To bring a network connection up and assign a static address, you can do:

```
$ sudo /sbin/ifconfig eth0 up 192.168.1.100
```

To bring it up and get it an assigned address from a DHCP server, you can do:

```
$ sudo /sbin/ifconfig eth0 up
$ sudo /sbin/dhclient eth0
```

While **ifconfig** has been used reliably for many years, the **ip** utility is newer (and far more versatile). On a technical level, it is more efficient because it uses **netlink** sockets, rather than **ioctl** system calls.

ip can be used for a wide variety of tasks. It can be used to display and control devices, routing, policy-based routing, and tunneling. The basic syntax is:

```
ip [ OPTIONS ] OBJECT { COMMAND | help }
```

Some examples:

- Show information for all network interfaces:

```
$ ip link
```

- Show information for the **eth0** network interface:

```
$ ip -s link show eth0
```

- Set the IP address for **eth0**:

```
$ sudo ip addr add 192.168.1.7 dev eth0
```

- Bring **eth0** down:

```
$ sudo ip link set eth0 down
```

- Set the MTU to 1480 bytes for **eth0**:

```
$ sudo ip link set eth0 mtu 1480
```

- Set the networking route:

```
$ sudo ip route add 172.16.1.0/24 via 192.168.1.5
```