Network Engineering 2019 Exercises - Unit 3

0.1   Netmask Calculation

What is the netmask for this network?

   82.127.224.0/20

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?

   99.79.70.212/30

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?

   0.0.0.0/2

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?

   64.92.0.0/14

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?

   0.0.0.0/5

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?

   8.99.204.202/0

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?

   55.0.176.0/20

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?

120.7.186.100/31

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?

92.0.0.0/6

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?

45.46.0.0/17

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?

60.0.0.0/7

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?

11.16.43.192/30

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?

118.98.0.0/15

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?

81.8.0.0/13

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?

21.142.136.224/30

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?

31.80.0.0/12

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?

97.127.49.176/30

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?

21.51.42.10/31

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?

104.0.0.0/5

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?

0.0.0.0/2

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?

103.176.124.0/24

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?

72.0.0.0/5

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?

62.0.0.0/7

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?

79.223.108.0/23

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?

52.125.128.0/17

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?

112.118.141.72/29

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?

108.192.0.0/10

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?

59.23.112.0/20

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?

31.0.0.0/8

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?

7.133.230.128/25

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?

66.64.0.0/10

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?

29.49.31.0/26

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?

41.137.0.0/16

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?

6.0.0.0/9

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?

4.0.0.0/6

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?

   11.154.250.202/31

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?

   31.152.0.0/14

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?

   14.64.0.0/11

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?

   31.0.0.0/8

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?

   96.0.0.0/3

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?

   91.67.11.122 netmask 255.192.0.0

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?

   69.182.252.224 netmask 255.255.224.0

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?

  100.166.27.180 netmask 255.255.255.224

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?

  43.56.255.199 netmask 255.248.0.0

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?

  12.239.115.132 netmask 255.128.0.0

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?

  57.92.225.71 netmask 255.224.0.0

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?

  89.158.231.51 netmask 255.248.0.0

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?

  115.28.207.133 netmask 255.255.255.240

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?

      8.242.73.93 netmask 255.255.255.252

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?

      26.36.85.165 netmask 255.255.224.0

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?

      7.188.1.4 netmask 255.255.0.0

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?

      0.138.215.178 netmask 224.0.0.0

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?

      127.85.102.31 netmask 255.255.254.0

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?

      5.121.5.174 netmask 255.255.240.0

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?

109.21.172.191 netmask 255.255.0.0

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?

115.4.197.87 netmask 255.255.255.128

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?

103.65.61.186 netmask 255.255.254.0

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?

16.101.73.236 netmask 255.252.0.0

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?

57.138.56.243 netmask 255.255.240.0

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?

80.33.147.123 netmask 255.255.254.0

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

> 110.93.48.61 netmask 64.0.0.0/2, PPP remote address 96.12.117.15, but not running

Put your answer on a single line in `unit3/answers.txt`, with 60: at the beginning of the line, e.g., `60: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)?

> 9.183.246.105 netmask 0.0.0.0/2

Put your answer on a single line in `unit3/answers.txt`, with 61: at the beginning of the line, e.g., `61: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 52.170.164.74/13 dev eth0; ip link set eth0 down

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

> 55.244.206.238 netmask 55.244.0.0/14, MTU = 1508, PPP remote address 65.27.180.48, TX queue length = 2498

Put your answer on a single line in `unit3/answers.txt`, with 63: at the beginning of the line, e.g., `63: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 127.97.79.230 netmask 255.255.0.0

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

> 27.164.128.247 netmask 27.164.128.0/20, MTU = 1904, PPP remote
> address 12.109.0.227, but not running, in promiscuous mode

Put your answer on a single line in `unit3/answers.txt`, with 65: at the beginning of the line, e.g., `65: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 24.203.177.13 netmask 255.254.0.0 -arp

Put your answer on a single line in `unit3/answers.txt`, with 66: at the beginning of the line, e.g., `66: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)?

> 73.45.105.7 netmask 73.0.0.0/9, without ARP, TX queue length =
> 3039

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

> ip address add 11.213.71.96/31 dev eth0; ip link set eth0 down; ip
> link set dev eth0 txqueuelen 1012

Put your answer on a single line in `unit3/answers.txt`, with 68: at the beginning of the line, e.g., `68: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 38.120.136.134/6 dev eth0ip link set dev eth0 mtu
> 1897; ip link set dev eth0 arp off

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

62.44.71.84 netmask 0.0.0.0/2, MTU = 2139, PPP remote address 53.162.196.163, but not running, without ARP

Put your answer on a single line in `unit3/answers.txt`, with 70: at the beginning of the line, e.g., `70: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)?

47.7.30.54 netmask 47.6.0.0/15, MTU = 3234

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

21.215.227.175 netmask 21.208.0.0/13

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

84.74.174.18 netmask 84.64.0.0/11, but not running, TX queue length = 1689

Put your answer on a single line in `unit3/answers.txt`, with 73: at the beginning of the line, e.g., `73: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 119.221.158.165/17 dev eth0

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

ifconfig eth0 2.47.58.39 netmask 248.0.0.0 mtu 4074

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

127.202.50.10 netmask 96.0.0.0/3, MTU = 842, PPP remote address 7.209.80.142

Put your answer on a single line in `unit3/answers.txt`, with 76: at the beginning of the line, e.g., `76:ifconfig moo0 1.2.3.4 netmask 255.0.0.0 -broadcast`

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

15.86.239.155 netmask 14.0.0.0/7, PPP remote address 81.75.3.224, without ARP

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

ip address add 77.158.26.142/12 dev eth0; ip link set dev eth0 arp off

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

61.205.64.14 netmask 60.0.0.0/6, but not running, in promiscuous mode

Put your answer on a single line in `unit3/answers.txt`, with 79: at the beginning of the line, e.g., `79:ip blah blah; ip again with other options; ip again with yet other options`

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 castle0, that specifies an MTU of 1424 and MAC address D6:37:11:B6:9A:5F.

- A template called castle1, that specifies an MTU of 5888 and MAC address D5:D3:A2:21:B7:98.

- A template called wealth2, that specifies an MTU of 2287 and MAC address 83:C2:CA:91:E8:CF.

- A template called moths3, that specifies an MTU of 7024 and MAC address 5E:0F:A3:E3:FE:19.

- An interface named wlan0, with IPv4 settings configured by DHCP.

- An interface named ftdi1, with IPv4 address 71.21.253.116 and netmask 255.248.0.0.

- An interface named jam2, with IPv4 address 42.14.4.161 and netmask 255.192.0.0, and inherits the template moths3.

- An interface named wlan3, with IPv4 address 80.123.242.188 and netmask 255.255.255.248, and inherits the template castle1.

- An interface named jam4, with IPv4 settings configured by DHCP.

- An interface named wlan5, with IPv4 address 122.202.132.207 and netmask 255.255.192.0.

- An interface named eth6, with IPv4 settings configured by DHCP.

0.4.2 Prepare unit3/iface1-solution.txt

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

- A template called castle0, that specifies an MTU of 7506 and MAC address BE:77:10:F5:B0:AB.

- A template called wealth1, that specifies an MTU of 6500 and MAC address 08:A6:B9:4D:33:DE.

- A template called castle2, that specifies an MTU of 7010 and MAC address 12:B2:ED:44:4F:C0.

- An interface named ftdi0, with IPv4 address 56.2.65.61 and netmask 255.0.0.0, and inherits the template castle2.

- An interface named ftdi1, with IPv4 address 29.218.73.235 and netmask 255.224.0.0, and inherits the template wealth1.

- An interface named eth2, with IPv4 settings configured by DHCPand inherits the template wealth1.

0.4.3 Prepare unit3/iface2-solution.txt

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

- A template called ruins0, that specifies an MTU of 2889 and MAC address 17:EB:AB:29:9E:99.

- A template called ruins1, that specifies an MTU of 5069 and MAC address 59:B7:2A:02:92:3F.

- A template called moths2, that specifies an MTU of 5170 and MAC address 2B:B2:80:8E:6D:4B.

- An interface named wlan0, with IPv4 settings configured by DHCPand inherits the template ruins1.

- An interface named ftdi1, with IPv4 settings configured by DHCP.

- An interface named jam2, with IPv4 address 28.168.79.156 and netmask 255.192.0.0.

0.4.4 Prepare unit3/iface3-solution.txt

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

- A template called ruins0, that specifies an MTU of 4558 and MAC address 86:53:E2:8D:FD:0D.

- A template called moths1, that specifies an MTU of 6113 and MAC address 9B:AD:C8:3C:81:C8.

- An interface named wlan0, with IPv4 settings configured by DHCP.

- An interface named ftdi1, with IPv4 address 6.242.75.43 and netmask 255.255.224.0, and inherits the template moths1.

- An interface named wlan2, with IPv4 settings configured by DHCP.

- An interface named ftdi3, with IPv4 address 18.99.83.208 and netmask 248.0.0.0.

- An interface named jam4, with IPv4 settings configured by DHCP.

- An interface named jam5, with IPv4 address 91.245.80.39 and netmask 255.255.255.252.

- An interface named wlan6, with IPv4 address 115.205.115.145 and netmask 255.255.128.0, and inherits the template moths1.

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 4956 and MAC address 48:78:F9:FD:C1:8B.

- A template called ruins1, that specifies an MTU of 1173 and MAC address 70:8F:EF:52:D6:8C.

- A template called ruins2, that specifies an MTU of 936 and MAC address D6:D9:D7:A1:C8:53.

- A template called castle3, that specifies an MTU of 1561 and MAC address 89:8A:F2:EA:94:A5.

- An interface named eth0, with IPv4 settings configured by DHCPand inherits the template castle3.

- An interface named eth1, with IPv4 address 38.3.241.47 and netmask 255.255.0.0, and inherits the template ruins2.

- An interface named eth2, with IPv4 settings configured by DHCPand inherits the template ruins1.

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

- 18.198.181.0/24 via the IP address of your 2nd VM

- 112.7.109.0/25 via the IP address of your 2nd VM

- 37.34.37.180/31 via the interface to your 2nd VM

- 31.34.66.144/28 via the interface to your 2nd VM

- 69.23.78.96/27 via the IP address of your 2nd VM

- 101.60.157.128/25 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

- 103.27.0.0/16 via the interface to your 2nd VM

- 97.95.8.0/21 via the IP address of your 2nd VM

- 114.191.128.0/17 via the IP address of your 2nd VM

- 122.57.0.0/16 via the IP address of your 2nd VM

- 104.192.247.206/31 via the interface to your 2nd VM

- 38.72.24.0/25 via the interface to 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

- 11.132.128.0/18 via the IP address of your 2nd VM

- 45.216.140.34/31 via the interface to your 2nd VM

- 79.121.239.128/25 via the IP address of your 2nd VM

- 76.10.176.0/20 via the interface to your 2nd VM

- 57.168.82.0/23 via the interface to your 2nd VM

- 34.105.72.0/23 via the interface to 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

- 72.177.0.0/16 via the interface to your 2nd VM

- 86.106.210.0/24 via the interface to your 2nd VM

- 93.118.30.0/23 via the IP address of your 2nd VM

- 14.197.240.0/21 via the IP address of your 2nd VM

- 56.93.138.0/24 via the IP address of your 2nd VM

- 18.230.182.128/25 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

- 122.246.64.0/21 via the IP address of your 2nd VM

- 105.68.25.0/25 via the IP address of your 2nd VM

- 52.11.4.208/31 via the IP address of your 2nd VM

- 79.35.48.0/20 via the interface to your 2nd VM

- 58.114.128.0/17 via the interface to your 2nd VM

- 78.55.58.160/27 via the IP address of your 2nd VM