



Sysadmin's networking cheat sheet

A sysadmin manages servers and networks. The following utilities and commands are common Linux tools that make a sysadmin's daily tasks easy.

Ping: verify connectivity between you and a remote system

```
ping 8.8.8.8
```

Ping a server at 8.8.8.8 over IPv4

```
ping6 example.com
```

Ping a server at example.com over IPv6

Traceroute: trace the path from one system to another, including routers in between

```
traceroute 8.8.8.8
```

```
traceroute example.com
```

Nslookup: query Internet name servers

```
nslookup example.com
```

Display your DNS server and target IP address

Telnet & OpenSSL: connect to ports and query them for functionality

```
telnet example.com 110
```

```
openssl s_client -starttls smtp \  
-connect example.com:587
```

Netstat: analyze interface, port, protocol statistics, and routing tables

```
netstat --listening
```

```
-l
```

List ports in listening mode

```
netstat --all
```

```
-a
```

List all ports

```
netstat --route
```

```
-r
```

Display routing tables

```
netstat --interfaces
```

```
-i
```

Display TX/RX packet statistics for each interface

General

```
systemctl restart network
```

Restart network service

```
tcpdump -i eth0
```

Show live packets from interface **eth0**





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Network manager	
<code>nmcli device</code>	Display network devices
<code>nmcli device show eth0</code>	Show information about eth0 device
<code>nmcli connection</code>	Show network connections
<code>nmcli connection up foo</code>	Bring connection foo up
<code>nmcli device wifi connect foo</code>	Connect to wireless network foo
Routing	
<code>ip route</code>	Show current routes
<code>route add default gw 10.0.0.1</code>	Add 10.0.0.1 as default gateway to routing table
<code>ip addr show</code>	Show your local IP address
<code>ip neighbor show</code>	Show neighbors
<code>arp</code>	Show neighbors
Firewall	
<code>firewall-cmd --get-active-zones</code>	List active firewall zones
<code>--change-interface eth0 --zone=example</code>	Place eth0 into example zone
<code>--get-services</code>	List all defined services
<code>--add-service samba --zone=example</code>	Add samba ports to example zone
<code>--add-port=123/tcp --zone=example</code>	Add port 123 to example zone
<code>--permanent</code>	Add this flag to make a change persistent

