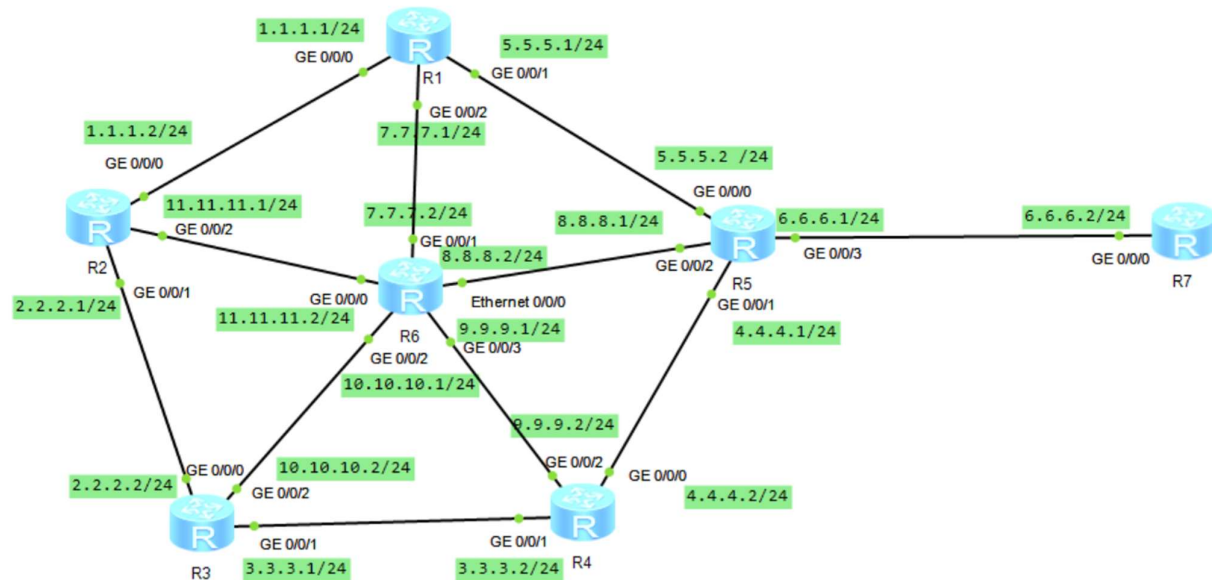


LAB-12

Implement the following scenario by applying RIP protocol (version 2).

eNSP simulation:



First, we assign the IP address to all connected interfaces of each router and then we configure rip version 2 on all routers.

CONFIGURATIONS:

R1:

```
interface GigabitEthernet0/0/0
 ip address 1.1.1.1 255.255.255.0
#
interface GigabitEthernet0/0/1
 ip address 5.5.5.1 255.255.255.0
#
interface GigabitEthernet0/0/2
 ip address 7.7.7.1 255.255.255.0
#
```

```
rip 1
 version 2
 network 1.0.0.0
 network 5.0.0.0
 network 7.0.0.0
#
```

R2:

```
interface GigabitEthernet0/0/0
 ip address 1.1.1.2 255.255.255.0
#
interface GigabitEthernet0/0/1
 ip address 2.2.2.1 255.255.255.0
#
interface GigabitEthernet0/0/2
 ip address 11.11.11.1 255.255.255.0
#
interface GigabitEthernet0/0/3
#
wlan
#
interface NULL0
#
rip 1
 version 2
 network 2.0.0.0
 network 1.0.0.0
 network 11.0.0.0
```

R3:

```
interface GigabitEthernet0/0/0
 ip address 2.2.2.2 255.255.255.0
#
interface GigabitEthernet0/0/1
 ip address 3.3.3.1 255.255.255.0
#
interface GigabitEthernet0/0/2
 ip address 10.10.10.2 255.255.255.0
#
interface GigabitEthernet0/0/3
#
wlan
#
interface NULL0
#
rip 1
 version 2
 network 2.0.0.0
 network 3.0.0.0
 network 10.0.0.0
```

R4:

```
interface GigabitEthernet0/0/0
  ip address 4.4.4.2 255.255.255.0
#
interface GigabitEthernet0/0/1
  ip address 3.3.3.2 255.255.255.0
#
interface GigabitEthernet0/0/2
  ip address 9.9.9.2 255.255.255.0
#
interface GigabitEthernet0/0/3
#
wlan
#
interface NULL0
#
rip 1
  version 2
  network 3.0.0.0
  network 4.0.0.0
  network 9.0.0.0
```

R5:

```
interface GigabitEthernet0/0/0
  ip address 5.5.5.2 255.255.255.0
#
interface GigabitEthernet0/0/1
  ip address 4.4.4.1 255.255.255.0
#
interface GigabitEthernet0/0/2
  ip address 8.8.8.1 255.255.255.0
#
interface GigabitEthernet0/0/3
  ip address 6.6.6.1 255.255.255.0
#
wlan
#
interface NULL0
#
rip 1
  version 2
  network 4.0.0.0
  network 5.0.0.0
  network 6.0.0.0
  network 8.0.0.0
```

R6:

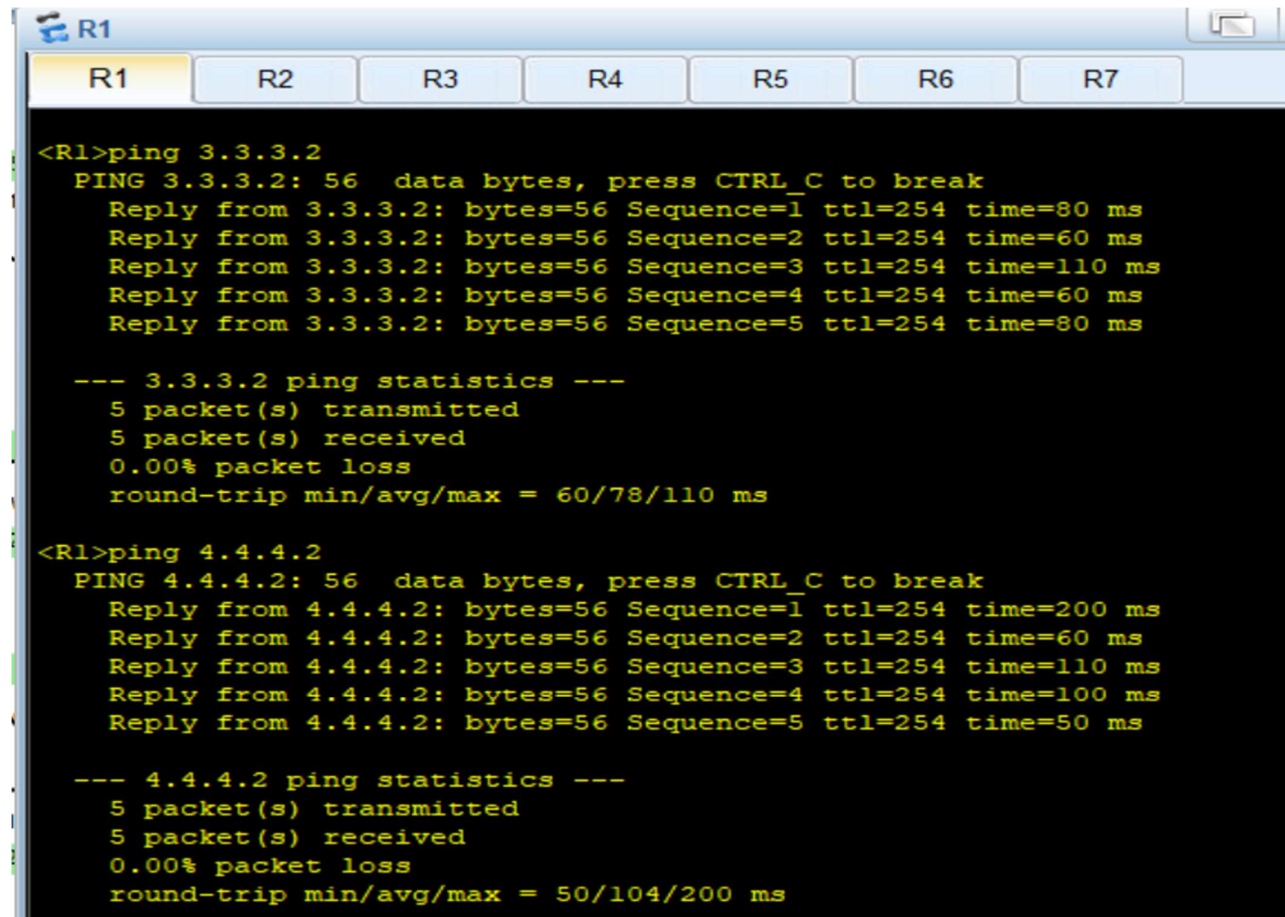
```
interface Ethernet0/0/0
 ip address 8.8.8.2 255.255.255.0
#
interface GigabitEthernet0/0/0
 ip address 11.11.11.2 255.255.255.0
#
interface GigabitEthernet0/0/1
 ip address 7.7.7.2 255.255.255.0
#
interface GigabitEthernet0/0/2
 ip address 10.10.10.1 255.255.255.0
#
interface GigabitEthernet0/0/3
 ip address 9.9.9.1 255.255.255.0
#
wlan
#
interface NULL0
#
rip 1
 version 2
 network 7.0.0.0
 network 8.0.0.0
 network 9.0.0.0
 network 10.0.0.0
 network 11.0.0.0
```

R7:

```
interface GigabitEthernet0/0/0
 ip address 6.6.6.2 255.255.255.0
#
interface GigabitEthernet0/0/1
#
interface GigabitEthernet0/0/2
#
interface GigabitEthernet0/0/3
#
wlan
#
interface NULL0
#
rip 1
 version 2
 network 6.0.0.0
```


Testing:

Now we try to ping different networks from a router.

R4 from R1:

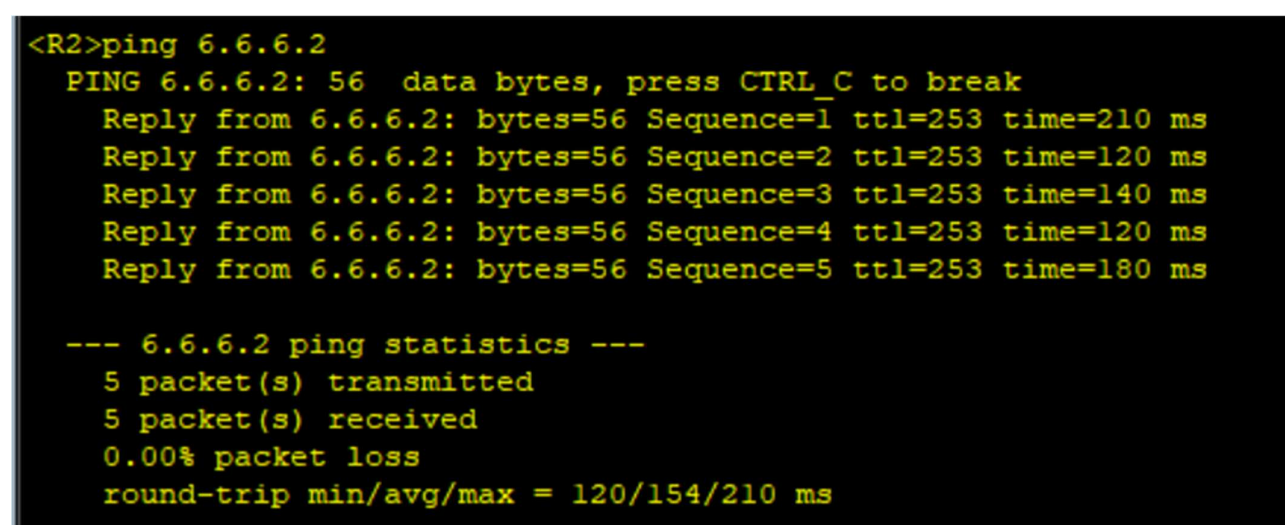
The screenshot shows a Cisco Packet Tracer console window for router R1. The window has tabs for R1, R2, R3, R4, R5, R6, and R7. The R1 tab is selected. The console output shows two ping commands being executed from R1. The first command is 'ping 3.3.3.2', which results in 5 successful replies with 0% packet loss. The second command is 'ping 4.4.4.2', which also results in 5 successful replies with 0% packet loss. The statistics for both pings show 5 packets transmitted and received, with a round-trip time of 60/78/110 ms for the first ping and 50/104/200 ms for the second ping.

```
<R1>ping 3.3.3.2
PING 3.3.3.2: 56 data bytes, press CTRL_C to break
  Reply from 3.3.3.2: bytes=56 Sequence=1 ttl=254 time=80 ms
  Reply from 3.3.3.2: bytes=56 Sequence=2 ttl=254 time=60 ms
  Reply from 3.3.3.2: bytes=56 Sequence=3 ttl=254 time=110 ms
  Reply from 3.3.3.2: bytes=56 Sequence=4 ttl=254 time=60 ms
  Reply from 3.3.3.2: bytes=56 Sequence=5 ttl=254 time=80 ms

--- 3.3.3.2 ping statistics ---
  5 packet(s) transmitted
  5 packet(s) received
  0.00% packet loss
  round-trip min/avg/max = 60/78/110 ms

<R1>ping 4.4.4.2
PING 4.4.4.2: 56 data bytes, press CTRL_C to break
  Reply from 4.4.4.2: bytes=56 Sequence=1 ttl=254 time=200 ms
  Reply from 4.4.4.2: bytes=56 Sequence=2 ttl=254 time=60 ms
  Reply from 4.4.4.2: bytes=56 Sequence=3 ttl=254 time=110 ms
  Reply from 4.4.4.2: bytes=56 Sequence=4 ttl=254 time=100 ms
  Reply from 4.4.4.2: bytes=56 Sequence=5 ttl=254 time=50 ms

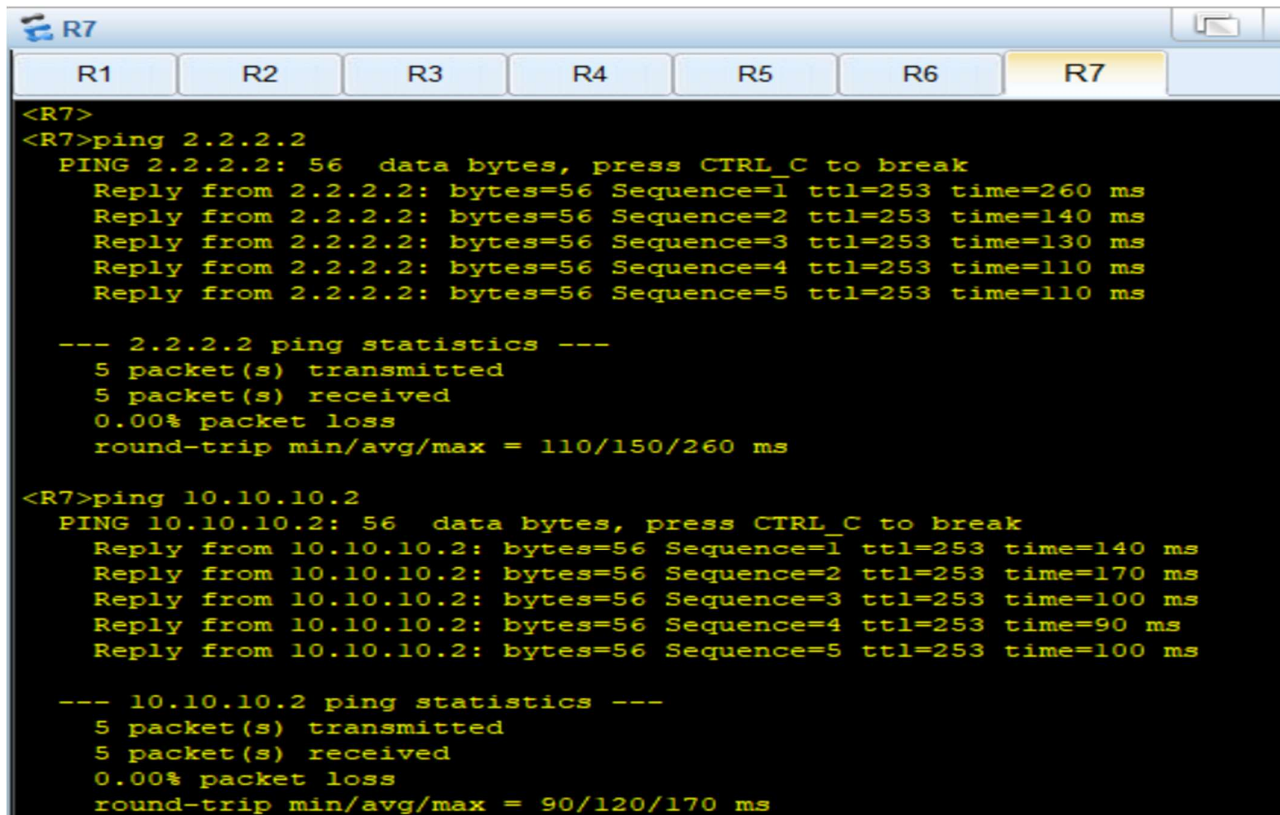
--- 4.4.4.2 ping statistics ---
  5 packet(s) transmitted
  5 packet(s) received
  0.00% packet loss
  round-trip min/avg/max = 50/104/200 ms
```

R7 from R2:

The screenshot shows a Cisco Packet Tracer console window for router R2. The window has tabs for R1, R2, R3, R4, R5, R6, and R7. The R2 tab is selected. The console output shows a ping command being executed from R2 to R7. The command is 'ping 6.6.6.2', which results in 5 successful replies with 0% packet loss. The statistics for the ping show 5 packets transmitted and received, with a round-trip time of 120/154/210 ms.

```
<R2>ping 6.6.6.2
PING 6.6.6.2: 56 data bytes, press CTRL_C to break
  Reply from 6.6.6.2: bytes=56 Sequence=1 ttl=253 time=210 ms
  Reply from 6.6.6.2: bytes=56 Sequence=2 ttl=253 time=120 ms
  Reply from 6.6.6.2: bytes=56 Sequence=3 ttl=253 time=140 ms
  Reply from 6.6.6.2: bytes=56 Sequence=4 ttl=253 time=120 ms
  Reply from 6.6.6.2: bytes=56 Sequence=5 ttl=253 time=180 ms

--- 6.6.6.2 ping statistics ---
  5 packet(s) transmitted
  5 packet(s) received
  0.00% packet loss
  round-trip min/avg/max = 120/154/210 ms
```

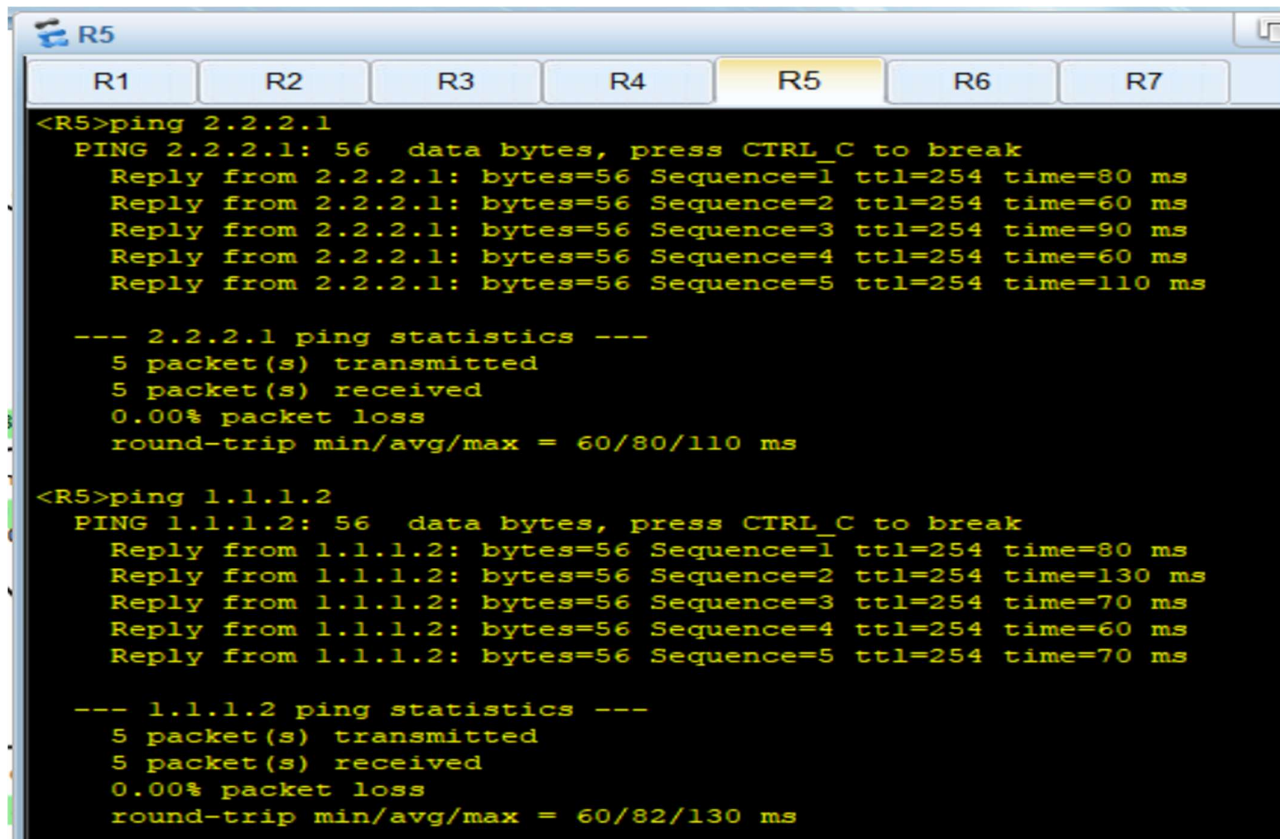
R3 from R7:

```
<R7>
<R7>ping 2.2.2.2
PING 2.2.2.2: 56 data bytes, press CTRL_C to break
  Reply from 2.2.2.2: bytes=56 Sequence=1 ttl=253 time=260 ms
  Reply from 2.2.2.2: bytes=56 Sequence=2 ttl=253 time=140 ms
  Reply from 2.2.2.2: bytes=56 Sequence=3 ttl=253 time=130 ms
  Reply from 2.2.2.2: bytes=56 Sequence=4 ttl=253 time=110 ms
  Reply from 2.2.2.2: bytes=56 Sequence=5 ttl=253 time=110 ms

--- 2.2.2.2 ping statistics ---
  5 packet(s) transmitted
  5 packet(s) received
  0.00% packet loss
  round-trip min/avg/max = 110/150/260 ms

<R7>ping 10.10.10.2
PING 10.10.10.2: 56 data bytes, press CTRL_C to break
  Reply from 10.10.10.2: bytes=56 Sequence=1 ttl=253 time=140 ms
  Reply from 10.10.10.2: bytes=56 Sequence=2 ttl=253 time=170 ms
  Reply from 10.10.10.2: bytes=56 Sequence=3 ttl=253 time=100 ms
  Reply from 10.10.10.2: bytes=56 Sequence=4 ttl=253 time=90 ms
  Reply from 10.10.10.2: bytes=56 Sequence=5 ttl=253 time=100 ms

--- 10.10.10.2 ping statistics ---
  5 packet(s) transmitted
  5 packet(s) received
  0.00% packet loss
  round-trip min/avg/max = 90/120/170 ms
```

R2 FROM R5:

```
<R5>ping 2.2.2.1
PING 2.2.2.1: 56 data bytes, press CTRL_C to break
  Reply from 2.2.2.1: bytes=56 Sequence=1 ttl=254 time=80 ms
  Reply from 2.2.2.1: bytes=56 Sequence=2 ttl=254 time=60 ms
  Reply from 2.2.2.1: bytes=56 Sequence=3 ttl=254 time=90 ms
  Reply from 2.2.2.1: bytes=56 Sequence=4 ttl=254 time=60 ms
  Reply from 2.2.2.1: bytes=56 Sequence=5 ttl=254 time=110 ms

--- 2.2.2.1 ping statistics ---
  5 packet(s) transmitted
  5 packet(s) received
  0.00% packet loss
  round-trip min/avg/max = 60/80/110 ms

<R5>ping 1.1.1.2
PING 1.1.1.2: 56 data bytes, press CTRL_C to break
  Reply from 1.1.1.2: bytes=56 Sequence=1 ttl=254 time=80 ms
  Reply from 1.1.1.2: bytes=56 Sequence=2 ttl=254 time=130 ms
  Reply from 1.1.1.2: bytes=56 Sequence=3 ttl=254 time=70 ms
  Reply from 1.1.1.2: bytes=56 Sequence=4 ttl=254 time=60 ms
  Reply from 1.1.1.2: bytes=56 Sequence=5 ttl=254 time=70 ms

--- 1.1.1.2 ping statistics ---
  5 packet(s) transmitted
  5 packet(s) received
  0.00% packet loss
  round-trip min/avg/max = 60/82/130 ms
```