

Chapter 23

Troubleshooting Network Connectivity with the SRC CLI

This chapter describes how to troubleshoot connections to remote hosts. Topics include:

- Overview of Commands to Troubleshoot Connections to Remote Hosts on page 181
- Testing Connectivity to Remote Hosts on page 181
- Viewing the Route Information on page 182
- Viewing Routing Table Information on page 182
- Viewing Interface Information on page 183

Overview of Commands to Troubleshoot Connections to Remote Hosts

If you are troubleshooting problems with the SRC software that might be caused by connectivity problems to remote hosts, you can use the following commands:

- `ping`—Test connectivity to a remote host.
- `tracert`—Display the route from the local host to a remote host and back.
- `show interfaces`—Display information about system interfaces.
- `show route`—Display information from the system routing table.

Testing Connectivity to Remote Hosts

To test connectivity to a remote host:

```
user@host> ping
PING 10.227.7.45 (10.227.7.45) 56(84) bytes of data.
64 bytes from 10.227.7.45: icmp_seq=0 ttl=63 time=0.560 ms
64 bytes from 10.227.7.45: icmp_seq=1 ttl=63 time=0.613 ms
64 bytes from 10.227.7.45: icmp_seq=2 ttl=63 time=0.641 ms
64 bytes from 10.227.7.45: icmp_seq=3 ttl=63 time=0.653 ms
64 bytes from 10.227.7.45: icmp_seq=4 ttl=63 time=0.651 ms
64 bytes from 10.227.7.45: icmp_seq=5 ttl=63 time=0.418 ms
```

```

64 bytes from 10.227.7.45: icmp_seq=6 ttl=63 time=0.440 ms
64 bytes from 10.227.7.45: icmp_seq=7 ttl=63 time=0.454 ms
64 bytes from 10.227.7.45: icmp_seq=8 ttl=63 time=0.466 ms
64 bytes from 10.227.7.45: icmp_seq=9 ttl=63 time=0.478 ms
64 bytes from 10.227.7.45: icmp_seq=10 ttl=63 time=0.488 ms

```

Ctrl-C

```

--- 10.227.7.45 ping statistics ---
94 packets transmitted, 94 received, 0% packet loss, time 93038ms
rtt min/avg/max/mdev = 0.418/0.560/0.791/0.089 ms, pipe 2

```

For information about all the options for the `ping` command, see the *SRC-PE CLI Command Reference*.

Viewing the Route Information

You can use the `traceroute` command to get information about the hops between the local system and a remote host.

To view route information:

```

user@host> traceroute 192.2.7.48
traceroute to 192.2.7.48 (192.2.7.48), 30 hops max, 46 byte packets
 1  host (192.2.7.45)  3000.716 ms !H  3000.733 ms !H  3001.272 ms !H

```

For information about all the options for the `traceroute` command, see the *SRC-PE CLI Command Reference*.

Viewing Routing Table Information

You can display brief or detailed information about the route from the local system to a remote host.

To view brief route information:

```

user@host> show route
Kernel IP routing table
Destination Gateway Genmask Flags MSS Window irtt Iface
192.2.2.0 * 255.255.255.0 U 0 0 0 eth0
default src1ab1.mylab. 0.0.0.0 UG 0 0 0 eth0

```

To view detailed route information:

```

user@host> show route detail
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface MSS Window irtt
192.2.2.0 * 255.255.255.0 U 0 0 0 0 eth0 0 0 0
default src1ab1.mylab. 0.0.0.0 UG 0 0 0 0 eth0 0 0 0

```

The detailed output includes the additional Metric, Ref, and Use fields.

Viewing Interface Information

You can view information about all system interfaces, or about a specified interface.

To view information about all system interfaces:

```
user@host> show interfaces
eth0      Link encap:Ethernet  HWaddr 00:30:48:55:B6:FC
          inet addr:10.227.6.42  Bcast:10.227.6.255  Mask:255.255.255.0
          inet6 addr: fe80::230:48ff:fe55:b6fc/64  Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:482467 errors:0 dropped:0 overruns:0 frame:0
          TX packets:57573 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:100
          RX bytes:38147790 (36.3 MiB)  TX bytes:4396018 (4.1 MiB)
          Base address:0xcc00  Memory:fc9c0000-fc9e0000

eth1      Link encap:Ethernet  HWaddr 00:30:48:55:B6:FD
          BROADCAST MULTICAST  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 b)  TX bytes:0 (0.0 b)
          Base address:0xc800  Memory:fc9a0000-fc9c0000

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128  Scope:Host
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:1946394 errors:0 dropped:0 overruns:0 frame:0
          TX packets:1946394 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:260604464 (248.5 MiB)  TX bytes:260604464 (248.5 MiB)

lo:1      Link encap:Local Loopback
          inet addr:192.168.254.1  Mask:255.255.255.0
          UP LOOPBACK RUNNING  MTU:16436  Metric:1

sit0      Link encap:IPv6-in-IPv4
          NOARP  MTU:1480  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:0 (0.0 b)  TX bytes:0 (0.0 b)
```

