Network Engineering 2019 Exercises - Unit 3

0.1 Netmask Calculation

What is the netmask for this network?

> 22.137.175.192/26

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?

> 0.0.0.0/1

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?

> 123.186.231.128/27

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?

> 24.63.252.120/29

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?

> 89.116.93.88/30

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?

> 64.0.0.0/3

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?

> 13.28.4.0/23

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?

28.128.0.0/11

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?

96.0.0.0/4

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?

0.0.0.0/0

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?

68.214.178.32/28

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?

20.0.0.0/6

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?

0.0.0.0/0

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?

112.138.2.120/29

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?

    21.224.0.0/11

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?

    122.0.0.0/9

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?

    116.0.0.0/7

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?

    68.10.227.200/30

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?

    64.0.0.0/5

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?

    109.248.124.16/28

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?

    38.0.0.0/7

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?

88.112.21.0/26

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?

30.0.0.0/7

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?

99.128.0.0/9

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?

31.198.192.0/18

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?

40.148.0.0/15

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?

63.53.152.0/21

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?

0.0.0.0/0

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?

98.204.0.0/14

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?

44.69.74.120/29

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?

0.0.0.0/1

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?

37.67.37.134/31

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?

39.162.0.0/17

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?

127.0.0.0/10

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?

69.152.233.128/26

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?

> 5.153.114.96/27

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?

> 48.0.0.0/5

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?

> 33.213.239.148/31

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?

> 82.255.156.32/27

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?

> 87.232.68.0/23

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?

> 112.47.183.174 netmask 255.255.128.0

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?

> 87.100.29.39 netmask 255.255.255.248

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?

61.60.163.7 netmask 255.255.255.240

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?

102.67.181.189 netmask 255.255.255.240

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?

107.111.163.202 netmask 255.255.255.192

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?

24.208.223.26 netmask 240.0.0.0

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?

57.11.151.123 netmask 128.0.0.0

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?

18.146.38.99 netmask 224.0.0.0

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?

39.98.13.242 netmask 128.0.0.0

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?

74.145.130.13 netmask 255.128.0.0

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?

126.150.119.187 netmask 255.255.224.0

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?

90.36.97.164 netmask 255.255.255.240

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?

46.52.123.248 netmask 255.255.255.192

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?

7.188.236.28 netmask 248.0.0.0

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?

1.86.94.213 netmask 240.0.0.0

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?

115.250.155.188 netmask 224.0.0.0

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?

96.34.50.182 netmask 224.0.0.0

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?

32.235.105.32 netmask 255.255.255.248

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?

52.131.152.32 netmask 255.255.255.248

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?

61.107.36.57 netmask 255.192.0.0

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

> ip address add 25.184.31.23/19 dev eth0; ip link set eth0 down

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

> ip address add 126.3.16.34/16 dev eth0

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

> 125.150.152.179 netmask 112.0.0.0/4, MTU = 2051, PPP remote
> address 66.36.26.66, but not running

Put your answer on a single line in **unit3/answers.txt**, with 62: at the beginning of the line, e.g., `62: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)?

> 17.102.193.93 netmask 17.102.193.88/29, MTU = 4032, PPP remote
> address 7.122.31.128, TX queue length = 1036

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 5.225.54.29 netmask 255.248.0.0 mtu 607 promisc

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

95.64.199.8 netmask 0.0.0.0/1, but not running, without ARP

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

63.18.0.52 netmask 56.0.0.0/5

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)?

54.179.230.114 netmask 48.0.0.0/5

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)?

62.179.34.153 netmask 62.176.0.0/14, MTU = 3547, without ARP, in promiscuous mode

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

ip address add 106.10.138.31/7 dev eth0; ip link set eth0 down; ip link set dev eth0 promisc on

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 109.109.210.194 netmask 255.255.255.254 mtu 2376

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

21.15.181.4 netmask 21.0.0.0/8, MTU = 2406, TX queue length = 3749

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)?

107.36.151.164 netmask 107.36.0.0/16, MTU = 2470, in promiscuous mode

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)?

92.130.91.94 netmask 92.130.88.0/22, TX queue length = 3945

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

35.125.174.20 netmask 35.125.174.16/29, MTU = 1530, without ARP, in promiscuous mode

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 100.88.122.5 netmask 255.255.255.0 txqueuelen 3590

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

      ifconfig eth0 44.165.108.237 netmask 255.255.0.0 mtu 2586

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

      ifconfig eth0 73.43.164.75 netmask 255.252.0.0 mtu 2667 promisc

Put your answer on a single line in **unit3/answers.txt**, with 77: at the beginning of the line, e.g., `77: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)?

      5.100.85.230 netmask 0.0.0.0/0, PPP remote address 123.37.228.62,
      TX queue length = 1295

Put your answer on a single line in **unit3/answers.txt**, with 78: at the beginning of the line, e.g., `78: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)?

      42.21.16.16 netmask 42.0.0.0/11

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 ruins0, that specifies an MTU of 625 and MAC address 2C:D1:07:4F:D6:A1.

- A template called castle1, that specifies an MTU of 6032 and MAC address 41:94:F4:7F:0D:42.

- A template called wealth2, that specifies an MTU of 5071 and MAC address 42:9B:7E:52:86:B3.

- An interface named wlan0, with IPv4 settings configured by DHCPand inherits the template wealth2.

- An interface named jam1, with IPv4 address 53.100.5.7 and netmask 255.255.255.0, and inherits the template wealth2.

- An interface named eth2, with IPv4 address 55.94.127.175 and netmask 0.0.0.0.

- An interface named wlan3, with IPv4 settings configured by DHCPand inherits the template ruins0.

- An interface named wlan4, with IPv4 address 32.95.32.117 and netmask 224.0.0.0, and inherits the template wealth2.

- An interface named jam5, with IPv4 address 96.83.147.167 and netmask 255.255.255.128.

- An interface named wlan6, with IPv4 address 116.226.66.202 and netmask 255.0.0.0.

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 4751 and MAC address 76:59:7F:7B:C4:81.

- A template called wealth1, that specifies an MTU of 6367 and MAC address 03:BA:C4:25:30:A7.

- An interface named ftdi0, with IPv4 settings configured by DHCPand inherits the template castle0.

- An interface named eth1, with IPv4 address 5.196.112.59 and netmask 255.255.255.240, 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 castle0, that specifies an MTU of 8622 and MAC address 23:E2:CD:26:9D:92.

- A template called moths1, that specifies an MTU of 5441 and MAC address 39:2E:F0:16:54:BB.

- A template called moths2, that specifies an MTU of 3590 and MAC address F6:27:AA:BA:AC:8C.

- A template called ruins3, that specifies an MTU of 981 and MAC address 18:40:DD:FD:E2:AB.

- An interface named wlan0, with IPv4 settings configured by DHCPand inherits the template ruins3.

- An interface named eth1, with IPv4 address 92.228.163.119 and netmask 255.255.255.0.

- An interface named jam2, with IPv4 settings configured by DHCP.

- An interface named jam3, with IPv4 settings configured by DHCP.

- An interface named jam4, with IPv4 address 96.164.216.203 and netmask 255.255.128.0, and inherits the template castle0.

- An interface named eth5, with IPv4 settings configured by DHCPand inherits the template moths2.

- An interface named wlan6, with IPv4 settings configured by DHCP.

0.4.4 Prepare unit3/iface3-solution.txt

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

- A template called wealth0, that specifies an MTU of 7114 and MAC address 01:9B:DC:A5:1D:70.

- A template called moths1, that specifies an MTU of 4946 and MAC address AF:93:1C:7A:04:FC.

- A template called ruins2, that specifies an MTU of 6414 and MAC address B8:3E:49:20:C6:E2.

- An interface named jam0, with IPv4 address 80.221.60.195 and netmask 254.0.0.0.

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

- An interface named jam2, with IPv4 settings configured by DHCP.

- An interface named wlan3, with IPv4 settings configured by DHCP.

- An interface named ftdi4, with IPv4 address 82.250.4.205 and netmask 192.0.0.0, and inherits the template wealth0.

- An interface named ftdi5, with IPv4 address 46.132.172.205 and netmask 255.255.255.224.

- An interface named wlan6, with IPv4 settings configured by DHCPand 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 ruins0, that specifies an MTU of 4932 and MAC address DA:A3:63:9D:B5:99.

- A template called moths1, that specifies an MTU of 4835 and MAC address 62:CE:B4:2F:70:4E.

- A template called moths2, that specifies an MTU of 2635 and MAC address 26:80:47:C4:2F:D9.

- A template called ruins3, that specifies an MTU of 7642 and MAC address A2:4D:C1:BC:80:C2.

- A template called wealth4, that specifies an MTU of 5514 and MAC address 65:8B:F8:1B:24:1F.

- An interface named ftdi0, with IPv4 settings configured by DHCP.

- An interface named wlan1, with IPv4 settings configured by DHCPand inherits the template ruins3.

- An interface named wlan2, with IPv4 address 41.84.124.126 and netmask 255.255.255.0, and inherits the template moths2.

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

- 50.138.128.0/17 via the IP address of your 2nd VM

- 75.148.76.128/28 via the IP address of your 2nd VM

- 19.22.44.0/22 via the IP address of your 2nd VM

- 110.213.12.208/28 via the IP address of your 2nd VM

- 52.244.128.0/17 via the interface to your 2nd VM

- 112.60.187.196/30 via the interface to 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

- 68.56.206.64/26 via the IP address of your 2nd VM

- 26.239.195.212/30 via the interface to your 2nd VM

- 39.243.45.160/28 via the IP address of your 2nd VM

- 112.253.8.0/26 via the interface to your 2nd VM

- 21.180.51.0/24 via the interface to your 2nd VM

- 43.232.100.60/31 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

- 52.153.94.0/23 via the IP address of your 2nd VM

- 92.140.128.0/20 via the IP address of your 2nd VM

- 49.189.116.12/30 via the IP address of your 2nd VM

- 71.113.164.0/22 via the interface to your 2nd VM

- 115.90.8.0/21 via the interface to your 2nd VM

- 82.226.157.176/28 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

- 18.227.52.0/24 via the interface to your 2nd VM

- 71.124.0.0/16 via the IP address of your 2nd VM

- 111.154.147.224/28 via the IP address of your 2nd VM

- 49.107.89.64/27 via the IP address of your 2nd VM

- 109.58.100.0/23 via the IP address of your 2nd VM

- 31.15.176.0/20 via the IP address of 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

- 109.166.55.176/28 via the interface to your 2nd VM

- 67.41.172.240/29 via the interface to your 2nd VM

- 82.176.198.0/28 via the interface to your 2nd VM

- 41.169.128.0/17 via the interface to your 2nd VM

- 115.252.82.160/28 via the IP address of your 2nd VM

- 89.52.164.200/29 via the IP address of your 2nd VM