Computer Networks
week 13. Static routing.

8 Routers Cisco 2911

loopback
10.0.0.0/24

2911
Router5

70.150.0.4/30

70.150.0.12/30

70.150.0.0/30

80.100.0.0/30

90.100.0.8/30

loopback
10.0.20.0/24

2911
Router3

2911
Router4

2911
Router7

2911
Router8

2911
Router9

loopback
10.0.40.0/24

70.150.0.8/30

70.150.0.16/30

90.100.0.4/30

90.100.0.0/30

2911
Router6

loopback
10.0.10.0/24

2911
Router10

loopback
10.0.30.0/24

Task

1. Place routers and connect them together (interfaces are up to you)
2. Assign IP addresses to interfaces
3. Configure virtual interfaces (loopback interfaces)
4. Configure routes on every router to all subnets (including virtual interfaces)
5. Check connections by ICMP requests
6. Try to decrease number of commands for static routes

Virtual interface configuration (via terminal)

```
Router#              enable
Router#              config
Router(config)#      Interface loopback1
Router(config-if)#   no shutdown
Router(config-if)#   ip address 10.0.0.1 255.255.255.0
Router(config-if)#   exit
Router(config)#      exit
Router#
```
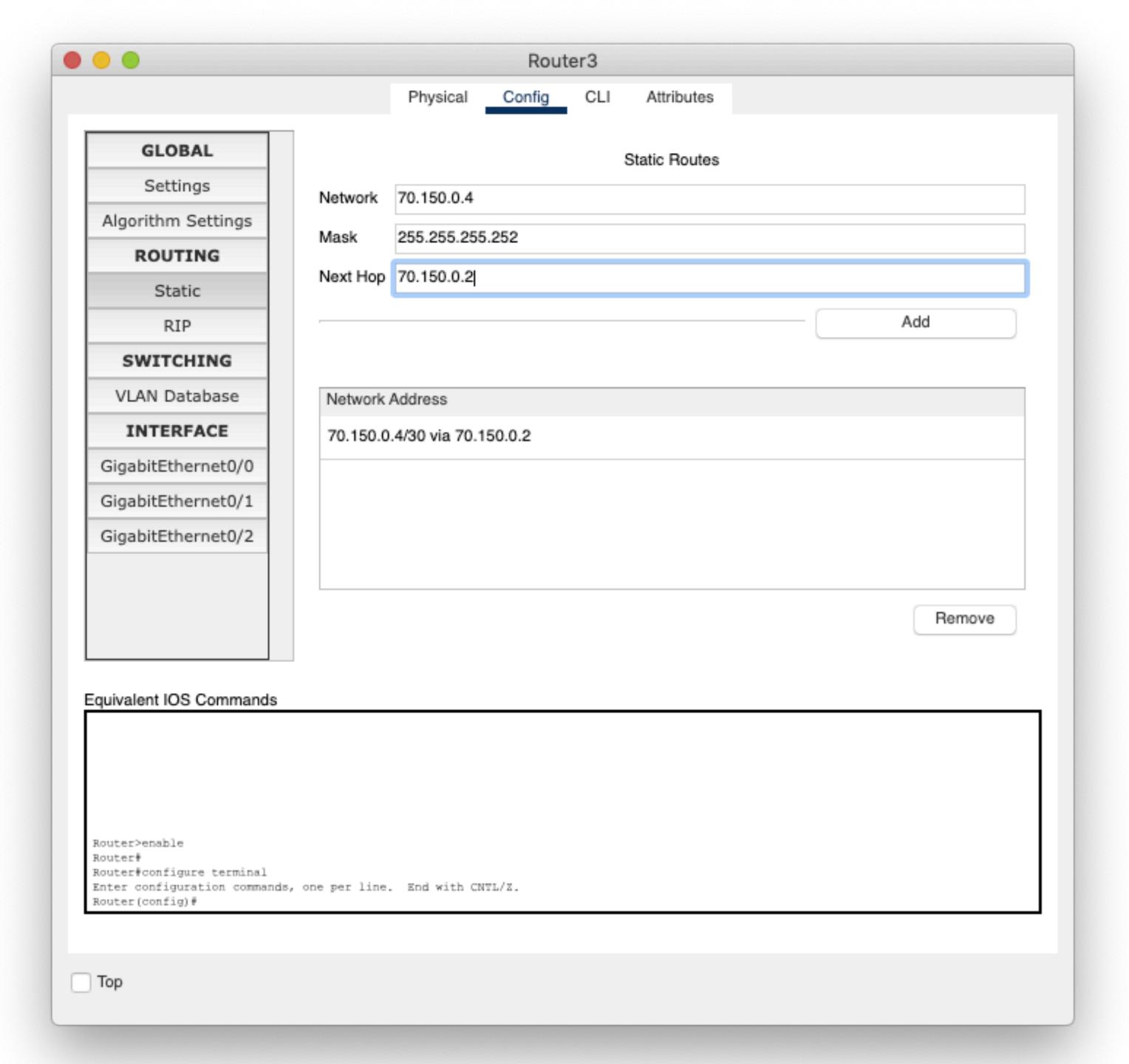
Static routes

This route from Router3 to subnet 70.150.0.4/30 via Router4 (Router4 has interface 70.150.0.2)

Useful commands

```
#show a routing table
Router# show ip route

#show status of interfaces
Router# show ip interface brief

#show current configuration
Router#show running-config

#save current configuration
Router#copy running-config startup-config

#ICMP requests
Router#ping 127.0.0.1
ROuter#traceroute 127.0.0.1
```