

#1 Ερώτηση

```
Debian11.6-1 Mikrotik-1 PC1
lease time: 10m
[admin@Mikrotik] > ip/address/print
Flags: D - DYNAMIC
Columns: ADDRESS, NETWORK, INTERFACE
# ADDRESS NETWORK INTERFACE
0 D 192.168.5.135/24 192.168.5.0 ether1
1 108.45.37.1/24 108.45.37.0 ether2
2 108.45.38.1/24 108.45.38.0 ether3
[admin@Mikrotik] > ip/route/print
Flags: D - DYNAMIC; A - ACTIVE; c, d, y - COPY
Columns: DST-ADDRESS, GATEWAY, DISTANCE
# DST-ADDRESS GATEWAY DISTANCE
DAd 0.0.0.0/0 192.168.5.2 1
DAc 108.45.37.0/24 ether2 0
DAc 108.45.38.0/24 ether3 0
DAc 192.168.5.0/24 ether1 0
[admin@Mikrotik] > ip/dhcp-client/print
Columns: INTERFACE, USE-PEER-DNS, ADD-DEFAULT-ROUTE, STATUS, ADDRESS
# INTERFACE USE-PEER-DNS ADD-DEFAULT-ROUTE STATUS ADDRESS
0 ether1 yes yes bound 192.168.5.135/24
[admin@Mikrotik] > ping 8.8.8.8
SEQ HOST SIZE TTL TIME STATUS
0 8.8.8.8 56 128 43ms222us
1 8.8.8.8 56 128 42ms944us
2 8.8.8.8 56 128 43ms523us
3 8.8.8.8 56 128 43ms18us
4 8.8.8.8 56 128 43ms346us
5 8.8.8.8 56 128 43ms156us
6 8.8.8.8 56 128 44ms216us
7 8.8.8.8 56 128 42ms613us
sent=8 received=8 packet-loss=0% min-rtt=42ms613us avg-rtt=43ms254us max-rtt=44ms216us
```

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```
[admin@Mikrotik] > /tool/traceroute 8.8.8.8
Columns: ADDRESS, LOSS, SENT, LAST, AVG, BEST, WORST, STD-DEV
# ADDRESS LOSS SENT LAST AVG BEST WORST STD-DEV
1 192.168.5.2 0% 19 0.6ms 0.5 0.4 0.9 0.1
2 192.168.1.1 0% 19 5.4ms 3.6 3.2 5.4 0.5
3 80.106.125.100 0% 19 7.7ms 5.8 4.7 7.7 0.9
4 79.128.234.170 0% 19 5.7ms 6.5 5.1 17.9 2.8
5 79.128.229.22 0% 18 10.5ms 9.6 9.1 10.5 0.4
6 62.75.3.13 0% 18 9.3ms 9.8 7.9 11 0.8
7 62.75.27.37 0% 18 42.6ms 43.1 42.2 44.3 0.5
8 74.125.51.154 0% 18 43.4ms 44.1 43.1 46.1 0.9
9 142.251.65.71 0% 18 44ms 44.5 42.9 47.8 1.1
10 142.250.214.189 0% 18 41.8ms 42.3 41.3 45.6 0.9
11 8.8.8.8 0% 18 41.9ms 42.2 41.2 46.2 1
[Q quit|D dump|C-z pause]
```

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#2 Ερώτηση

```
Debian11.6-1 Mikrotik-1 PC1
Saving startup configuration to startup.vpc
. done

PC1> show ip

NAME       : PC1[1]
IP/MASK     : 108.45.37.254/24
GATEWAY     : 108.45.37.1
DNS         : 192.168.5.2
DHCP SERVER : 108.45.37.1
DHCP LEASE  : 572, 600/300/525
MAC         : 00:50:79:66:68:00
LPORT      : 2002
RHOST:PORT  : 127.0.0.1:2003
MTU         : 1500

PC1> ping 108.45.37.1
84 bytes from 108.45.37.1 icmp_seq=1 ttl=64 time=0.599 ms
84 bytes from 108.45.37.1 icmp_seq=2 ttl=64 time=0.693 ms
84 bytes from 108.45.37.1 icmp_seq=3 ttl=64 time=0.638 ms
84 bytes from 108.45.37.1 icmp_seq=4 ttl=64 time=0.599 ms
84 bytes from 108.45.37.1 icmp_seq=5 ttl=64 time=0.575 ms

PC1> ping 108.45.38.1
84 bytes from 108.45.38.1 icmp_seq=1 ttl=64 time=0.477 ms
84 bytes from 108.45.38.1 icmp_seq=2 ttl=64 time=0.485 ms
84 bytes from 108.45.38.1 icmp_seq=3 ttl=64 time=1.273 ms
84 bytes from 108.45.38.1 icmp_seq=4 ttl=64 time=1.988 ms
84 bytes from 108.45.38.1 icmp_seq=5 ttl=64 time=0.547 ms

PC1> ping 192.168.5.135
84 bytes from 192.168.5.135 icmp_seq=1 ttl=64 time=0.604 ms
84 bytes from 192.168.5.135 icmp_seq=2 ttl=64 time=5.103 ms
84 bytes from 192.168.5.135 icmp_seq=3 ttl=64 time=0.626 ms
84 bytes from 192.168.5.135 icmp_seq=4 ttl=64 time=0.654 ms
84 bytes from 192.168.5.135 icmp_seq=5 ttl=64 time=0.686 ms

PC1>
```

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```
Debian11.6-1 Mikrotik-1 PC1
84 bytes from 192.168.5.135 icmp_seq=5 ttl=64 time=0.686 ms

PC1> ping 8.8.8.8
8.8.8.8 icmp_seq=1 timeout
8.8.8.8 icmp_seq=2 timeout
8.8.8.8 icmp_seq=3 timeout
8.8.8.8 icmp_seq=4 timeout
8.8.8.8 icmp_seq=5 timeout

PC1> ping 8.8.8.8
84 bytes from 8.8.8.8 icmp_seq=1 ttl=127 time=44.142 ms
84 bytes from 8.8.8.8 icmp_seq=2 ttl=127 time=43.713 ms
84 bytes from 8.8.8.8 icmp_seq=3 ttl=127 time=43.785 ms
84 bytes from 8.8.8.8 icmp_seq=4 ttl=127 time=43.566 ms
84 bytes from 8.8.8.8 icmp_seq=5 ttl=127 time=44.474 ms

PC1> ping 192.168.5.135
84 bytes from 192.168.5.135 icmp_seq=1 ttl=64 time=0.657 ms
84 bytes from 192.168.5.135 icmp_seq=2 ttl=64 time=0.699 ms
84 bytes from 192.168.5.135 icmp_seq=3 ttl=64 time=0.679 ms
84 bytes from 192.168.5.135 icmp_seq=4 ttl=64 time=0.677 ms
84 bytes from 192.168.5.135 icmp_seq=5 ttl=64 time=0.944 ms

PC1>
```

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```
[admin@Mikrotik] /ip/firewall/nat> /ip firewall nat add chain=srcnat action=masquerade out-interface=ether1
[admin@Mikrotik] /ip/firewall/nat>
```

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#3 Ερώτηση

```
Debian11.6-1 Mikrotik-1 PC1
-o[neline] | -t[imestamp] | -ts[hort] | -b[at]ch [filename] |
-rc[vbuf] [size] | -n[etns] name | -N[umeric] | -a[ll] |
-c[olor]}
debian@debian:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: ens3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 0c:d8:d5:6f:00:00 brd ff:ff:ff:ff:ff:ff
    altname enp0s3
    inet 108.45.38.254/24 brd 108.45.38.255 scope global dynamic ens3
        valid_lft 502sec preferred_lft 502sec
    inet6 fe80::ed8:d5ff:fe6f:0/64 scope link
        valid_lft forever preferred_lft forever
debian@debian:~$ sudo traceroute 8.8.8.8
traceroute to 8.8.8.8 (8.8.8.8), 30 hops max, 60 byte packets
 1  lo0-100.WASHDC-VFTTP-325.verizon-gni.net (108.45.38.1)  0.947 ms  2.125 ms  2.112 ms
 2  192.168.5.2 (192.168.5.2)  3.374 ms  3.716 ms  3.706 ms
 3  * * *
 4  * * *
 5  * * *
 6  * * *
 7  * * *
 8  * * *
 9  * * *
10  * * *
11  * * *
12  * * *
13  * * *
14  * * *
15  * * *
16  * * *
17  * * *
18  * * *
19  * * *
20  * * *
21  * * *
22  * * *
23  * * *
24  * * *
25  * * *
26  * * *
27  * * *
28  * * *
29  * * *
30  * * *
debian@debian:~$ ping 8.8.8.8
PING 8.8.8.8 (8.8.8.8) 56(84) bytes of data.
64 bytes from 8.8.8.8: icmp_seq=1 ttl=127 time=43.1 ms
64 bytes from 8.8.8.8: icmp_seq=2 ttl=127 time=43.3 ms
64 bytes from 8.8.8.8: icmp_seq=3 ttl=127 time=43.5 ms
64 bytes from 8.8.8.8: icmp_seq=4 ttl=127 time=44.0 ms
64 bytes from 8.8.8.8: icmp_seq=5 ttl=127 time=44.3 ms
64 bytes from 8.8.8.8: icmp_seq=6 ttl=127 time=44.3 ms
^C
--- 8.8.8.8 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5009ms
rtt min/avg/max/mdev = 43.132/43.769/44.340/0.473 ms
debian@debian:~$
```

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Processing triggers for man-db (2.9.4-2) ...

debian@debian:~\$ telnet 192.168.5.135

Trying 192.168.5.135...

Connected to 192.168.5.135.

Escape character is '^['.

Login: admin

Password:

```
MMM      MMM      KKK      TTTTTTTTTT      KKK
MMMM     MMMM     KKK      TTTTTTTTTT      KKK
MMM MMMM MMM III  KKK KKK RRRRRR  OOOOOO  TTT  III  KKK KKK
MMM MM  MMM III  KKKKK  RRR  RRR  OOO  OOO  TTT  III  KKKKK
MMM      MMM III  KKK KKK RRRRRR  OOO  OOO  TTT  III  KKK KKK
MMM      MMM III  KKK KKK RRR  RRR  OOOOOO  TTT  III  KKK KKK
```

MikroTik RouterOS 7.1.3 (c) 1999-2022 <https://www.mikrotik.com/>

Press F1 for help

[admin@MikroTik] >

[admin@MikroTik] >

telnet> ^C

Connection closed by foreign host.

debian@debian:~\$

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debian@debian:~\$ ssh admin@192.168.5.135

The authenticity of host '192.168.5.135 (192.168.5.135)' can't be established.

RSA key fingerprint is SHA256:Vzxawv98Veo6Dk0ImTUVon1SebFRs50E1MB3EuJdzHI.

Are you sure you want to continue connecting (yes/no/[fingerprint])? yes

Warning: Permanently added '192.168.5.135' (RSA) to the list of known hosts.

admin@192.168.5.135's password:

```
MMM      MMM      KKK      TTTTTTTTTT      KKK
MMMM     MMMM     KKK      TTTTTTTTTT      KKK
MMM MMMM MMM III  KKK KKK RRRRRR  OOOOOO  TTT  III  KKK KKK
MMM MM  MMM III  KKKKK  RRR  RRR  OOO  OOO  TTT  III  KKKKK
MMM      MMM III  KKK KKK RRRRRR  OOO  OOO  TTT  III  KKK KKK
MMM      MMM III  KKK KKK RRR  RRR  OOOOOO  TTT  III  KKK KKK
```

MikroTik RouterOS 7.1.3 (c) 1999-2022 <https://www.mikrotik.com/>

Press F1 for help

[admin@MikroTik] >

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```
Debian11.6-1 Mikrotik-1 PC1
entered No. Good bye
debian@debian:~$ sudo ./3nd_Ergasia.sh.x
your ip address: 108.45.38.254 and your gateway: 108.45.38.1
1084538 108.45.38.254 108.45.38.1
admin@108.45.37.1's password:
Connection to 108.45.37.1 closed.
add address=108.45.37.0/24 gateway=108.45.37.1
DHCP_SERVER_SUCCESS_1
add address=108.45.38.0/24 gateway=108.45.38.1
DHCP_SERVER_SUCCESS_2
Finding IP address of VPCS: 108.45.37.254
Checking Gateway: GW_CORRECT
begin ping to gateway 1: ping to GW_SUCCESS_1
begin ping to gateway 2: ping to GW_SUCCESS_2
Start ping to VPCS ping to VPCS_SUCCESS
begin ping to 8.8.8.8: ping to 8.8.8.8_SUCCESS
Start traceroute to 8.8.8.8 with ICMP: traceroute_SUCCESS: you reach 8.8.8.8 in 12 hops
Submit result: y/n ?y
entered yes. uploading results....good bye
debian@debian:~$
```

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