

Task 1

Adapter **DHCP Server**

☐ Enable Server

Server Address: 192.168.77.254

Server Mask: 255.255.255.0

Lower Address Bound: 192.168.77.2

Upper Address Bound: 192.168.77.253

Apply Reset

Adapter **DHCP Server**

☐ Configure Adapter Automatically

☒ Configure Adapter Manually

IPv4 Address: 192.168.77.1

IPv4 Network Mask: 255.255.255.0

IPv6 Address: fe80::ccc2:f5b6:61be:ef78

IPv6 Prefix Length: 64

Apply Reset

ip ad:

```
debian@um1:~$ ip ad
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 52:54:00:00:00:12 brd ff:ff:ff:ff:ff:ff
    inet 10.1.2.105/24 brd 10.1.2.255 scope global eth0
        valid_lft forever preferred_lft forever
3: enp0s8: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 08:00:27:09:f2:11 brd ff:ff:ff:ff:ff:ff
    inet 192.168.77.2/24 brd 192.168.77.255 scope global dynamic enp0s8
        valid_lft 590sec preferred_lft 590sec
debian@um1:~$ ip ad
4: enp0s9: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 08:00:27:97:73:e4 brd ff:ff:ff:ff:ff:ff
    inet 192.168.77.4/24 brd 192.168.77.255 scope global dynamic enp0s9
        valid_lft 547sec preferred_lft 547sec
debian@um2:~$ ip ad
4: enp0s9: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 08:00:27:40:00:5e brd ff:ff:ff:ff:ff:ff
    inet 192.168.77.5/24 brd 192.168.77.255 scope global dynamic enp0s9
        valid_lft 549sec preferred_lft 549sec
debian@um3:~$ ip ad
4: enp0s9: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 08:00:27:40:00:5e brd ff:ff:ff:ff:ff:ff
    inet 192.168.77.5/24 brd 192.168.77.255 scope global dynamic enp0s9
        valid_lft 549sec preferred_lft 549sec
debian@um3:~$
```

```

root@vm1:~# iptables -L -v
Chain INPUT (policy ACCEPT 0 packets, 0 bytes)
 pkts bytes target     prot opt in     out     source                   destination
Chain FORWARD (policy ACCEPT 0 packets, 0 bytes)
 pkts bytes target     prot opt in     out     source                   destination
Chain OUTPUT (policy ACCEPT 0 packets, 0 bytes)
 pkts bytes target     prot opt in     out     source                   destination
root@vm1:~#

```

Vm4 --> vm3 ping and ssh:

```

debian@vm4:~$ ping 10.3.4.103
PING 10.3.4.103 (10.3.4.103) 56(84) bytes of data.
64 bytes from 10.3.4.103: icmp_seq=1 ttl=64 time=0.687 ms
64 bytes from 10.3.4.103: icmp_seq=2 ttl=64 time=0.457 ms
64 bytes from 10.3.4.103: icmp_seq=3 ttl=64 time=0.458 ms
64 bytes from 10.3.4.103: icmp_seq=4 ttl=64 time=0.267 ms
^C
--- 10.3.4.103 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 76ms
rtt min/avg/max/mdev = 0.267/0.467/0.687/0.149 ms
debian@vm4:~$ ssh 10.3.4.103
The authenticity of host '10.3.4.103 (10.3.4.103)' can't be established.
ECDSA key fingerprint is SHA256:rQ0nQFs2Ukd84g+EYKicOUoek40JA+Nkc+1jJ/duMf4.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '10.3.4.103' (ECDSA) to the list of known hosts.
debian@10.3.4.103's password:
Linux vm3 4.19.0-8-amd64 #1 SMP Debian 4.19.98-1 (2020-01-26) x86_64

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the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Wed May 19 15:45:13 2021
debian@vm3:~$ _

```

Vm3 block vm4:

```

root@vm3:~# iptables -I INPUT -p icmp -j DROP -i eth1
root@vm3:~#

debian@vm4:~$ ping 10.3.4.103
PING 10.3.4.103 (10.3.4.103) 56(84) bytes of data.
^C
--- 10.3.4.103 ping statistics ---
10 packets transmitted, 0 received, 100% packet loss, time 230ms

debian@vm2:~$ ping 10.2.3.103
PING 10.2.3.103 (10.2.3.103) 56(84) bytes of data.
64 bytes from 10.2.3.103: icmp_seq=1 ttl=64 time=0.608 ms
64 bytes from 10.2.3.103: icmp_seq=2 ttl=64 time=0.473 ms
64 bytes from 10.2.3.103: icmp_seq=3 ttl=64 time=0.549 ms
^C
--- 10.2.3.103 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 5ms
rtt min/avg/max/mdev = 0.473/0.543/0.608/0.058 ms

```

Block ssh:

```
root@vm3:~# iptables -I INPUT -p tcp --dport ssh -j DROP -i eth1
root@vm3:~# _
debian@vm4:~$ ssh 10.3.4.103
ssh: connect to host 10.3.4.103 port 22: Connection timed out
debian@vm4:~$
```

Vm3 --> block vm2

```
root@vm3:~# iptables -I INPUT -p tcp --dport ssh -j DROP -i eth0
root@vm3:~# iptables -I INPUT -p icmp -j DROP -i eth0
```

Vm1 --> ping vm4 will work fine as vm3 doesn't block forwarding packets