OSPF Configuration

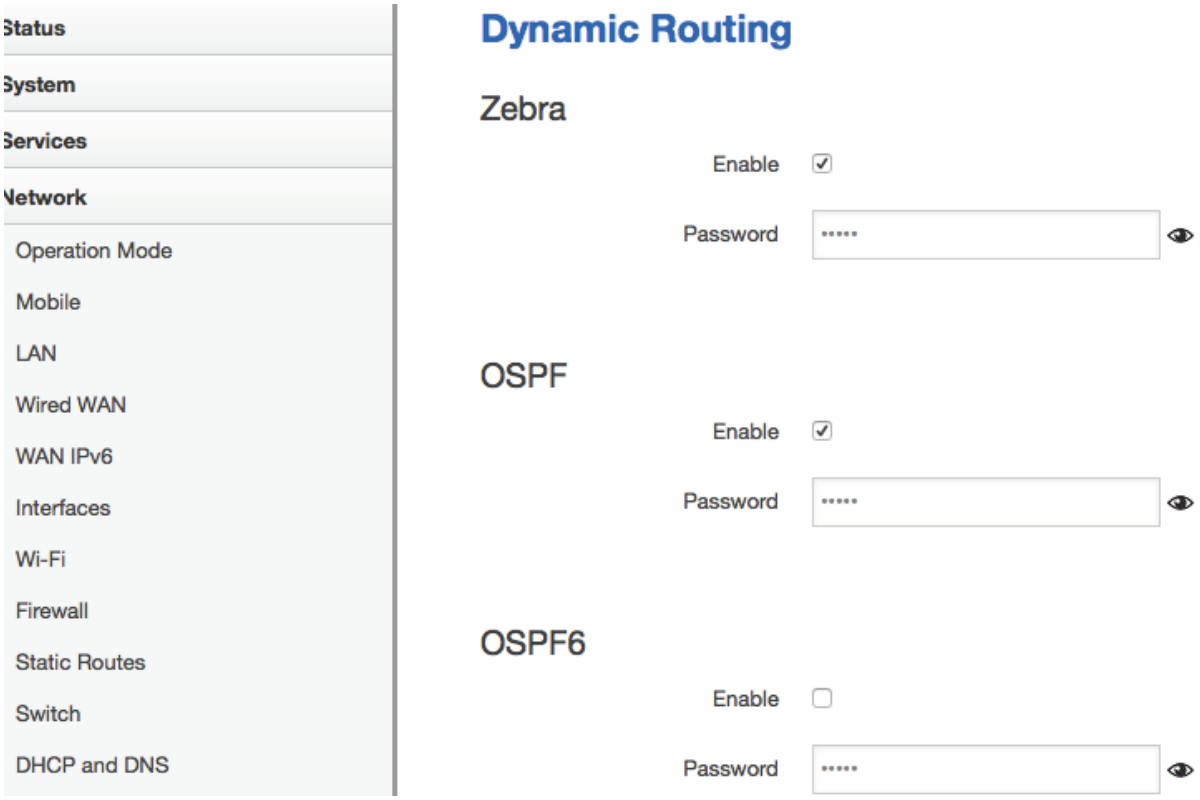
Network topology:

Router A: Lan subnet 192.168.2.0/24, WAN ip address: 192.168.1.118

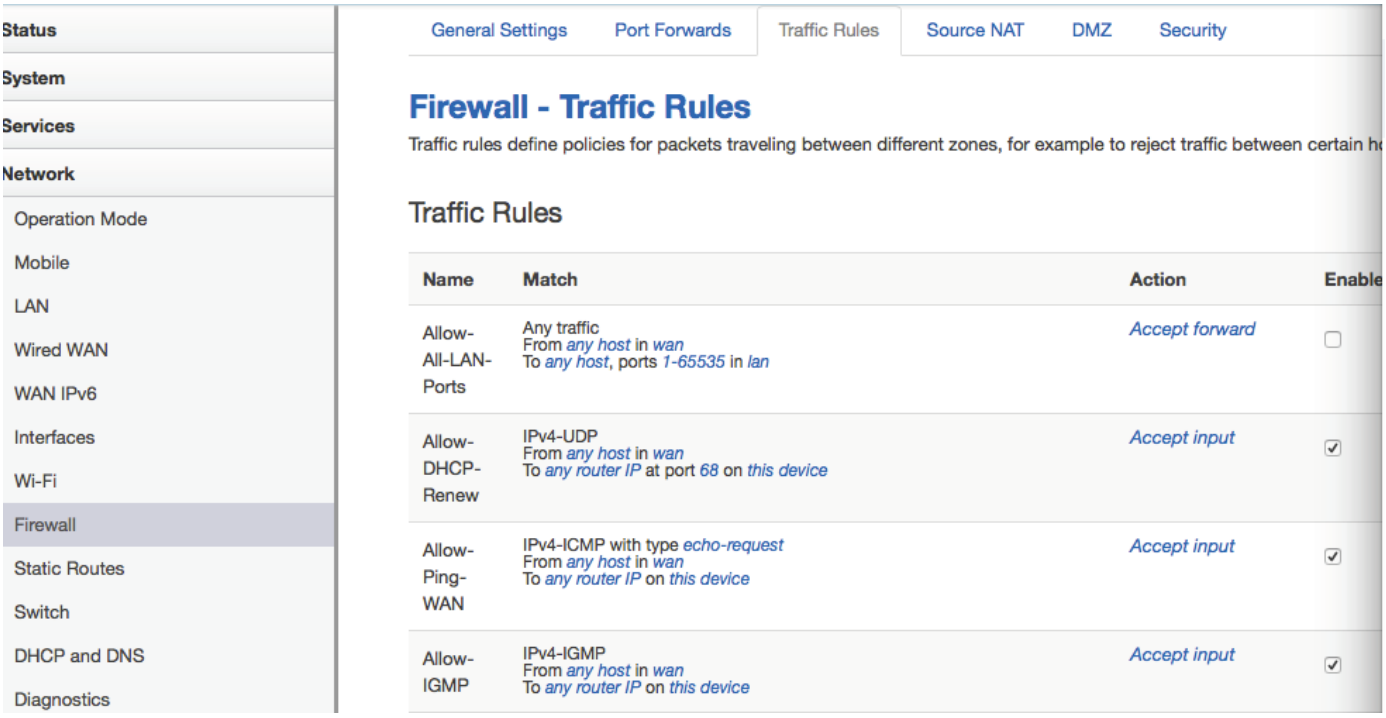
Router B: Lan subnet 192.168.3.0/24, WAN ip address: 192.168.1.138

Router C: Lan subnet 192.168.1.0/24, Router A and Router B's WAN ports connect to Router C.

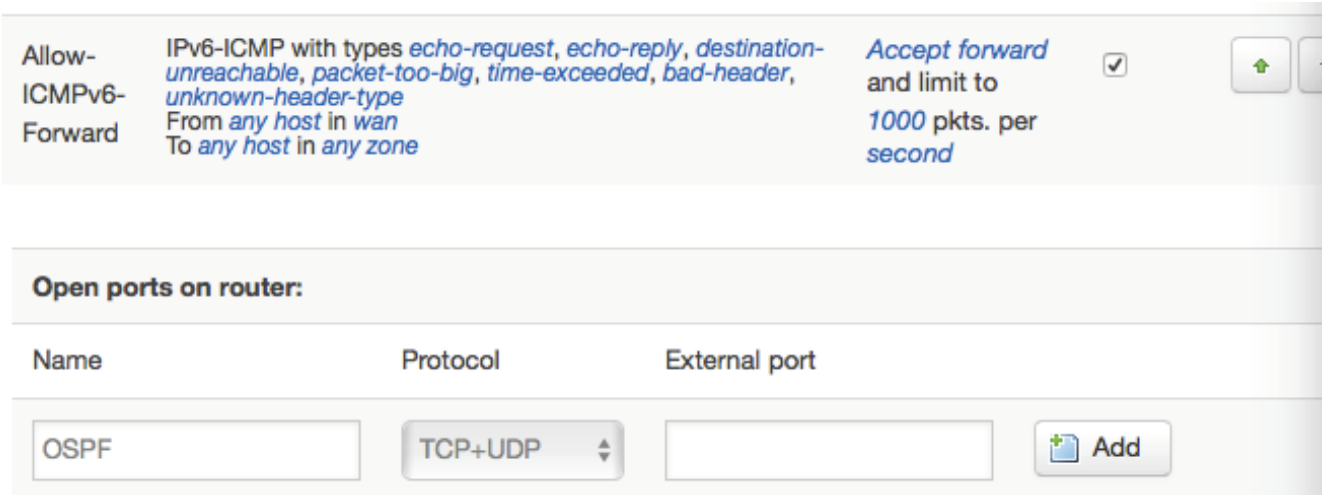
1. Enable OSPF on Router A. Open page Network→Dynamic Routing, check enable of zebra, and enable OSPF also, then click button "Save & Apply"



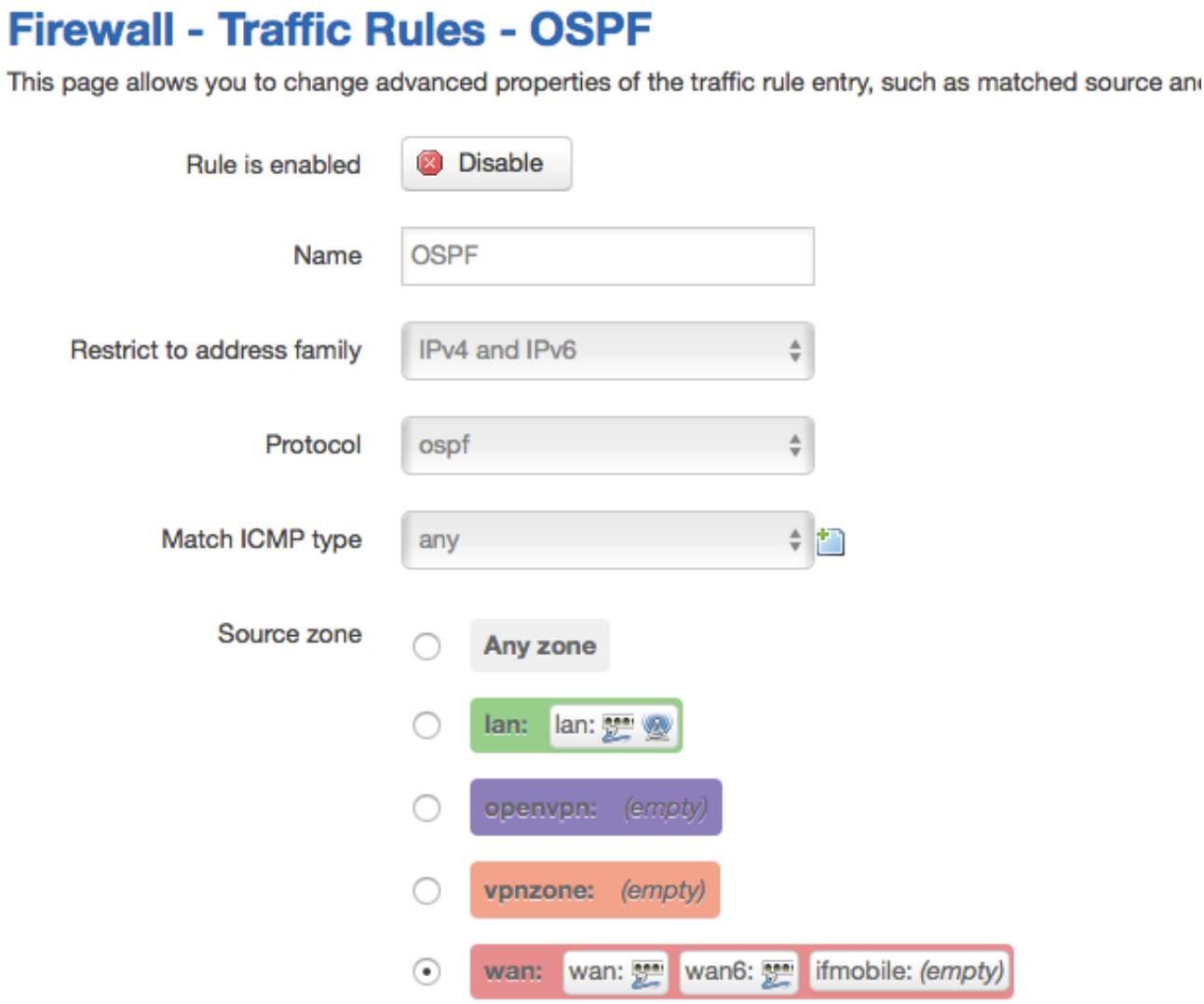
2. Config firewall. Open page Network→Firewall → Traffic Rules.



3. Scroll down,, input name (OSPF) at section “Open ports on router” , then click button “Add”.



4. At the rule page, select “Protocol” to “—custom --”, then input “ospf”. Click button “Save & Apply”



5. telnet to router to config OSPF, the telnet port for OSPF is 2604

```
root@TR-1815-LTE:~# telnet localhost 2604

Entering character mode
Escape character is '^]'.


Hello, this is Quagga (version 0.99.22.4).
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User Access Verification

Password:
TR-1815-LTE>
TR-1815-LTE> en
TR-1815-LTE> enable
TR-1815-LTE#
TR-1815-LTE# con term
TR-1815-LTE(config)#
TR-1815-LTE(config)# router ospf
TR-1815-LTE(config-router)#
TR-1815-LTE(config-router)# route
TR-1815-LTE(config-router)# router-id 192.168.1.118
TR-1815-LTE(config-router)#
TR-1815-LTE(config-router)# network 192.168.1.0/24 area 1
TR-1815-LTE(config-router)#
TR-1815-LTE(config-router)# network 192.168.2.0/24 area 1
TR-1815-LTE(config-router)#
TR-1815-LTE(config-router)# write file
Configuration saved to /etc/quagga/ospfd.conf
TR-1815-LTE(config-router)#
TR-1815-LTE(config-router)# q
TR-1815-LTE(config)#
TR-1815-LTE(config)# q
TR-1815-LTE#
TR-1815-LTE# q

Connection closed by foreign host
```

6. Enable OSPF and Zebra on Router B, and config traffic rules as same as Router A, then config OSPF:

```
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User Access Verification

Password:
CM685V_W>
CM685V_W> en
CM685V_W#
CM685V_W# conf te
CM685V_W(config)#
CM685V_W(config)# router ospf
CM685V_W(config-router)#
CM685V_W(config-router)# router-id 192.168.1.138
CM685V_W(config-router)#
CM685V_W(config-router)# network 192.168.1.0/24
% Command incomplete.
CM685V_W(config-router)#
CM685V_W(config-router)# network 192.168.1.0/24 area 1
CM685V_W(config-router)#
CM685V_W(config-router)# network 192.168.3.0/24 area 1
CM685V_W(config-router)#
CM685V_W(config-router)# write file
Configuration saved to /etc/quagga/ospfd.conf
CM685V_W(config-router)#
CM685V_W(config-router)# q
CM685V_W(config)#
CM685V_W(config)# q
CM685V_W#
CM685V_W# q

Connection closed by foreign host
```
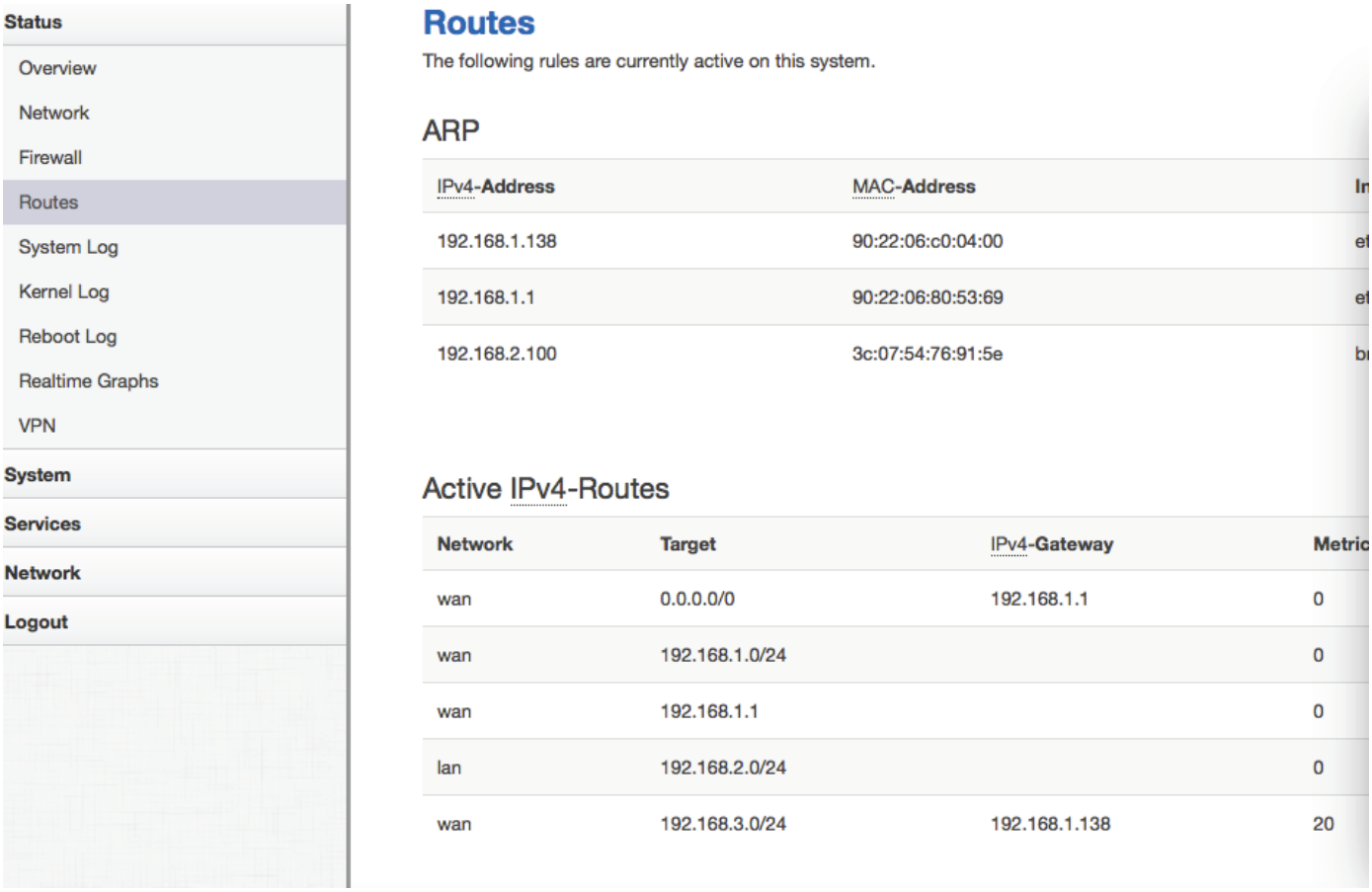
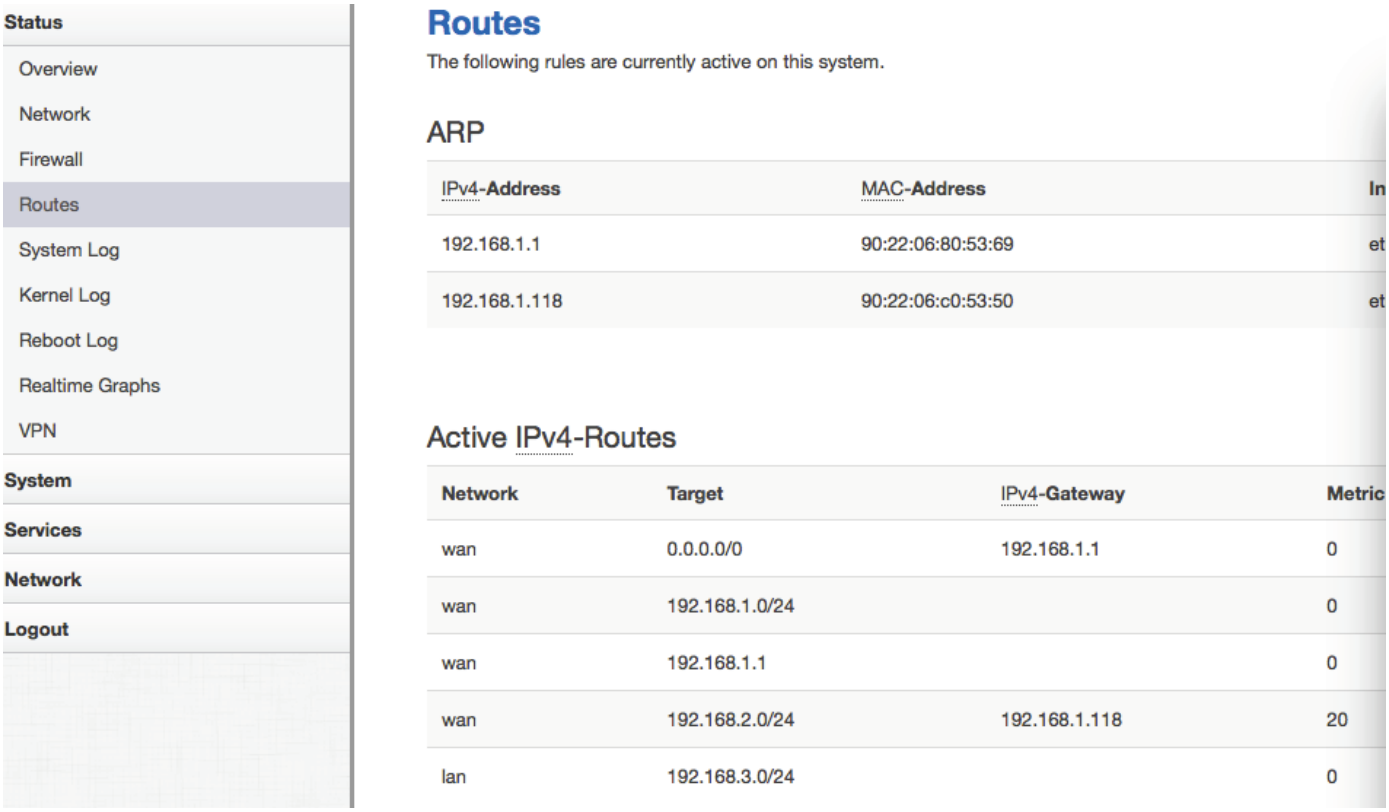

7. check route in CLI.

```
Kernel IP routing table
Destination     Gateway         Genmask         Flags Metric Ref    Use Iface
default         192.168.1.1     0.0.0.0         UG    0      0        0 eth0.2
192.168.1.0     *               255.255.255.0   U     0      0        0 eth0.2
192.168.1.1     *               255.255.255.255 UH    0      0        0 eth0.2
192.168.2.0     *               255.255.255.0   U     0      0        0 br-lan
192.168.3.0     192.168.1.138   255.255.255.0   UG    20     0        0 eth0.2
root@TR-1815-LTE:~#
```

```
root@CM685V_W:~# route
Kernel IP routing table
Destination     Gateway         Genmask         Flags Metric Ref    Use Iface
default         192.168.1.1     0.0.0.0         UG    0      0        0 eth0.2
192.168.1.0     *               255.255.255.0   U     0      0        0 eth0.2
192.168.1.1     *               255.255.255.255 UH    0      0        0 eth0.2
192.168.2.0     192.168.1.118   255.255.255.0   UG    20     0        0 eth0.2
192.168.3.0     *               255.255.255.0   U     0      0        0 br-lan
root@CM685V_W:~#
```

8. check route on GUI.





9. check ping and traceroute

```
dentydeMacBook-Pro-3:~ apple$ ping 192.168.3.1
PING 192.168.3.1 (192.168.3.1): 56 data bytes
64 bytes from 192.168.3.1: icmp_seq=0 ttl=63 time=1.472 ms
64 bytes from 192.168.3.1: icmp_seq=1 ttl=63 time=1.430 ms
^C
--- 192.168.3.1 ping statistics ---
2 packets transmitted, 2 packets received, 0.0% packet loss
round-trip min/avg/max/stddev = 1.430/1.451/1.472/0.021 ms
dentydeMacBook-Pro-3:~ apple$ traceroute 192.168.3.1
traceroute to 192.168.3.1 (192.168.3.1), 64 hops max, 52 byte packets
 1  tr-1815-lte (192.168.2.1)  1.389 ms  0.743 ms  0.675 ms
 2  192.168.3.1 (192.168.3.1)  1.437 ms  1.382 ms  1.308 ms
dentydeMacBook-Pro-3:~ apple$
```