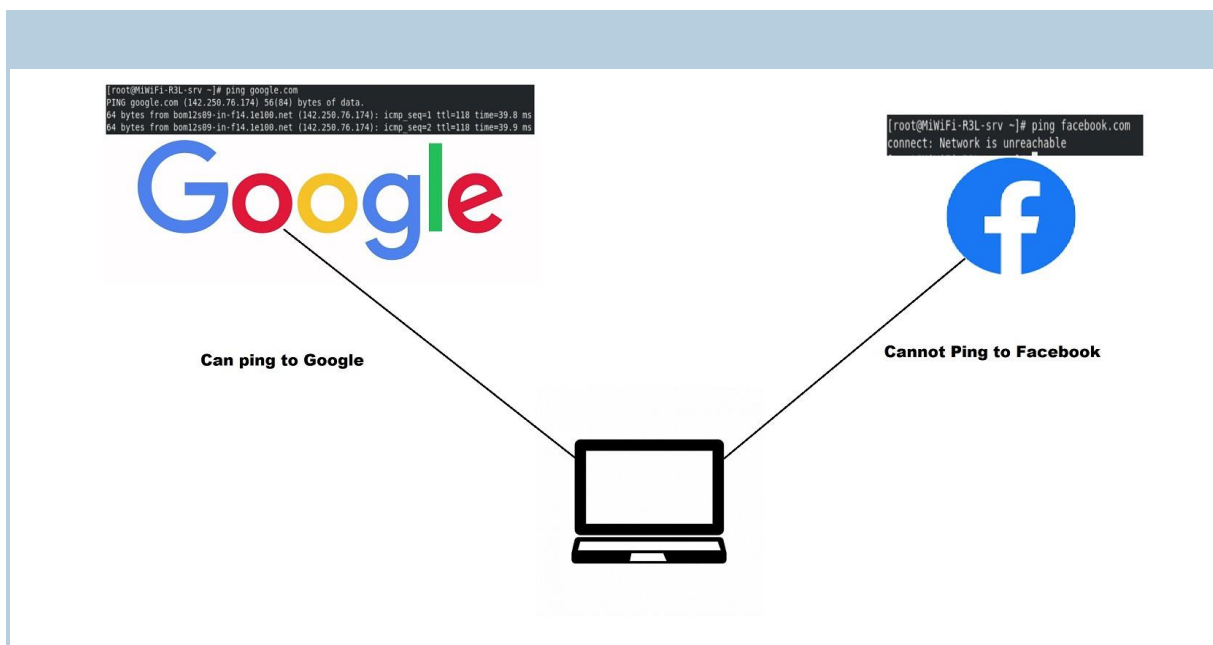


# ARTH TASK 13 : A Setup created where the system can only ping to Google but not Facebook



To View the Routing table of the System : **route -n**

```
root@MiWiFi-R3L-srv:~  
File Edit View Search Terminal Help  
[root@MiWiFi-R3L-srv ~]# route -n  
Kernel IP routing table  
Destination      Gateway          Genmask          Flags Metric Ref    Use Iface  
0.0.0.0          192.168.31.1    0.0.0.0          UG    100    0      0 enp0s3  
192.168.31.0     0.0.0.0         255.255.255.0    U     100    0      0 enp0s3  
192.168.122.0    0.0.0.0         255.255.255.0    U      0      0      0 virbr0  
[root@MiWiFi-R3L-srv ~]#
```

Checking connection with google and facebook before configuring the Routing table:

## Check connection with Google

```
[root@MiWiFi-R3L-srv ~]# ping -c 5 google.com
PING google.com (142.250.76.174) 56(84) bytes of data.
64 bytes from bom12s09-in-f14.1e100.net (142.250.76.174): icmp_seq=1 ttl=118 time=39.6 ms
64 bytes from bom12s09-in-f14.1e100.net (142.250.76.174): icmp_seq=2 ttl=118 time=73.8 ms
64 bytes from bom12s09-in-f14.1e100.net (142.250.76.174): icmp_seq=3 ttl=118 time=39.9 ms
64 bytes from bom12s09-in-f14.1e100.net (142.250.76.174): icmp_seq=4 ttl=118 time=40.9 ms
64 bytes from bom12s09-in-f14.1e100.net (142.250.76.174): icmp_seq=5 ttl=118 time=41.6 ms

--- google.com ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 13ms
rtt min/avg/max/mdev = 39.631/47.161/73.781/13.330 ms
```

Google is ping-able at the moment

```
[root@MiWiFi-R3L-srv ~]# nslookup google.com
Server:          192.168.31.1
Address:         192.168.31.1#53

Non-authoritative answer:
Name:   google.com
Address: 142.250.76.174
Name:   google.com
Address: 2404:6800:4009:81a::200e
```

## Check connection with Facebook

```
[root@MiWiFi-R3L-srv ~]# ping -c 5 facebook.com
PING facebook.com (157.240.23.35) 56(84) bytes of data.
64 bytes from edge-star-mini-shv-01-maa2.facebook.com (157.240.23.35): icmp_seq=
1 ttl=56 time=47.3 ms
64 bytes from edge-star-mini-shv-01-maa2.facebook.com (157.240.23.35): icmp_seq=
2 ttl=56 time=146 ms
64 bytes from edge-star-mini-shv-01-maa2.facebook.com (157.240.23.35): icmp_seq=
3 ttl=56 time=110 ms
64 bytes from edge-star-mini-shv-01-maa2.facebook.com (157.240.23.35): icmp_seq=
4 ttl=56 time=44.4 ms
64 bytes from edge-star-mini-shv-01-maa2.facebook.com (157.240.23.35): icmp_seq=
5 ttl=56 time=44.5 ms

--- facebook.com ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 12ms
rtt min/avg/max/mdev = 44.364/78.393/146.100/42.046 ms
```

Facebook is also ping-able at the moment

```
[root@MiWiFi-R3L-srv ~]# nslookup facebook.com
Server:          192.168.31.1
Address:         192.168.31.1#53

Non-authoritative answer:
Name:   facebook.com
Address: 157.240.23.35
Name:   facebook.com
Address: 2a03:2880:f137:83:face:b00c:0:25de
```

We are able to ping to all the IPs due to the presence of **0.0.0.0** IP in the routing table. It is able to ping to all the IPS

## Now starting the configuration

Deleting the default gateway of the system : **route del -net 0.0.0.0**

```
[root@MiWiFi-R3L-srv ~]# route del -net 0.0.0.0
[root@MiWiFi-R3L-srv ~]# route -n
Kernel IP routing table
Destination      Gateway          Genmask          Flags Metric Ref    Use Iface
192.168.31.0     0.0.0.0         255.255.255.0    U        100    0      0 enp0s3
192.168.122.0    0.0.0.0         255.255.255.0    U         0      0      0 virbr0
[root@MiWiFi-R3L-srv ~]#
```

After this , if we try to ping , it will not work

```
[root@MiWiFi-R3L-srv ~]# ping google.com
connect: Network is unreachable
[root@MiWiFi-R3L-srv ~]# ping facebook.com
connect: Network is unreachable
[root@MiWiFi-R3L-srv ~]#
```

Now we only add the IP address of google to the Routing Table , which we want to ping

```
[root@MiWiFi-R3L-srv ~]# nslookup google.com
Server:          192.168.31.1
Address:         192.168.31.1#53

Non-authoritative answer:
Name:   google.com
Address: 142.250.76.174
Name:   google.com
Address: 2404:6800:4009:81a::200e
```

Command to Add new IP to Routing Table :

**route add -net 142.250.76.0/24 gw 192.168.31.1 enp0s3**

After this , we can ping to google

```
[root@MiWiFi-R3L-srv ~]# route add -net 142.250.76.0/24 gw 192.168.31.1 enp0s3
[root@MiWiFi-R3L-srv ~]# ping google.com
PING google.com (142.250.76.174) 56(84) bytes of data.
64 bytes from bom12s09-in-f14.1e100.net (142.250.76.174): icmp_seq=1 ttl=118 time=39.8 ms
64 bytes from bom12s09-in-f14.1e100.net (142.250.76.174): icmp_seq=2 ttl=118 time=39.9 ms
64 bytes from bom12s09-in-f14.1e100.net (142.250.76.174): icmp_seq=3 ttl=118 time=86.5 ms
64 bytes from bom12s09-in-f14.1e100.net (142.250.76.174): icmp_seq=4 ttl=118 time=100 ms
64 bytes from bom12s09-in-f14.1e100.net (142.250.76.174): icmp_seq=5 ttl=118 time=67.5 ms
64 bytes from bom12s09-in-f14.1e100.net (142.250.76.174): icmp_seq=6 ttl=118 time=120 ms
^C
--- google.com ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 14ms
rtt min/avg/max/mdev = 39.839/75.649/120.000/29.748 ms
[root@MiWiFi-R3L-srv ~]# ping facebook.com
connect: Network is unreachable
[root@MiWiFi-R3L-srv ~]#
```

Hence the system configuration is complete

If we want to Reset the routing table to normal

```
[root@MiWiFi-R3L-srv ~]# route -n
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
142.250.76.0 192.168.31.1 255.255.255.0 UG 0 0 0 enp0s3
192.168.31.0 0.0.0.0 255.255.255.0 U 100 0 0 enp0s3
192.168.122.0 0.0.0.0 255.255.255.0 U 0 0 0 virbr0
[root@MiWiFi-R3L-srv ~]# route add -net 0.0.0.0 gw 192.168.31.1 enp0s3
[root@MiWiFi-R3L-srv ~]# route -n
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
0.0.0.0 192.168.31.1 0.0.0.0 UG 0 0 0 enp0s3
142.250.76.0 192.168.31.1 255.255.255.0 UG 0 0 0 enp0s3
192.168.31.0 0.0.0.0 255.255.255.0 U 100 0 0 enp0s3
192.168.122.0 0.0.0.0 255.255.255.0 U 0 0 0 virbr0
[root@MiWiFi-R3L-srv ~]# ping facebook.com
PING facebook.com (157.240.23.35) 56(84) bytes of data.
64 bytes from edge-star-mini-shv-01-maa2.facebook.com (157.240.23.35): icmp_seq=1 ttl=56 time=44.6 ms
64 bytes from edge-star-mini-shv-01-maa2.facebook.com (157.240.23.35): icmp_seq=2 ttl=56 time=44.7 ms
64 bytes from edge-star-mini-shv-01-maa2.facebook.com (157.240.23.35): icmp_seq=3 ttl=56 time=71.0 ms
^C
--- facebook.com ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 6ms
rtt min/avg/max/mdev = 44.644/53.454/71.010/12.413 ms
[root@MiWiFi-R3L-srv ~]# ping google.com
PING google.com (142.250.76.174) 56(84) bytes of data.
64 bytes from bom12s09-in-f14.1e100.net (142.250.76.174): icmp_seq=1 ttl=118 time=46.4 ms
64 bytes from bom12s09-in-f14.1e100.net (142.250.76.174): icmp_seq=2 ttl=118 time=93.5 ms
^C
--- google.com ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 3ms
rtt min/avg/max/mdev = 46.362/69.941/93.520/23.579 ms
[root@MiWiFi-R3L-srv ~]#
```