

```
wifi@wifi-VirtualBox:~$ sudo mn --wifi --topo single,4 --position --link=wmediumd
```

```
*** Creating network
```

```
*** Adding controller
```

```
*** Adding stations:
```

```
sta1 sta2 sta3 sta4
```

```
*** Adding access points:
```

```
ap1
```

```
*** Configuring wifi nodes...
```

```
*** Connecting to wmediumd server /var/run/wmediumd.sock
```

```
*** Adding link(s):
```

```
(sta1, ap1) (sta2, ap1) (sta3, ap1) (sta4, ap1)
```

```
*** Configuring nodes
```

```
*** Starting controller(s)
```

```
c0
```

```
*** Starting switches and/or access points
```

```
ap1 ...
```

```
*** Starting CLI:
```

```
mininet-wifi> pingall
```

```
*** Ping: testing ping reachability
```

```
sta1 -> *** sta1 : ('ping -c1 10.0.0.2',)
```

```
PING 10.0.0.2 (10.0.0.2) 56(84) bytes of data.
```

```
64 bytes from 10.0.0.2: icmp_seq=1 ttl=64 time=2.91 ms
```

```
--- 10.0.0.2 ping statistics ---
```

```
1 packets transmitted, 1 received, 0% packet loss, time 0ms
```

```
rtt min/avg/max/mdev = 2.910/2.910/2.910/0.000 ms
```

```
sta2 *** sta1 : ('ping -c1 10.0.0.3',)
```

```
PING 10.0.0.3 (10.0.0.3) 56(84) bytes of data.
```

```
64 bytes from 10.0.0.3: icmp_seq=1 ttl=64 time=3.94 ms
```

```
--- 10.0.0.3 ping statistics ---
```

```
1 packets transmitted, 1 received, 0% packet loss, time 0ms
```

```
rtt min/avg/max/mdev = 3.946/3.946/3.946/0.000 ms
```

```
sta3 *** sta1 : ('ping -c1 10.0.0.4',)
```

```
PING 10.0.0.4 (10.0.0.4) 56(84) bytes of data.
```

```
64 bytes from 10.0.0.4: icmp_seq=1 ttl=64 time=4.66 ms
```

```
--- 10.0.0.4 ping statistics ---
```

```
1 packets transmitted, 1 received, 0% packet loss, time 0ms
```

```
rtt min/avg/max/mdev = 4.666/4.666/4.666/0.000 ms
```

```
sta4
```

```
sta2 -> *** sta2 : ('ping -c1 10.0.0.1',)
```

```
PING 10.0.0.1 (10.0.0.1) 56(84) bytes of data.
```

```
64 bytes from 10.0.0.1: icmp_seq=1 ttl=64 time=3.29 ms
```

--- 10.0.0.1 ping statistics ---

1 packets transmitted, 1 received, 0% packet loss, time 0ms

rtt min/avg/max/mdev = 3.297/3.297/3.297/0.000 ms

sta1 \*\*\* sta2 : ('ping -c1 10.0.0.3',)

PING 10.0.0.3 (10.0.0.3) 56(84) bytes of data.

64 bytes from 10.0.0.3: icmp\_seq=1 ttl=64 time=22.4 ms

--- 10.0.0.3 ping statistics ---

1 packets transmitted, 1 received, 0% packet loss, time 0ms

rtt min/avg/max/mdev = 22.444/22.444/22.444/0.000 ms

sta3 \*\*\* sta2 : ('ping -c1 10.0.0.4',)

PING 10.0.0.4 (10.0.0.4) 56(84) bytes of data.

64 bytes from 10.0.0.4: icmp\_seq=1 ttl=64 time=24.7 ms

--- 10.0.0.4 ping statistics ---

1 packets transmitted, 1 received, 0% packet loss, time 0ms

rtt min/avg/max/mdev = 24.787/24.787/24.787/0.000 ms

sta4

sta3 -> \*\*\* sta3 : ('ping -c1 10.0.0.1',)

PING 10.0.0.1 (10.0.0.1) 56(84) bytes of data.

64 bytes from 10.0.0.1: icmp\_seq=1 ttl=64 time=6.10 ms

--- 10.0.0.1 ping statistics ---

1 packets transmitted, 1 received, 0% packet loss, time 0ms

rtt min/avg/max/mdev = 6.102/6.102/6.102/0.000 ms

sta1 \*\*\* sta3 : ('ping -c1 10.0.0.2',)

PING 10.0.0.2 (10.0.0.2) 56(84) bytes of data.

64 bytes from 10.0.0.2: icmp\_seq=1 ttl=64 time=23.3 ms

--- 10.0.0.2 ping statistics ---

1 packets transmitted, 1 received, 0% packet loss, time 0ms

rtt min/avg/max/mdev = 23.385/23.385/23.385/0.000 ms

sta2 \*\*\* sta3 : ('ping -c1 10.0.0.4',)

PING 10.0.0.4 (10.0.0.4) 56(84) bytes of data.

64 bytes from 10.0.0.4: icmp\_seq=1 ttl=64 time=25.0 ms

--- 10.0.0.4 ping statistics ---

1 packets transmitted, 1 received, 0% packet loss, time 0ms

rtt min/avg/max/mdev = 25.017/25.017/25.017/0.000 ms

sta4

sta4 -> \*\*\* sta4 : ('ping -c1 10.0.0.1',)

PING 10.0.0.1 (10.0.0.1) 56(84) bytes of data.

64 bytes from 10.0.0.1: icmp\_seq=1 ttl=64 time=14.2 ms

--- 10.0.0.1 ping statistics ---

1 packets transmitted, 1 received, 0% packet loss, time 0ms

rtt min/avg/max/mdev = 14.244/14.244/14.244/0.000 ms  
sta1 \*\*\* sta4 : ('ping -c1 10.0.0.2',)  
PING 10.0.0.2 (10.0.0.2) 56(84) bytes of data.  
64 bytes from 10.0.0.2: icmp\_seq=1 ttl=64 time=23.4 ms

--- 10.0.0.2 ping statistics ---

1 packets transmitted, 1 received, 0% packet loss, time 0ms  
rtt min/avg/max/mdev = 23.483/23.483/23.483/0.000 ms  
sta2 \*\*\* sta4 : ('ping -c1 10.0.0.3',)  
PING 10.0.0.3 (10.0.0.3) 56(84) bytes of data.  
64 bytes from 10.0.0.3: icmp\_seq=1 ttl=64 time=22.6 ms

--- 10.0.0.3 ping statistics ---

1 packets transmitted, 1 received, 0% packet loss, time 0ms  
rtt min/avg/max/mdev = 22.622/22.622/22.622/0.000 ms  
sta3

\*\*\* Results: 0% dropped (12/12 received)

**mininet-wifi> sta1 iw dev sta1-wlan0 link**

Connected to 02:00:00:00:04:00 (on sta1-wlan0)

SSID: my-ssid

freq: 2412

RX: 42683 bytes (916 packets)

TX: 2018 bytes (23 packets)

signal: -67 dBm

rx bitrate: 11.0 MBit/s

tx bitrate: 36.0 MBit/s

bss flags: short-slot-time

dtim period: 2

beacon int: 100

mininet-wifi>