Network Engineering 2019 Exercises - Unit 3

0.1 Netmask Calculation

What is the netmask for this network?

83.128.94.0/23

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?

104.176.0.0/12

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?

105.208.4.64/26

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?

81.52.145.128/29

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?

112.0.0.0/4

Put your answer on a single line in unit3/answers.txt, with 4: at the beginning of the line, e.g., 4:255.255.25.0

What is the netmask for this network?

33.86.97.144/28

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?

34.220.176.0/21

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

29.66.165.208/28

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?

62.182.196.0/23

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?

37.40.0.0/14

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?

127.8.0.0/13

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?

123.228.85.224/27

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?

54.214.64.4/31

Put your answer on a single line in unit3/answers.txt, with 12: at the beginning of the line, e.g., 12:255.255.25.0

What is the netmask for this network?

62.136.96.0/19

Put your answer on a single line in unit3/answers.txt, with 13: at the beginning of the line, e.g., 13:255.255.25.0

123.0.0.0/8

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?

22.205.124.192/26

Put your answer on a single line in unit3/answers.txt, with 15: at the beginning of the line, e.g., 15:255.255.25.0

What is the netmask for this network?

113.78.188.0/22

Put your answer on a single line in unit3/answers.txt, with 16: at the beginning of the line, e.g., 16:255.255.25.0

What is the netmask for this network?

35.72.0.0/14

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?

68.80.0.0/13

Put your answer on a single line in unit3/answers.txt, with 18: at the beginning of the line, e.g., 18:255.255.25.0

What is the netmask for this network?

64.0.0.0/3

Put your answer on a single line in unit3/answers.txt, with 19: at the beginning of the line, e.g., 19:255.255.25.0

What is the netmask for this network?

77.197.2.144/28

Put your answer on a single line in unit3/answers.txt, with 20: at the beginning of the line, e.g., 20:255.255.25.0

8.0.0.0/10

Put your answer on a single line in unit3/answers.txt, with 21: at the beginning of the line, e.g., 21:255.255.25.0

What is the netmask for this network?

27.2.216.192/26

Put your answer on a single line in unit3/answers.txt, with 22: at the beginning of the line, e.g., 22:255.255.25.0

What is the netmask for this network?

17.83.0.0/16

Put your answer on a single line in unit3/answers.txt, with 23: at the beginning of the line, e.g., 23:255.255.25.0

What is the netmask for this network?

66.75.108.160/27

Put your answer on a single line in unit3/answers.txt, with 24: at the beginning of the line, e.g., 24:255.255.25.0

What is the netmask for this network?

64.128.0.0/10

Put your answer on a single line in unit3/answers.txt, with 25: at the beginning of the line, e.g., 25:255.255.25.0

What is the netmask for this network?

74.0.0.0/7

Put your answer on a single line in unit3/answers.txt, with 26: at the beginning of the line, e.g., 26:255.255.25.0

What is the netmask for this network?

38.148.0.0/14

Put your answer on a single line in unit3/answers.txt, with 27: at the beginning of the line, e.g., 27:255.255.25.0

126.41.128.0/17

Put your answer on a single line in unit3/answers.txt, with 28: at the beginning of the line, e.g., 28:255.255.25.0

What is the netmask for this network?

57.0.0.0/8

Put your answer on a single line in unit3/answers.txt, with 29: at the beginning of the line, e.g., 29:255.255.25.0

What is the netmask for this network?

92.64.0.0/12

Put your answer on a single line in unit3/answers.txt, with 30: at the beginning of the line, e.g., 30:255.255.25.0

What is the netmask for this network?

73.96.108.128/26

Put your answer on a single line in unit3/answers.txt, with 31: at the beginning of the line, e.g., 31:255.255.25.0

What is the netmask for this network?

79.128.0.0/9

Put your answer on a single line in unit3/answers.txt, with 32: at the beginning of the line, e.g., 32:255.255.25.0

What is the netmask for this network?

40.188.128.0/20

Put your answer on a single line in unit3/answers.txt, with 33: at the beginning of the line, e.g., 33:255.255.25.0

What is the netmask for this network?

97.40.80.0/20

Put your answer on a single line in unit3/answers.txt, with 34: at the beginning of the line, e.g., 34:255.255.25.0

82.0.0.0/8

Put your answer on a single line in unit3/answers.txt, with 35: at the beginning of the line, e.g., 35:255.255.25.0

What is the netmask for this network?

113.179.192.0/23

Put your answer on a single line in unit3/answers.txt, with 36: at the beginning of the line, e.g., 36:255.255.25.0

What is the netmask for this network?

0.0.0.0/3

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?

0.98.229.128/25

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., 39:255.255.25.0

0.2 Variable Length Sub-net Masking

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

 $103.97.98.85~\rm netmask~255.255.128.0$

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?

 $4.3.161.13 \ \mathrm{netmask} \ 255.255.255.248$

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?

99.188.210.88 netmask 255.255.192.0

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?

50.232.201.235 netmask 255.255.255.254

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?

15.182.52.68 netmask 255.248.0.0

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?

91.235.46.199 netmask 255.255.255.252

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?

60.53.121.153 netmask 255.192.0.0

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?

57.163.2.120 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?

17.245.181.212 netmask 0.0.0.0

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?

31.182.76.208 netmask 255.224.0.0

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?

94.236.130.53 netmask 255.0.0.0

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?

34.11.107.211 netmask 252.0.0.0

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?

77.135.35.223 netmask 252.0.0.0

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?

93.86.221.41 netmask 255.255.0.0

Put your answer on a single line in unit3/answers.txt, with 53: at the beginning of the line, e.g., 53:10.0.0/8

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

114.125.45.64 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?

16.152.91.179 netmask 255.255.248.0

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?

106.235.110.45 netmask 0.0.0.0

Put your answer on a single line in unit3/answers.txt, with 56: at the beginning of the line, e.g., 56:10.0.0/8

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

11.152.133.178 netmask 252.0.0.0

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?

63.52.181.179 netmask 255.255.255.252

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?

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

```
42.169.178.235 netmask 255.240.0.0
```

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

```
18.95.160.145 netmask 255.255.252.0, without ARP, in promiscuous mode, TX queue length = 4069
```

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

```
if<br/>config eth<br/>012.252.71.48netmask255.248.0.0mtu2361tx<br/>queuelen1705
```

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)?

```
83.176.226.71 netmask 0.0.0.0
```

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

```
90.38.229.22 netmask 255.255.254.0, without ARP
```

Put your answer on a single line in unit3/answers.txt, with 64: at the beginning of the line, e.g., 64: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)?

122.91.238.243netmask $255.255.192.0,\,\mathrm{MTU}=2420,\,\mathrm{in}$ promiscuous mode, TX queue length =1552

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

85.54.38.230 netmask 192.0.0.0

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

40.120.240.177 netmask 255.255.224.0

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

ip address add 91.86.202.163/21 dev eth0; ip link set dev eth0 mtu 3402; ip link set dev eth0 down; ip link set dev eth0 txqueuelen 773

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

ip address add 7.82.11.4/13 dev eth0; ip link set dev 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 the ifconfig command to setup interface eth0 with the following network settings (apply any options in the order listed)?

10.29.64.154 netmask 255.255.254.0, MTU = 2081

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

ifconfig eth0 107.160.30.38 netmask 224.0.0.0

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 53.126.136.6 netmask 255.254.0.0 down txqueuelen 4029

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)?

48.222.227.123 netmask 255.255.240.0, MTU = 1990

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 26.83.57.214/29 dev eth0; ip link set dev eth0 arp off

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

ip address add 58.109.243.240/9 dev eth0; ip link set dev eth0 arp off; ip link set dev eth0 txqueuelen 546

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

ip address add 95.111.126.109/28 dev eth
0; ip link set dev eth
0 arp off

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 eth
055.148.119.233netmask255.255.255.240mtu
 3315 -arp

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

ip address add 45.82.178.180/2 dev eth
0; ip link set dev eth
0 txqueuelen 3464

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

ip address add 123.154.34.158/27 dev eth0; ip link set dev eth0 mtu 2607; ip link set dev eth0 arp off

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

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 6111 and MAC address DD:06:D0:87:9F:D9.
- A template called castle1, that specifies an MTU of 3857 and MAC address 8D:E0:E4:EA:F4:FD.
- A template called ruins2, that specifies an MTU of 3952 and MAC address 32:FC:A2:CD:C5:9D.
- An interface named eth0, with IPv4 address 88.1.205.175 and netmask 255.255.255.248.
- An interface named jam1, with IPv4 settings configured by DHCP.
- An interface named wlan2, with IPv4 address 118.135.214.96 and netmask 255.252.0.0.

0.4.2 Prepare unit3/iface1-solution.txt

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

- A template called moths0, that specifies an MTU of 6097 and MAC address 27:B1:41:24:53:45.
- A template called castle1, that specifies an MTU of 3139 and MAC address E7:24:14:85:6F:C4.
- A template called castle2, that specifies an MTU of 667 and MAC address D1:1B:75:25:AA:9B.
- A template called moths3, that specifies an MTU of 2690 and MAC address 49:79:44:B6:BC:0B.
- A template called moths4, that specifies an MTU of 147 and MAC address BC:44:07:0F:89:5E.
- An interface named jam0, with IPv4 address 24.95.187.112 and netmask 192.0.0.0, and inherits the template moths0.
- An interface named eth1, with IPv4 address 22.202.241.216 and netmask 255.255.255.240, and inherits the template castle2.
- An interface named wlan2, with IPv4 settings configured by DHCP.

- An interface named eth3, with IPv4 settings configured by DHCP, and inherits the template moths0.
- An interface named jam4, with IPv4 settings configured by DHCP, and inherits the template castle1.
- An interface named wlan5, with IPv4 settings configured by DHCP, and inherits the template moths3.
- An interface named ftdi6, with IPv4 settings configured by DHCP, and inherits the template castle1.

0.4.3 Prepare unit3/iface2-solution.txt

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

- A template called moths0, that specifies an MTU of 6311 and MAC address 78:B0:73:EF:D6:5F.
- A template called moths1, that specifies an MTU of 8916 and MAC address 56:4B:7D:09:BE:49.
- A template called wealth2, that specifies an MTU of 5175 and MAC address 74:EE:28:20:84:8A.
- A template called castle3, that specifies an MTU of 4405 and MAC address C5:78:26:F2:C3:29.
- A template called ruins4, that specifies an MTU of 8472 and MAC address D9:30:2B:AF:8F:46.
- An interface named eth0, with IPv4 address 100.105.141.229 and netmask 255.255.128.0.
- An interface named jam1, with IPv4 settings configured by DHCP.
- An interface named ftdi2, with IPv4 address 74.247.242.51 and netmask 192.0.0.0.
- An interface named eth3, with IPv4 address 38.98.80.127 and netmask 192.0.0.0, and inherits the template moths0.
- An interface named eth4, with IPv4 settings configured by DHCP, and inherits the template ruins4.
- An interface named wlan5, with IPv4 address 119.89.173.88 and netmask 255.255.192.0.
- An interface named jam6, with IPv4 address 82.103.251.251 and netmask 240.0.0.0.

0.4.4 Prepare unit3/iface3-solution.txt

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

- A template called castle0, that specifies an MTU of 120 and MAC address 2C:89:36:5A:46:B7.
- A template called ruins1, that specifies an MTU of 3977 and MAC address AF:7F:3E:6B:4E:70.
- A template called moths2, that specifies an MTU of 5982 and MAC address D3:86:4E:C6:F0:0E.
- A template called castle3, that specifies an MTU of 3439 and MAC address B2:65:36:84:E7:8C.
- An interface named ftdi0, with IPv4 settings configured by DHCP, and inherits the template ruins1.
- An interface named wlan1, with IPv4 address 30.126.254.72 and netmask 240.0.0.0.
- An interface named jam2, with IPv4 settings configured by DHCP, and inherits the template moths2.

0.4.5 Prepare unit3/iface4-solution.txt

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

- A template called castle0, that specifies an MTU of 1160 and MAC address DA:68:0A:C5:1A:6F.
- A template called moths1, that specifies an MTU of 970 and MAC address 57:87:96:6B:9C:C4.
- A template called ruins2, that specifies an MTU of 5672 and MAC address AA:21:1C:3F:E8:7F.
- A template called moths3, that specifies an MTU of 8129 and MAC address 52:A3:09:F8:8E:63.
- An interface named jam0, with IPv4 settings configured by DHCP, and inherits the template moths3.
- An interface named ftdi1, with IPv4 address 109.8.22.41 and netmask 224.0.0.0, and inherits the template moths1.
- An interface named ftdi2, with IPv4 address 6.29.4.77 and netmask 255.255.255.248, and inherits the template castle0.

- An interface named eth3, with IPv4 address 7.253.182.98 and netmask 252.0.0.0.
- An interface named wlan4, with IPv4 address 37.27.206.130 and netmask 255.255.224.0, and inherits the template moths3.
- An interface named eth5, with IPv4 address 91.9.116.238 and netmask 255.255.0.0.
- An interface named jam6, with IPv4 address 77.142.197.206 and netmask 255.255.255.252, and inherits the template moths1.

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
 - 115.66.245.128/26 via the interface to your 2nd VM
 - 121.95.248.0/23 via the interface to your 2nd VM
 - 24.21.152.58/31 via the interface to your 2nd VM
 - 22.33.138.80/30 via the IP address of your 2nd VM
 - \bullet 59.61.0.0/17 via the IP address of your 2nd VM
 - 122.131.152.88/29 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
 - 86.195.97.64/26 via the IP address of your 2nd VM
 - 25.173.64.0/18 via the interface to your 2nd VM
 - 74.191.128.0/23 via the interface to your 2nd VM
 - 80.99.16.0/20 via the interface to your 2nd VM
 - 112.118.103.0/26 via the IP address of your 2nd VM
 - \bullet 40.0.220.0/25 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
 - 34.132.116.0/22 via the IP address of your 2nd VM
 - 52.196.219.136/30 via the interface to your 2nd VM
 - 72.214.1.78/31 via the interface to your 2nd VM
 - 19.149.130.0/23 via the IP address of your 2nd VM
 - 117.182.61.98/31 via the IP address of your 2nd VM
 - 90.11.96.0/19 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
 - 126.116.78.0/25 via the interface to your 2nd VM
 - 64.234.128.0/17 via the interface to your 2nd VM
 - 65.41.126.0/23 via the interface to your 2nd VM
 - 53.139.6.144/28 via the interface to your 2nd VM
 - 27.128.147.0/25 via the IP address of your 2nd VM
 - 72.99.0.0/16 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
 - 41.179.169.182/31 via the interface to your 2nd VM
 - 124.101.248.0/21 via the IP address of your 2nd VM
 - 57.33.65.32/27 via the IP address of your 2nd VM
 - 101.127.238.64/29 via the IP address of your 2nd VM
 - 117.201.1.252/31 via the IP address of your 2nd VM
 - 96.29.128.0/20 via the IP address of your 2nd VM