

Network Engineering 2019 Exercises - Unit 3

0.1 Netmask Calculation

What is the netmask for this network?

101.152.0.0/13

Put your answer on a single line in `unit3/answers.txt`, with 0: at the beginning of the line, e.g., 0:255.255.255.0

What is the netmask for this network?

35.87.229.96/27

Put your answer on a single line in `unit3/answers.txt`, with 1: at the beginning of the line, e.g., 1:255.255.255.0

What is the netmask for this network?

57.42.0.0/15

Put your answer on a single line in `unit3/answers.txt`, with 2: at the beginning of the line, e.g., 2:255.255.255.0

What is the netmask for this network?

100.134.0.0/18

Put your answer on a single line in `unit3/answers.txt`, with 3: at the beginning of the line, e.g., 3:255.255.255.0

What is the netmask for this network?

64.0.0.0/2

Put your answer on a single line in `unit3/answers.txt`, with 4: at the beginning of the line, e.g., 4:255.255.255.0

What is the netmask for this network?

2.2.110.192/26

Put your answer on a single line in `unit3/answers.txt`, with 5: at the beginning of the line, e.g., 5:255.255.255.0

What is the netmask for this network?

104.225.32.0/19

Put your answer on a single line in `unit3/answers.txt`, with 6: at the beginning of the line, e.g., 6:255.255.255.0

What is the netmask for this network?

46.89.0.0/16

Put your answer on a single line in `unit3/answers.txt`, with 7: at the beginning of the line, e.g., 7:255.255.255.0

What is the netmask for this network?

94.216.0.0/13

Put your answer on a single line in `unit3/answers.txt`, with 8: at the beginning of the line, e.g., 8:255.255.255.0

What is the netmask for this network?

64.0.128.0/17

Put your answer on a single line in `unit3/answers.txt`, with 9: at the beginning of the line, e.g., 9:255.255.255.0

What is the netmask for this network?

0.0.0.0/0

Put your answer on a single line in `unit3/answers.txt`, with 10: at the beginning of the line, e.g., 10:255.255.255.0

What is the netmask for this network?

84.0.0.0/6

Put your answer on a single line in `unit3/answers.txt`, with 11: at the beginning of the line, e.g., 11:255.255.255.0

What is the netmask for this network?

0.0.0.0/1

Put your answer on a single line in `unit3/answers.txt`, with 12: at the beginning of the line, e.g., 12:255.255.255.0

What is the netmask for this network?

120.109.88.128/25

Put your answer on a single line in `unit3/answers.txt`, with 13: at the beginning of the line, e.g., 13:255.255.255.0

What is the netmask for this network?

33.14.143.128/25

Put your answer on a single line in `unit3/answers.txt`, with 14: at the beginning of the line, e.g., 14:255.255.255.0

What is the netmask for this network?

98.232.0.0/17

Put your answer on a single line in `unit3/answers.txt`, with 15: at the beginning of the line, e.g., 15:255.255.255.0

What is the netmask for this network?

22.231.227.192/26

Put your answer on a single line in `unit3/answers.txt`, with 16: at the beginning of the line, e.g., 16:255.255.255.0

What is the netmask for this network?

108.41.31.64/26

Put your answer on a single line in `unit3/answers.txt`, with 17: at the beginning of the line, e.g., 17:255.255.255.0

What is the netmask for this network?

48.0.0.0/7

Put your answer on a single line in `unit3/answers.txt`, with 18: at the beginning of the line, e.g., 18:255.255.255.0

What is the netmask for this network?

38.128.0.0/10

Put your answer on a single line in `unit3/answers.txt`, with 19: at the beginning of the line, e.g., 19:255.255.255.0

What is the netmask for this network?

116.107.64.0/18

Put your answer on a single line in `unit3/answers.txt`, with 20: at the beginning of the line, e.g., 20:255.255.255.0

What is the netmask for this network?

114.55.120.0/24

Put your answer on a single line in `unit3/answers.txt`, with 21: at the beginning of the line, e.g., 21:255.255.255.0

What is the netmask for this network?

0.0.0.0/1

Put your answer on a single line in `unit3/answers.txt`, with 22: at the beginning of the line, e.g., 22:255.255.255.0

What is the netmask for this network?

13.254.128.0/17

Put your answer on a single line in `unit3/answers.txt`, with 23: at the beginning of the line, e.g., 23:255.255.255.0

What is the netmask for this network?

97.64.0.0/11

Put your answer on a single line in `unit3/answers.txt`, with 24: at the beginning of the line, e.g., 24:255.255.255.0

What is the netmask for this network?

21.31.0.0/17

Put your answer on a single line in `unit3/answers.txt`, with 25: at the beginning of the line, e.g., 25:255.255.255.0

What is the netmask for this network?

0.0.0.0/0

Put your answer on a single line in `unit3/answers.txt`, with 26: at the beginning of the line, e.g., 26:255.255.255.0

What is the netmask for this network?

29.8.0.0/13

Put your answer on a single line in `unit3/answers.txt`, with 27: at the beginning of the line, e.g., 27:255.255.255.0

What is the netmask for this network?

100.240.135.224/28

Put your answer on a single line in `unit3/answers.txt`, with 28: at the beginning of the line, e.g., 28:255.255.255.0

What is the netmask for this network?

82.0.0.0/10

Put your answer on a single line in `unit3/answers.txt`, with 29: at the beginning of the line, e.g., 29:255.255.255.0

What is the netmask for this network?

83.224.0.0/11

Put your answer on a single line in `unit3/answers.txt`, with 30: at the beginning of the line, e.g., 30:255.255.255.0

What is the netmask for this network?

12.167.93.176/28

Put your answer on a single line in `unit3/answers.txt`, with 31: at the beginning of the line, e.g., 31:255.255.255.0

What is the netmask for this network?

59.0.0.0/8

Put your answer on a single line in `unit3/answers.txt`, with 32: at the beginning of the line, e.g., 32:255.255.255.0

What is the netmask for this network?

58.244.0.0/14

Put your answer on a single line in `unit3/answers.txt`, with 33: at the beginning of the line, e.g., 33:255.255.255.0

What is the netmask for this network?

64.0.0.0/4

Put your answer on a single line in `unit3/answers.txt`, with 34: at the beginning of the line, e.g., 34:255.255.255.0

What is the netmask for this network?

15.173.184.192/26

Put your answer on a single line in `unit3/answers.txt`, with 35: at the beginning of the line, e.g., 35:255.255.255.0

What is the netmask for this network?

10.87.127.208/29

Put your answer on a single line in `unit3/answers.txt`, with 36: at the beginning of the line, e.g., 36:255.255.255.0

What is the netmask for this network?

27.55.244.0/27

Put your answer on a single line in `unit3/answers.txt`, with 37: at the beginning of the line, e.g., 37:255.255.255.0

What is the netmask for this network?

34.118.111.64/26

Put your answer on a single line in `unit3/answers.txt`, with 38: at the beginning of the line, e.g., 38:255.255.255.0

What is the netmask for this network?

94.24.0.0/13

Put your answer on a single line in `unit3/answers.txt`, with 39: at the beginning of the line, e.g., 39:255.255.255.0

0.2 Variable Length Sub-net Masking

What is the VLSM name of the network corresponding to the following?

119.54.21.38 netmask 255.254.0.0

Put your answer on a single line in `unit3/answers.txt`, with 40: at the beginning of the line, e.g., 40:10.0.0.0/8

What is the VLSM name of the network corresponding to the following?

5.55.125.126 netmask 255.255.192.0

Put your answer on a single line in `unit3/answers.txt`, with 41: at the beginning of the line, e.g., 41:10.0.0.0/8

What is the VLSM name of the network corresponding to the following?

95.61.59.112 netmask 255.255.252.0

Put your answer on a single line in `unit3/answers.txt`, with 42: at the beginning of the line, e.g., `42:10.0.0.0/8`

What is the VLSM name of the network corresponding to the following?

41.208.165.223 netmask 255.255.192.0

Put your answer on a single line in `unit3/answers.txt`, with 43: at the beginning of the line, e.g., `43:10.0.0.0/8`

What is the VLSM name of the network corresponding to the following?

55.181.38.210 netmask 248.0.0.0

Put your answer on a single line in `unit3/answers.txt`, with 44: at the beginning of the line, e.g., `44:10.0.0.0/8`

What is the VLSM name of the network corresponding to the following?

74.44.218.220 netmask 254.0.0.0

Put your answer on a single line in `unit3/answers.txt`, with 45: at the beginning of the line, e.g., `45:10.0.0.0/8`

What is the VLSM name of the network corresponding to the following?

48.221.149.16 netmask 255.255.255.0

Put your answer on a single line in `unit3/answers.txt`, with 46: at the beginning of the line, e.g., `46:10.0.0.0/8`

What is the VLSM name of the network corresponding to the following?

118.147.27.132 netmask 255.255.252.0

Put your answer on a single line in `unit3/answers.txt`, with 47: at the beginning of the line, e.g., `47:10.0.0.0/8`

What is the VLSM name of the network corresponding to the following?

79.164.181.161 netmask 255.255.255.224

Put your answer on a single line in `unit3/answers.txt`, with 48: at the beginning of the line, e.g., `48:10.0.0.0/8`

What is the VLSM name of the network corresponding to the following?

87.135.213.36 netmask 255.255.128.0

Put your answer on a single line in `unit3/answers.txt`, with 49: at the beginning of the line, e.g., `49:10.0.0.0/8`

What is the VLSM name of the network corresponding to the following?

19.47.86.31 netmask 255.255.255.248

Put your answer on a single line in `unit3/answers.txt`, with 50: at the beginning of the line, e.g., `50:10.0.0.0/8`

What is the VLSM name of the network corresponding to the following?

87.15.208.107 netmask 255.255.248.0

Put your answer on a single line in `unit3/answers.txt`, with 51: at the beginning of the line, e.g., `51:10.0.0.0/8`

What is the VLSM name of the network corresponding to the following?

105.26.191.90 netmask 255.255.255.248

Put your answer on a single line in `unit3/answers.txt`, with 52: at the beginning of the line, e.g., `52:10.0.0.0/8`

What is the VLSM name of the network corresponding to the following?

34.80.145.16 netmask 255.255.255.0

Put your answer on a single line in `unit3/answers.txt`, with 53: at the beginning of the line, e.g., `53:10.0.0.0/8`

What is the VLSM name of the network corresponding to the following?

27.126.123.23 netmask 255.255.255.240

Put your answer on a single line in `unit3/answers.txt`, with 54: at the beginning of the line, e.g., 54:10.0.0.0/8

What is the VLSM name of the network corresponding to the following?

15.71.205.165 netmask 255.255.255.248

Put your answer on a single line in `unit3/answers.txt`, with 55: at the beginning of the line, e.g., 55:10.0.0.0/8

What is the VLSM name of the network corresponding to the following?

115.162.102.140 netmask 240.0.0.0

Put your answer on a single line in `unit3/answers.txt`, with 56: at the beginning of the line, e.g., 56:10.0.0.0/8

What is the VLSM name of the network corresponding to the following?

84.41.171.239 netmask 255.255.255.240

Put your answer on a single line in `unit3/answers.txt`, with 57: at the beginning of the line, e.g., 57:10.0.0.0/8

What is the VLSM name of the network corresponding to the following?

54.190.240.218 netmask 255.252.0.0

Put your answer on a single line in `unit3/answers.txt`, with 58: at the beginning of the line, e.g., 58:10.0.0.0/8

What is the VLSM name of the network corresponding to the following?

23.13.101.78 netmask 255.240.0.0

Put your answer on a single line in `unit3/answers.txt`, with 59: at the beginning of the line, e.g., 59:10.0.0.0/8

0.3 Configure Network Interfaces using the `ifconfig` and `ip` commands

What is `ip` command sequence equivalent to the following `ifconfig` command (apply any options in the order listed)?

```
ifconfig eth0 121.221.107.179 netmask 255.192.0.0 txqueuelen 2790
```

Put your answer on a single line in `unit3/answers.txt`, with 60: at the beginning of the line, e.g., 60:`ip blah blah; ip again with other options; ip again with yet other options`

What is the `ifconfig` command to setup interface `eth0` with the following network settings (apply any options in the order listed)?

```
32.215.185.181 netmask 255.255.128.0, PPP remote address 82.247.32.198,  
TX queue length = 3975
```

Put your answer on a single line in `unit3/answers.txt`, with 61: at the beginning of the line, e.g., 61:`ifconfig moo0 1.2.3.4 netmask 255.0.0.0 -broadcast`

What is `ip` command sequence to setup interface `eth0` with the following network settings (apply any options in the order listed)?

```
24.98.89.242 netmask 255.255.255.254, in promiscuous mode
```

Put your answer on a single line in `unit3/answers.txt`, with 62: at the beginning of the line, e.g., 62:`ip blah blah; ip again with other options; ip again with yet other options`

What is `ifconfig` command equivalent to the following `ip` command sequence (apply any options in the order listed)?

```
ip address add 100.99.195.99/19 dev eth0; ip link set dev eth0 arp  
off
```

Put your answer on a single line in `unit3/answers.txt`, with 63: at the beginning of the line, e.g., 63:`ip blah blah; ip again with other options; ip again with yet other options`

What is `ifconfig` command equivalent to the following `ip` command sequence (apply any options in the order listed)?

```
ip address add 20.76.148.128/15 dev eth0; ip link set dev eth0 mtu  
911; ip link set dev eth0 promisc on
```

Put your answer on a single line in `unit3/answers.txt`, with 64: at the beginning of the line, e.g., 64:`ip blah blah; ip again with other options; ip again with yet other options`

What is ifconfig command equivalent to the following ip command sequence (apply any options in the order listed)?

```
ip address add 124.217.67.33/28 dev eth0; ip link set dev eth0 promisc  
on
```

Put your answer on a single line in `unit3/answers.txt`, with 65: at the beginning of the line, e.g., `65:ip blah blah; ip again with other options; ip again with yet other options`

What is the ifconfig command to setup interface eth0 with the following network settings (apply any options in the order listed)?

```
108.77.250.164 netmask 255.255.255.254, PPP remote address 64.247.143.243
```

Put your answer on a single line in `unit3/answers.txt`, with 66: at the beginning of the line, e.g., `66:ifconfig moo0 1.2.3.4 netmask 255.0.0.0 -broadcast`

What is ifconfig command equivalent to the following ip command sequence (apply any options in the order listed)?

```
ip address add 30.4.145.205/17 dev eth0; ip link set eth0 down
```

Put your answer on a single line in `unit3/answers.txt`, with 67: at the beginning of the line, e.g., `67:ip blah blah; ip again with other options; ip again with yet other options`

What is the ifconfig command to setup interface eth0 with the following network settings (apply any options in the order listed)?

```
58.132.145.22 netmask 255.255.255.240, MTU = 1543, TX queue  
length = 4153
```

Put your answer on a single line in `unit3/answers.txt`, with 68: at the beginning of the line, e.g., `68:ifconfig moo0 1.2.3.4 netmask 255.0.0.0 -broadcast`

What is ip command sequence equivalent to the following ifconfig command (apply any options in the order listed)?

```
ifconfig eth0 59.36.242.60 netmask 240.0.0.0 promisc
```

Put your answer on a single line in `unit3/answers.txt`, with 69: at the beginning of the line, e.g., `69:ip blah blah; ip again with other options; ip again with yet other options`

What is ip command sequence equivalent to the following ifconfig command (apply any options in the order listed)?

```
ifconfig eth0 113.105.118.101 netmask 248.0.0.0 down
```

Put your answer on a single line in `unit3/answers.txt`, with 70: at the beginning of the line, e.g., 70:ip blah blah; ip again with other options; ip again with yet other options

What is ip command sequence equivalent to the following ifconfig command (apply any options in the order listed)?

```
ifconfig eth0 59.216.0.0 netmask 255.224.0.0 -arp
```

Put your answer on a single line in `unit3/answers.txt`, with 71: at the beginning of the line, e.g., 71:ip blah blah; ip again with other options; ip again with yet other options

What is ip command sequence equivalent to the following ifconfig command (apply any options in the order listed)?

```
ifconfig eth0 108.93.195.196 netmask 255.255.254.0 -arp txqueuelen 4395
```

Put your answer on a single line in `unit3/answers.txt`, with 72: at the beginning of the line, e.g., 72:ip blah blah; ip again with other options; ip again with yet other options

What is ip command sequence to setup interface eth0 with the following network settings (apply any options in the order listed)?

```
93.39.197.236 netmask 255.255.255.0, MTU = 1509
```

Put your answer on a single line in `unit3/answers.txt`, with 73: at the beginning of the line, e.g., 73:ip blah blah; ip again with other options; ip again with yet other options

What is ifconfig command equivalent to the following ip command sequence (apply any options in the order listed)?

```
ip address add 114.143.172.177/15 dev eth0; ip link set eth0 down;  
ip link set dev eth0 promisc on; ip link set dev eth0 txqueuelen 709
```

Put your answer on a single line in `unit3/answers.txt`, with 74: at the beginning of the line, e.g., 74:ip blah blah; ip again with other options; ip again with yet other options

What is ip command sequence to setup interface eth0 with the following network settings (apply any options in the order listed)?

14.118.99.131 netmask 255.255.252.0

Put your answer on a single line in `unit3/answers.txt`, with 75: at the beginning of the line, e.g., 75:ip blah blah; ip again with other options; ip again with yet other options

What is ip command sequence to setup interface eth0 with the following network settings (apply any options in the order listed)?

115.251.243.54 netmask 255.255.224.0, in promiscuous mode

Put your answer on a single line in `unit3/answers.txt`, with 76: at the beginning of the line, e.g., 76:ip blah blah; ip again with other options; ip again with yet other options

What is the ifconfig command to setup interface eth0 with the following network settings (apply any options in the order listed)?

39.7.230.34 netmask 255.240.0.0, without ARP, in promiscuous mode,
TX queue length = 2442

Put your answer on a single line in `unit3/answers.txt`, with 77: at the beginning of the line, e.g., 77:ifconfig moo0 1.2.3.4 netmask 255.0.0.0 -broadcast

What is ip command sequence equivalent to the following ifconfig command (apply any options in the order listed)?

ifconfig eth0 36.158.21.172 netmask 255.0.0.0

Put your answer on a single line in `unit3/answers.txt`, with 78: at the beginning of the line, e.g., 78:ip blah blah; ip again with other options; ip again with yet other options

What is the ifconfig command to setup interface eth0 with the following network settings (apply any options in the order listed)?

82.159.244.236 netmask 192.0.0.0, MTU = 3126, TX queue length
= 3921

Put your answer on a single line in `unit3/answers.txt`, with 79: at the beginning of the line, e.g., 79:ifconfig moo0 1.2.3.4 netmask 255.0.0.0 -broadcast

0.4 Configure Network Interfaces using `/etc/network/interfaces` file

0.4.1 Prepare `unit3/iface0-solution.txt`

Produce an `interfaces` file in `unit3/iface0-solution.txt`, that contains the following:

- A template called `moths0`, that specifies an MTU of 6100 and MAC address `08:32:B4:99:E2:34`.
- A template called `moths1`, that specifies an MTU of 2310 and MAC address `E0:57:69:10:95:96`.
- A template called `castle2`, that specifies an MTU of 5058 and MAC address `E5:6A:85:CD:8D:9B`.
- An interface named `ftdi0`, with IPv4 address `75.133.130.158` and netmask `255.240.0.0`, and inherits the template `moths0`.
- An interface named `eth1`, with IPv4 settings configured by DHCP and inherits the template `moths0`.
- An interface named `wlan2`, with IPv4 address `120.124.224.79` and netmask `255.255.255.128`.

0.4.2 Prepare `unit3/iface1-solution.txt`

Produce an `interfaces` file in `unit3/iface1-solution.txt`, that contains the following:

- A template called `moths0`, that specifies an MTU of 718 and MAC address `3E:79:E8:00:5E:52`.
- A template called `ruins1`, that specifies an MTU of 5207 and MAC address `DF:20:66:7D:4D:E4`.
- An interface named `ftdi0`, with IPv4 address `100.58.87.230` and netmask `240.0.0.0`, and inherits the template `ruins1`.
- An interface named `ftdi1`, with IPv4 settings configured by DHCP and inherits the template `ruins1`.
- An interface named `ftdi2`, with IPv4 settings configured by DHCP.

0.4.3 Prepare `unit3/iface2-solution.txt`

Produce an `interfaces` file in `unit3/iface2-solution.txt`, that contains the following:

- A template called `castle0`, that specifies an MTU of 2922 and MAC address `82:35:8C:AE:14:AC`.

- A template called `wealth1`, that specifies an MTU of 1702 and MAC address `F9:F8:EA:DF:9D:7D`.
- An interface named `eth0`, with IPv4 settings configured by DHCP.
- An interface named `wlan1`, with IPv4 address `47.41.138.74` and netmask `255.255.255.0`.
- An interface named `ftdi2`, with IPv4 settings configured by DHCP.
- An interface named `wlan3`, with IPv4 settings configured by DHCP.
- An interface named `eth4`, with IPv4 address `83.133.145.1` and netmask `248.0.0.0`.
- An interface named `ftdi5`, with IPv4 settings configured by DHCP and inherits the template `wealth1`.
- An interface named `wlan6`, with IPv4 settings configured by DHCP and inherits the template `wealth1`.

0.4.4 Prepare `unit3/iface3-solution.txt`

Produce an `interfaces` file in `unit3/iface3-solution.txt`, that contains the following:

- A template called `castle0`, that specifies an MTU of 5050 and MAC address `D4:0E:44:9A:6E:FC`.
- A template called `moths1`, that specifies an MTU of 6741 and MAC address `E9:BF:E1:EA:C4:86`.
- An interface named `eth0`, with IPv4 address `126.155.244.195` and netmask `224.0.0.0`, and inherits the template `moths1`.
- An interface named `ftdi1`, with IPv4 address `30.126.38.214` and netmask `128.0.0.0`, and inherits the template `moths1`.
- An interface named `wlan2`, with IPv4 address `117.210.69.178` and netmask `255.255.192.0`.
- An interface named `wlan3`, with IPv4 settings configured by DHCP and inherits the template `castle0`.
- An interface named `jam4`, with IPv4 address `23.39.71.79` and netmask `255.192.0.0`.
- An interface named `ftdi5`, with IPv4 address `113.168.210.44` and netmask `255.255.254.0`.
- An interface named `jam6`, with IPv4 address `100.83.204.174` and netmask `255.255.0.0`.

0.4.5 Prepare unit3/iface4-solution.txt

Produce an `interfaces` file in `unit3/iface4-solution.txt`, that contains the following:

- A template called `moths0`, that specifies an MTU of 293 and MAC address 95:C2:37:67:44:58.
- A template called `castle1`, that specifies an MTU of 7440 and MAC address BD:4F:D2:1E:F7:22.
- An interface named `wlan0`, with IPv4 settings configured by DHCP.
- An interface named `eth1`, with IPv4 settings configured by DHCP and inherits the template `castle1`.
- An interface named `jam2`, with IPv4 address 72.104.59.163 and netmask 255.254.0.0.

0.5 Create and delete routes

0.5.1 Create files `unit3/routes0add.sh` and `unit3/routes0del.sh` that contains commands that will respective establish and delete the following routes

- 80.36.18.128/25 via the interface to your 2nd VM
- 96.11.11.240/29 via the interface to your 2nd VM
- 13.253.0.0/17 via the interface to your 2nd VM
- 125.227.58.128/25 via the interface to your 2nd VM
- 126.153.123.86/31 via the IP address of your 2nd VM
- 15.66.176.0/20 via the IP address of your 2nd VM

0.5.2 Create files `unit3/routes1add.sh` and `unit3/routes1del.sh` that contains commands that will respective establish and delete the following routes

- 56.225.106.128/26 via the IP address of your 2nd VM
- 117.197.162.48/31 via the IP address of your 2nd VM
- 115.218.48.0/22 via the interface to your 2nd VM
- 65.170.194.0/24 via the IP address of your 2nd VM
- 16.155.60.0/26 via the IP address of your 2nd VM
- 111.185.66.0/24 via the IP address of your 2nd VM

0.5.3 Create files `unit3/routes2add.sh` and `unit3/routes2del.sh` that contains commands that will respective establish and delete the following routes

- 99.247.99.0/24 via the IP address of your 2nd VM
- 74.89.255.112/30 via the IP address of your 2nd VM
- 17.165.208.0/20 via the IP address of your 2nd VM
- 14.26.120.0/21 via the IP address of your 2nd VM
- 17.192.96.0/23 via the IP address of your 2nd VM
- 116.131.115.0/25 via the IP address of your 2nd VM

0.5.4 Create files `unit3/routes3add.sh` and `unit3/routes3del.sh` that contains commands that will respective establish and delete the following routes

- 52.70.224.0/20 via the IP address of your 2nd VM
- 25.229.192.0/19 via the interface to your 2nd VM
- 81.30.48.128/25 via the IP address of your 2nd VM
- 20.0.0.0/16 via the IP address of your 2nd VM
- 35.145.0.0/17 via the IP address of your 2nd VM
- 35.242.128.0/17 via the interface to your 2nd VM

0.5.5 Create files `unit3/routes4add.sh` and `unit3/routes4del.sh` that contains commands that will respective establish and delete the following routes

- 40.145.160.0/21 via the interface to your 2nd VM
- 90.111.80.128/26 via the IP address of your 2nd VM
- 58.116.0.0/17 via the IP address of your 2nd VM
- 30.69.72.0/22 via the IP address of your 2nd VM
- 41.201.64.0/18 via the interface to your 2nd VM
- 114.86.64.0/20 via the interface to your 2nd VM