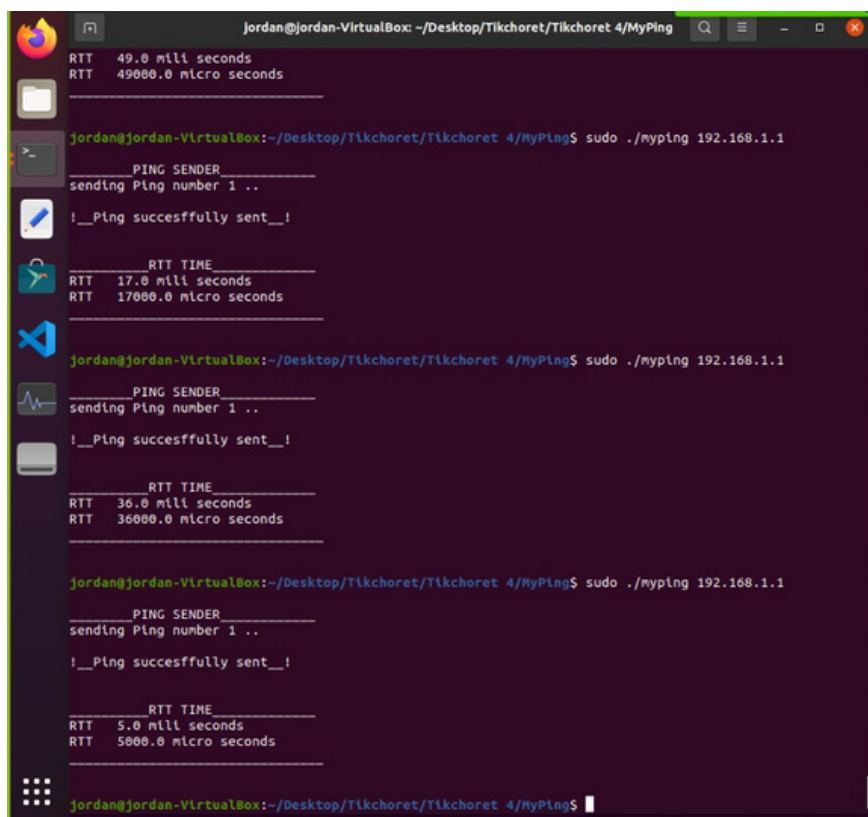


*Well Recieved*

# PARTIE 2

## Sniffing - חלקן ב' -

*Send 7 Ping to the Same Address*



```
Jordan@Jordan-VirtualBox: ~/Desktop/Tikchoret/Tikchoret 4/MyPing
RTT  49.0 mlll seconds
RTT  49000.0 micro seconds

jordan@Jordan-VirtualBox:~/Desktop/Tikchoret/Tikchoret 4/MyPing$ sudo ./myping 192.168.1.1

PING SENDER
sending Ping number 1 ..

!_Ping succesfully sent_!

RTT TIME
RTT  17.0 mlll seconds
RTT  17000.0 micro seconds

jordan@Jordan-VirtualBox:~/Desktop/Tikchoret/Tikchoret 4/MyPing$ sudo ./myping 192.168.1.1

PING SENDER
sending Ping number 1 ..

!_Ping succesfully sent_!

RTT TIME
RTT  36.0 mlll seconds
RTT  36000.0 micro seconds

jordan@Jordan-VirtualBox:~/Desktop/Tikchoret/Tikchoret 4/MyPing$ sudo ./myping 192.168.1.1

PING SENDER
sending Ping number 1 ..

!_Ping succesfully sent_!

RTT TIME
RTT  5.0 mlll seconds
RTT  5000.0 micro seconds

jordan@Jordan-VirtualBox:~/Desktop/Tikchoret/Tikchoret 4/MyPing$
```

# Sniff The Ping Sent with Sniffer.c

```
Jordan@jordan-VirtualBox: ~/Desktop/Tikchoret/Tikchoret 4/Or Sniffer
Available Devices are :
1. enp0s3 - (null)
2. enp0s8 - (null)
3. lo - (null)
4. any - Pseudo-device that captures on all interfaces
5. bluetooth-monitor - Bluetooth Linux Monitor
6. nflog - Linux netfilter log (NFLOG) interface
7. nfqueue - Linux netfilter queue (NFQUEUE) interface

Which device would you want to sniff ? 1
Opening device enp0s3 for sniffing ... Done
Number of Packet ICMP : 0
#Source IP      : 10.0.2.15
#Destination IP : 192.168.1.1
#Code : 0
#Type : 8

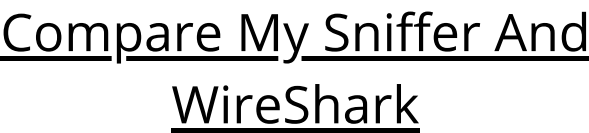
Number of Packet ICMP : 1
#Source IP      : 192.168.1.1
#Destination IP : 10.0.2.15
#Code : 0
#Type : 0

Number of Packet ICMP : 2
#Source IP      : 10.0.2.15
#Destination IP : 192.168.1.1
#Code : 0
#Type : 8

Number of Packet ICMP : 3
#Source IP      : 192.168.1.1
#Destination IP : 10.0.2.15
#Code : 0
#Type : 0

Number of Packet ICMP : 4
#Source IP      : 10.0.2.15
#Destination IP : 192.168.1.1
#Code : 0
#Type : 8

Number of Packet ICMP : 5
#Source IP      : 192.168.1.1
#Destination IP : 10.0.2.15
#Code : 0
#Type : 0
```



## Send 4 Ping to the Same Adresse

### Sniffe With sniffer.c & WireShark

No.	Time	Source	Destination	Protocol	Length	Info
608	0.001724	192.168.1.1	192.168.1.1	ICMP	80	Echo (ping) request 10-000001, seq=1558/5638, ttl=254 (reply in 689)
609	0.000808	192.168.1.1	192.168.1.1	ICMP	80	Echo (ping) reply 10-000001, seq=1558/5638, ttl=164 (request in 689)
610	0.000808	192.168.1.1	192.168.1.1	ICMP	80	Echo (ping) request 10-000001, seq=1559/5639, ttl=254 (reply in 690)
611	0.000795	192.168.1.1	192.168.1.1	ICMP	80	Echo (ping) reply 10-000001, seq=1559/5639, ttl=164 (request in 688)
744	0.000747	192.168.1.1	192.168.1.1	ICMP	80	Echo (ping) request 10-000001, seq=1560/5636, ttl=254 (reply in 745)
745	0.000747	192.168.1.1	192.168.1.1	ICMP	80	Echo (ping) reply 10-000001, seq=1560/5636, ttl=164 (request in 744)
807	0.018256	192.168.1.1	192.168.1.1	ICMP	80	Echo (ping) request 10-000001, seq=1561/6400, ttl=254 (reply in 808)
808	0.000747	192.168.1.1	192.168.1.1	ICMP	80	Echo (ping) reply 10-000001, seq=1561/6400, ttl=164 (request in 807)