

Using IPv6 on the command line, provide a successful ping to the loopback address.

Using IPv6 on the command line provide four successful ping responses on the local subnet.

preuss : bash

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preuss@msctclinux:~>

preuss : bash

Taskbar area containing icons for VMware Workstation, a folder, a globe, and a terminal icon. Below the icons are four numbered buttons (1, 2, 3, 4).

preuss : bash

System tray area containing icons for the US flag, a folder, a refresh icon, the time 02:36 pm, and the power button.

To direct input to this virtual machine, press Ctrl+G.

preuss : bash

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```
preuss@msctclinux:~> ping6 -c 4 ::1
```

preuss : bash

preuss : ping6

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```
preuss@msctclinux:~> ping6 -c 4 ::1
PING ::1(::1) 56 data bytes
64 bytes from ::1: icmp_seq=1 ttl=64 time=0.030 ms
64 bytes from ::1: icmp_seq=2 ttl=64 time=0.041 ms
64 bytes from ::1: icmp_seq=3 ttl=64 time=0.045 ms
64 bytes from ::1: icmp_seq=4 ttl=64 time=0.045 ms

--- ::1 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 2999ms
rtt min/avg/max/mdev = 0.030/0.040/0.045/0.007 ms
preuss@msctclinux:~> █
```

Adding the -c 4 tells ping6 to only ping the host 4 times. This also works with the ping command. It saves a ctrl-c.

preuss : ping6



1

2



preuss : ping6



02:39 pm



preuss : bash

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```
preuss@msctclinux:~> ping6 -c 4 -Ieth0 fe80::20e:cff:fec0:8cb4
```

preuss : bash

Taskbar area containing icons for applications, system tray, and a clock showing 02:41 pm.

To direct input to this virtual machine, press Ctrl+G.

preuss : ping6

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```
preuss@msctclinux:~> ping6 -c 4 -Ieth0 fe80::20e:cff:fec0:8cb4
PING fe80::20e:cff:fec0:8cb4(fe80::20e:cff:fec0:8cb4) from fe80::20c:29ff:feee:773c eth0: 56 data bytes
64 bytes from fe80::20e:cff:fec0:8cb4: icmp_seq=1 ttl=64 time=4.27 ms
64 bytes from fe80::20e:cff:fec0:8cb4: icmp_seq=2 ttl=64 time=0.584 ms
64 bytes from fe80::20e:cff:fec0:8cb4: icmp_seq=3 ttl=64 time=0.587 ms
64 bytes from fe80::20e:cff:fec0:8cb4: icmp_seq=4 ttl=64 time=0.524 ms

--- fe80::20e:cff:fec0:8cb4 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3003ms
rtt min/avg/max/mdev = 0.524/1.491/4.271/1.605 ms
preuss@msctclinux:~>
```

This will work if you connect to the 192.168.64.0/22 switch in B150 or B142.

preuss : ping6

preuss : bash

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```
msctlinux:/home/preuss # ip -6 addr add FEC2::BAD:BAD/64 dev eth0
```

We are adding an IPv6 address to our eth0 interface.

preuss : bash

preuss : bash

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```
msctclinux:/home/preuss # ip -6 addr add FEC2::BAD:BAD/64 dev eth0
RTNETLINK answers: File exists
msctclinux:/home/preuss # ifconfig eth0
eth0      Link encap:Ethernet  HWaddr 00:0C:29:EE:77:3C
          inet addr:192.168.66.28  Bcast:192.168.67.255  Mask:255.255.252.0
          inet6 addr: fec2::bad:bad/64  scope:Site
          inet6 addr: fe80::20c:29ff:feee:773c/64  scope:Link
          inet6 addr: fec2::bad:bad:bad/128  scope:Site
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:475  errors:0  dropped:0  overruns:0  frame:0
          TX packets:58  errors:0  dropped:0  overruns:0  carrier:0
          collisions:0  txqueuelen:1000
          RX bytes:34494 (33.6 Kb)  TX bytes:7720 (7.5 Kb)
```

msctclinux:/home/preuss # █

preuss : bash

preuss : ping6

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```
msctclinux:/home/preuss # ping6 -c 4 -Ieth0 fec2::4
PING fec2::4(fec2::4) from fec2::bad:bad eth0: 56 data bytes
64 bytes from fec2::4: icmp_seq=1 ttl=64 time=2.70 ms
64 bytes from fec2::4: icmp_seq=2 ttl=64 time=0.610 ms
64 bytes from fec2::4: icmp_seq=3 ttl=64 time=0.639 ms
64 bytes from fec2::4: icmp_seq=4 ttl=64 time=0.571 ms

--- fec2::4 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3005ms
rtt min/avg/max/mdev = 0.571/1.132/2.709/0.910 ms
msctclinux:/home/preuss #
```

This ping6 works if you add an IPv6 address and are connected to the 192.168.64.0/22 network.

preuss : ping6



1

2



preuss : ping6

3

4



02:47 pm



preuss : ping6

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```

msctclinux:/home/preuss # ping6 -c 4 -Ieth0 fec1::C0A8:0AFD
PING fec1::C0A8:0AFD(fec1::c0a8:afd) from fec2::bad:bad eth0: 56 data bytes
From fec2::bad:bad icmp_seq=1 Destination unreachable: Address unreachable
From fec2::bad:bad icmp_seq=2 Destination unreachable: Address unreachable
From fec2::bad:bad icmp_seq=3 Destination unreachable: Address unreachable
From fec2::bad:bad icmp_seq=4 Destination unreachable: Address unreachable

--- fec1::C0A8:0AFD ping statistics ---
4 packets transmitted, 0 received, +4 errors, 100% packet loss, time 3017ms

msctclinux:/home/preuss # █

```

Wadena is not responding.

preuss : ping6