

How to Assign an IP Address on a Linux Computer

This wikiHow teaches you how to assign a new IP address to your computer when using Linux. Doing so can prevent connection issues for the item in question. Verify your Linux version. Popular Debian-based Linux distributions include Ubuntu,...

Method 1 of 2:

On Debian-Based Linux



Verify your Linux version. Popular Debian-based Linux distributions include Ubuntu, Mint, and Raspbian versions.

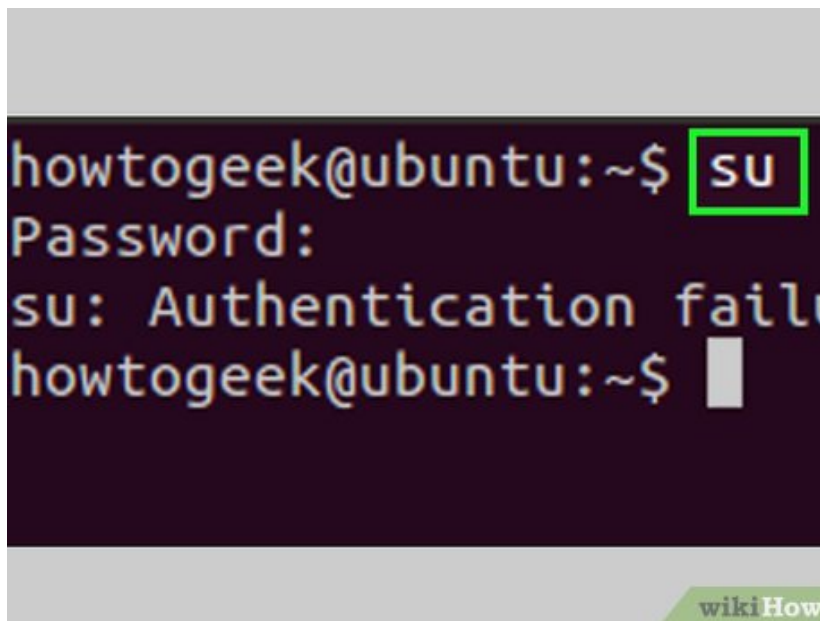
2.



Open Terminal. This is the command line app that's the basis of all Linux distributions. Depending on your Linux version, you may have several ways of opening Terminal:

1. Press `Ctrl + Alt + T` or `Ctrl + Alt + F1` (if you're on a Mac, substitute the `Command` key for `Ctrl`).
2. Click the text box at the top or bottom of the screen if possible.
3. Open the **Menu** window and find the "Terminal" application, then click on it.

3.



Switch to root. If you aren't already logged into the "root" user directory, type in `su` and press `Enter`, then type in your root user password when prompted and press `Enter`.

1. A "root" account is the Linux equivalent of an Administrator account on a Windows or Mac computer.

```

htmanshu@ansh:~$ ifconfig
enp3s0  Link encap:Ethernet  HWaddr 70:4d:7b:70:d2:3e
        UP 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)

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:65536  Metric:1
        RX packets:73925 errors:0 dropped:0 overruns:0 frame:0
        TX packets:73925 errors:0 dropped:0 overruns:0 carrier:0
        collisions:0 txqueuelen:1000
        RX bytes:7911049 (7.9 MB)  TX bytes:7911049 (7.9 MB)

wlx18a6f713679b Link encap:Ethernet  HWaddr 18:a6:f7:13:67:9b
        inet addr:192.168.2.6  Bcast:192.168.2.255  Mask:255.255.255.0
        inet6 addr: fe80::733f:7699:a8de:78ac/64 Scope:Link
        UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
        RX packets:598724 errors:0 dropped:5949 overruns:0 frame:0
        TX packets:481412 errors:0 dropped:20 overruns:0 carrier:0
        collisions:0 txqueuelen:1000
        RX bytes:390451501 (390.4 MB)  TX bytes:1025061041 (1025.0 MB)

```

4.

Bring up a list of your current Internet items. Type in `ifconfig` and press `?Enter` to do so. You should see a list of item names appear on the left side of the window with their details listed on the right.

1. The top item should be your current router or Ethernet connection. This item's name is "eth0" (Ethernet) or "wifi0" (Wi-Fi) in Linux.

```

eth0    Link encap:Ethernet  HWaddr 08:00:27:0f:00:8a
        inet6 addr: fe80::a00:27ff:fe0f:8a/64 Scope:Link
        UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
        RX packets:0 errors:0 dropped:0 overruns:0 frame:0
        TX packets:6 errors:0 dropped:0 overruns:0 carrier:0
        collisions:0 txqueuelen:1000
        RX bytes:0 (0.0 b)  TX bytes:468 (468.0 b)
        Interrupt:19 Base address:0xd020

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: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)

virbr0  Link encap:Ethernet  HWaddr 52:54:00:75:c2:9b
        inet addr:192.168.122.1  Bcast:192.168.122.255  Ma
        UP BROADCAST RUNNING 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:0

[root@centos ~]#

```

5.

Find the item to which you want to assign an IP address. Note the name of the item that you want to change. You'll find the name on the left side of the window.

1. In most cases, this is the "eth0" or "wifi0" item.

```

root@ubuntu:~# ifconfig eth0 192.168.1.3
root@ubuntu:~# ifconfig
eth0      Link encap:Ethernet  HWaddr 00:0c:29:d2:
          inet addr:192.168.1.3  Bcast:192.168.1.2
          inet6 addr: fe80::20c:29ff:fed2:1d9b/64
          UP BROADCAST RUNNING MULTICAST  MTU:1500
          RX packets:1109 errors:0 dropped:0 overru
          TX packets:897 errors:0 dropped:0 overru
          collisions:0 txqueuelen:1000
          RX bytes:112592 (109.9 KB)  TX bytes:120
          Interrupt:16 Base address:0x2000

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:0 errors:0 dropped:0 overruns
          TX packets:0 errors:0 dropped:0 overruns
          collisions:0 txqueuelen:0
          RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)

```

6.

Change the item's IP address. Type in `sudo ifconfig name ipaddress netmask 255.255.255.0 up` —making sure to replace *name* with your item's name and *ipaddress* with your preferred IP address—and press `? Enter`.

1. To assign an IP of "192.168.2.100" to your ethernet connection ("eth0"), for example, you'd enter `sudo ifconfig eth0 192.168.0.100 netmask 255.255.255.0` here.

```

1. root@localhost:~ (ssh)
[root@localhost ~]# clear
[root@localhost ~]# route add default gw 192.168.1.1
[root@localhost ~]# route
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
192.168.1.0 * 255.255.255.0 U 0 0 0 eth0
default 192.168.1.1 0.0.0.0 UG 0 0 0 eth0
[root@localhost ~]#

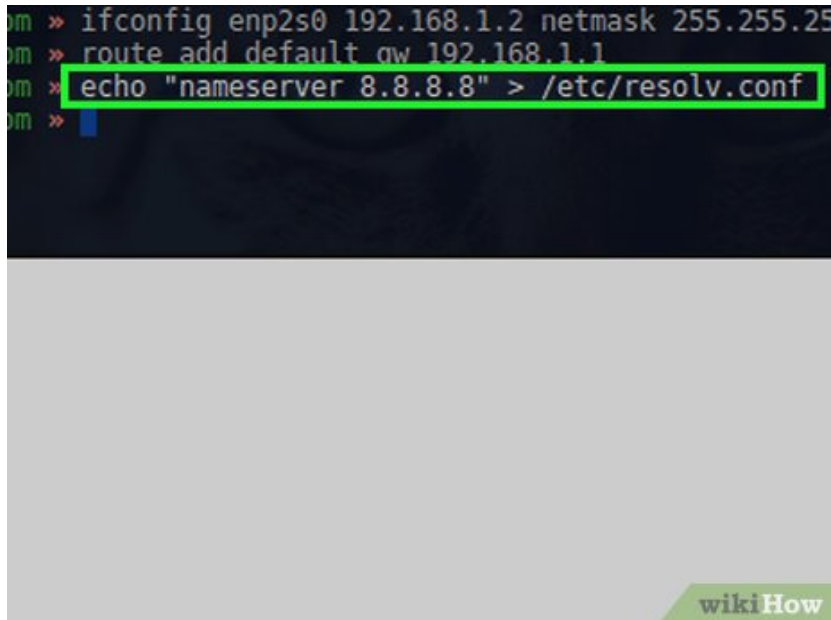
```

7.

Assign a default gateway. Type in `route add default gw 192.168.1.1` and press `? Enter`.^[1]

```
m >> ifconfig enp2s0 192.168.1.2 netmask 255.255.255.0
m >> route add default gw 192.168.1.1
m >> echo "nameserver 8.8.8.8" > /etc/resolv.conf
m >>
```

8.



Add a DNS server. Type in `echo "nameserver 8.8.8.8" > /etc/resolv.conf` and press `?Enter`.

1. If you have a different DNS server address that you would rather use, enter that in the place of `8.8.8.8`.

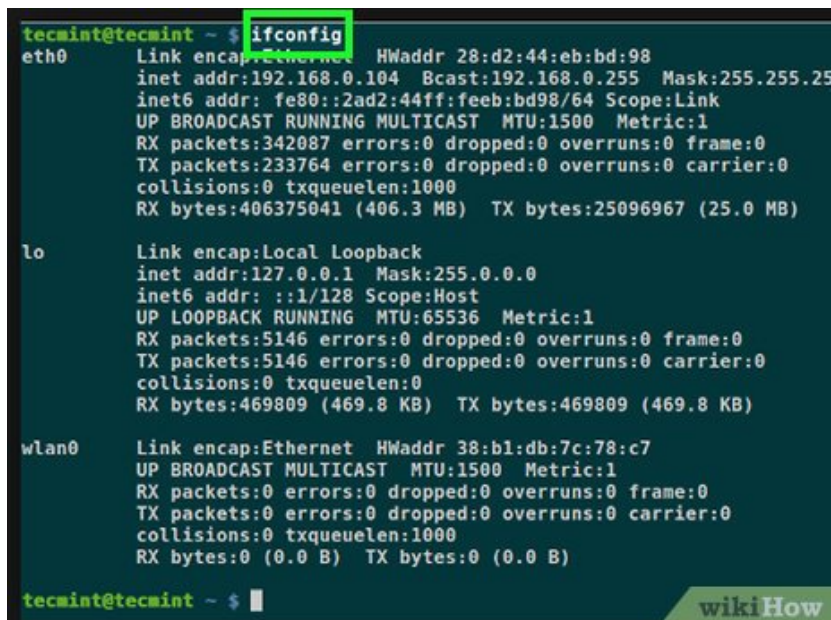
```
tecmint@tecmint ~$ ifconfig
eth0      Link encap:Ethernet  HWaddr 28:d2:44:eb:bd:98
          inet addr:192.168.0.104  Bcast:192.168.0.255  Mask:255.255.255.0
          inet6 addr: fe80::2ad2:44ff:feeb:bd98/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:342087 errors:0 dropped:0 overruns:0 frame:0
          TX packets:233764 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:406375041 (406.3 MB)  TX bytes:25096967 (25.0 MB)

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:65536  Metric:1
          RX packets:5146 errors:0 dropped:0 overruns:0 frame:0
          TX packets:5146 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:469809 (469.8 KB)  TX bytes:469809 (469.8 KB)

wlan0     Link encap:Ethernet  HWaddr 38:b1:db:7c:78:c7
          UP 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)

tecmint@tecmint ~$
```

9.



Check your item's new IP address. Enter the `ifconfig` command again, find your item, and look at the address to the right of the item's name. You should see the IP address that you just assigned.

Method 2 of 2:

On RPM-Based Linux



1.

Verify your Linux version. Popular RPM-based Linux distributions include CentOS, Red Hat, and Fedora versions.

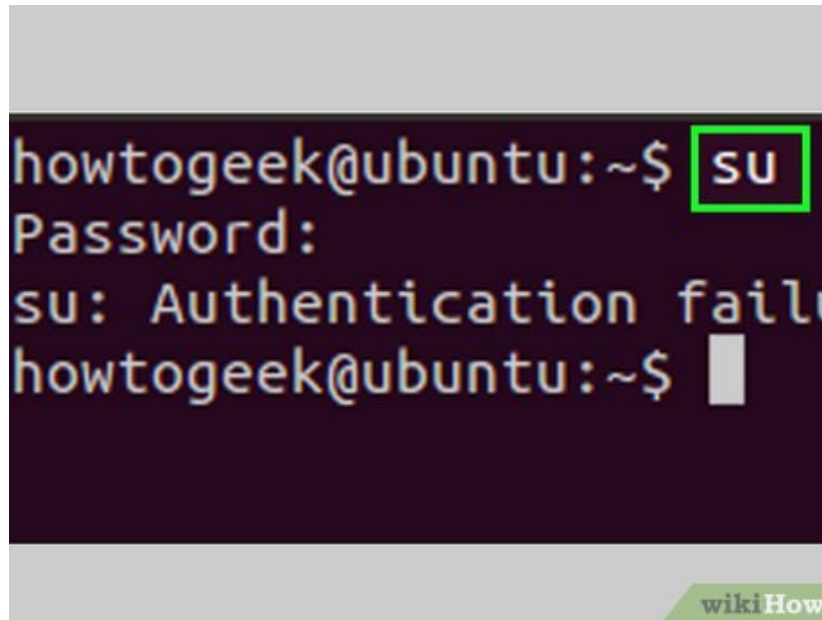


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Open Terminal. This is the command line app that's the basis of all Linux distributions. Depending on your Linux version, you may have several ways of opening Terminal:

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2. Click the text box at the top or bottom of the screen if possible.
3. Open the **Menu** window and find the "Terminal" application, then click on it.

3.



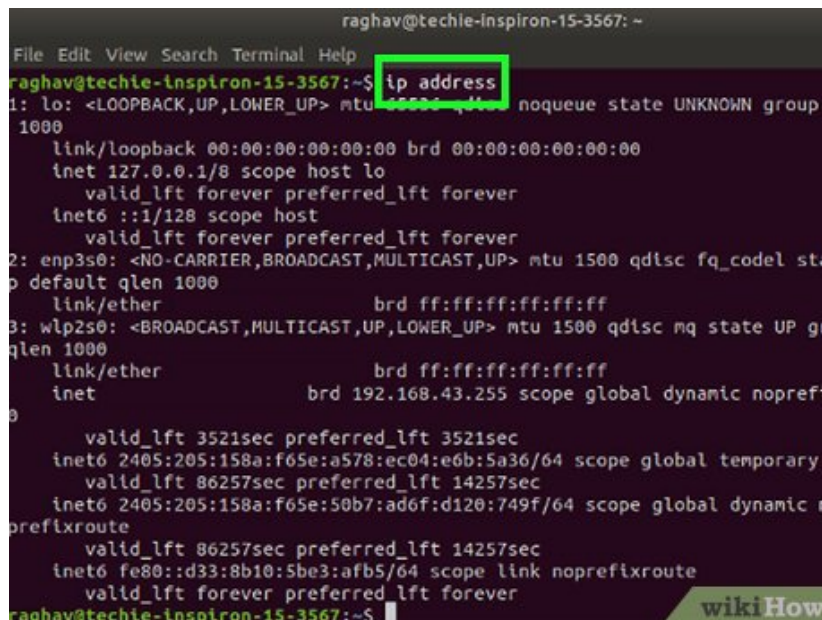
```
howtogeek@ubuntu:~$ su
Password:
su: Authentication failure
howtogeek@ubuntu:~$
```

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Switch to root. If you aren't already logged into the "root" user directory, type in `su` and press `?Enter`, then type in your root user password when prompted and press `?Enter`.

1. A "root" account is the Linux equivalent of an Administrator account on a Windows or Mac computer.

4.

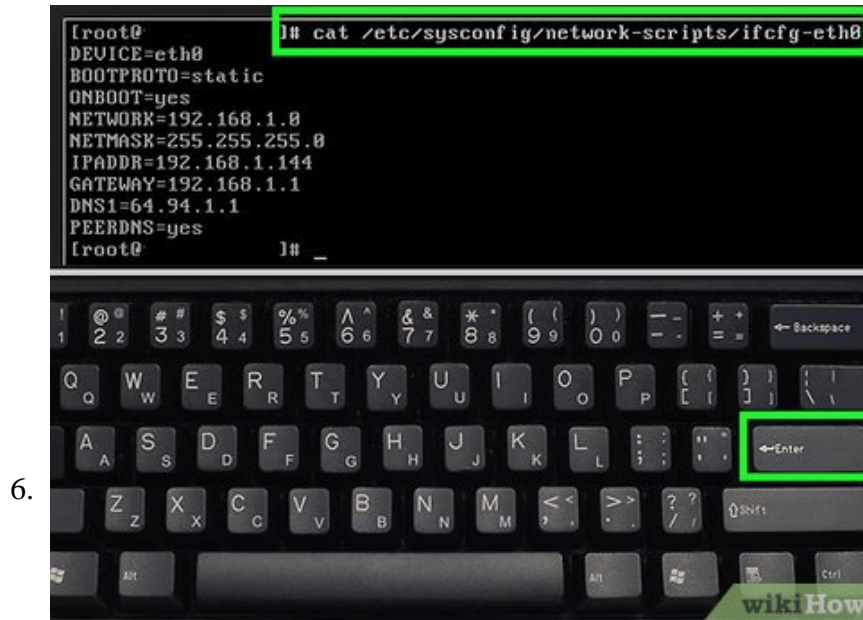


```
raghav@techie-inspiron-15-3567: ~
File Edit View Search Terminal Help
raghav@techie-inspiron-15-3567:~$ ip address
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group
1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: enp3s0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc fq_codel sta
p default qlen 1000
    link/ether          brd ff:ff:ff:ff:ff:ff
3: wlp2s0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc mq state UP gr
qlen 1000
    link/ether          brd ff:ff:ff:ff:ff:ff
    inet               brd 192.168.43.255 scope global dynamic noprefi
    valid_lft 3521sec preferred_lft 3521sec
    inet6 2405:205:158a:f65e:a578:ec04:e6b:5a36/64 scope global temporary
    valid_lft 86257sec preferred_lft 14257sec
    inet6 2405:205:158a:f65e:50b7:ad6f:d120:749f/64 scope global dynamic m
prefixroute
    valid_lft 86257sec preferred_lft 14257sec
    inet6 fe80::d33:8b10:5be3:afb5/64 scope link noprefixroute
    valid_lft forever preferred_lft forever
raghav@techie-inspiron-15-3567:~$
```

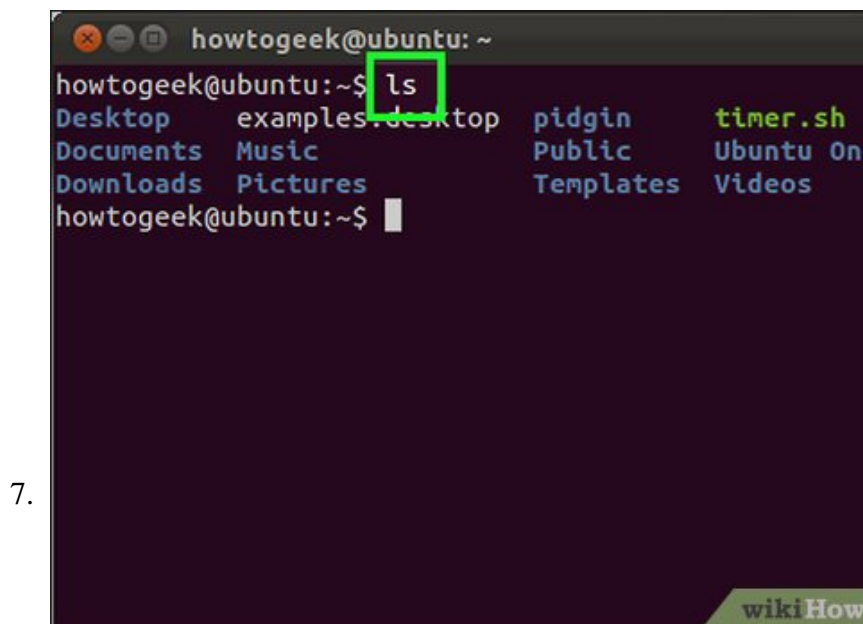
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Bring up a list of your current Internet items. Type in `ip a` to view your network connections.

5. **Find the network connection that you want to change.** This will normally be the Ethernet or Wi-Fi connection, which has an IP address currently listed on the right side of the window.



Switch to the network scripts directory. Type in `cd /etc/sysconfig/network-scripts` and press `Enter`.



Display the network options. Type in `ls` and press `Enter`. You should see your current connection's name in the upper-left side of the network option results.

```
2.root@master~
[root@master ~]# cat /etc/sysconfig/network-scripts/ifcfg-eth0
TYPE=Ethernet
BOOTPROTO=none
IPADDR0=192.168.1.202
PREFIX0=24
GATEWAY0=192.168.1.1
DEFROUTE=yes
IPV4_FAILURE_FATAL=no
IPV6INIT=yes
IPV6_AUTOCONF=yes
IPV6_DEFROUTE=yes
IPV6_FAILURE_FATAL=no
NAME=eth0
UUID=8cce0ab7-79fb-4c3d-83d5-f59c6ff0f6aa
DEVICE=enp0s8
ONBOOT=yes
DNS1=192.168.1.202
DNS2=8.8.8.8
IPV6_PEERDNS=yes
IPV6_PEERROUTES=yes
[root@master ~]#
```

8.

Open the network options for your connection. Type in `vi ifcfg-network name` and press `?Enter`. Doing so will open the network's properties in your Vi editor.

1. For a network named "eno12345678", for example, you'd enter `vi ifcfg-eno12345678` here.

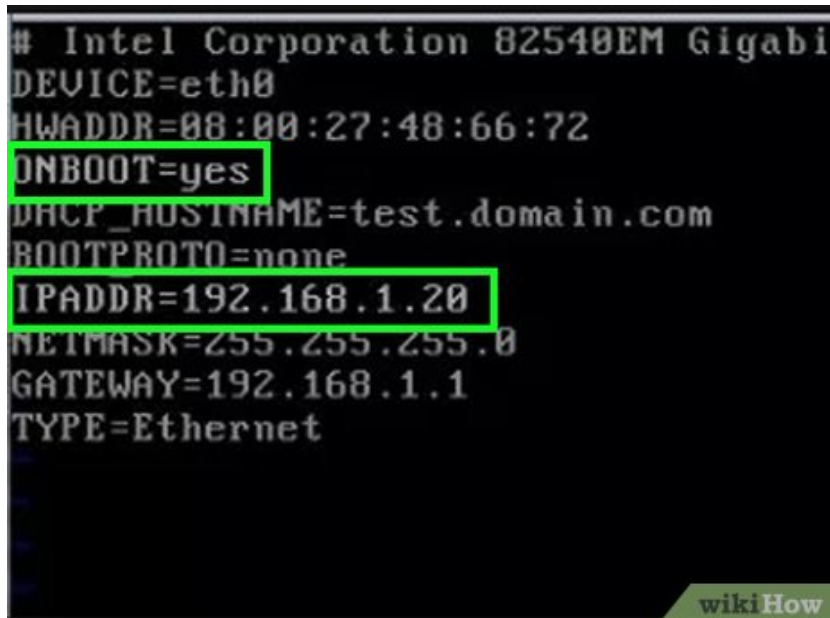
```
2.root@master~
[root@master ~]# cat /etc/sysconfig/network-scripts/ifcfg-eth0
TYPE=Ethernet
BOOTPROTO=none
IPADDR0=192.168.1.202
PREFIX0=24
GATEWAY0=192.168.1.1
DEFROUTE=yes
IPV4_FAILURE_FATAL=no
IPV6INIT=yes
IPV6_AUTOCONF=yes
IPV6_DEFROUTE=yes
IPV6_FAILURE_FATAL=no
NAME=eth0
UUID=8cce0ab7-79fb-4c3d-83d5-f59c6ff0f6aa
DEVICE=enp0s8
ONBOOT=yes
DNS1=192.168.1.202
DNS2=8.8.8.8
IPV6_PEERDNS=yes
IPV6_PEERROUTES=yes
[root@master ~]#
```

9.

Edit the network's information. Change the following values:

1. **BOOTPROTO** - Change `dhcp` to `none`
2. **Any IPV6 entry** - Delete any IPV6 entries entirely by moving the cursor to the `I` on the left and pressing `Del`.
3. **ONBOOT** - Change `no` to `yes`

```
# Intel Corporation 82540EM Gigabi
DEVICE=eth0
HWADDR=08:00:27:48:66:72
ONBOOT=yes
DHCP_HOSTNAME=test.domain.com
BOOTPROTO=none
IPADDR=192.168.1.20
NETMASK=255.255.255.0
GATEWAY=192.168.1.1
TYPE=Ethernet
```



10.

Enter a new IP category. Press `?Enter` to jump down one line from the `ONBOOT` category, type in `IPADDR=` and enter the IP address that you want to use, and then press `?Enter`.

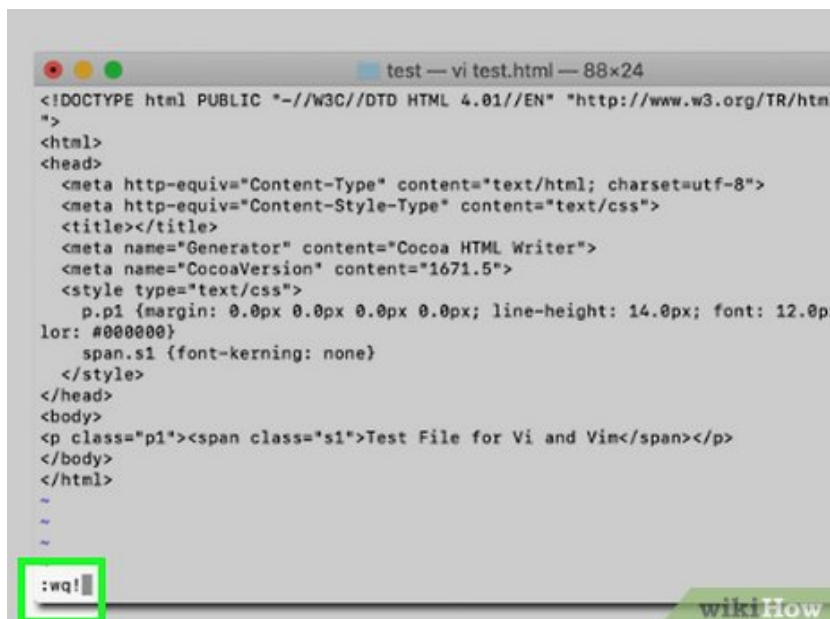
1. For example: to use "192.168.2.23" as your IP address, you'd type in `IPADDR=192.168.2.23` and press `?Enter`.

11. **Enter netmask, gateway, and DNS information.** To do so:^[2]

1. Type in `PREFIX=24` and press `?Enter`. You can also enter `NETMASK=255.255.255.0` here.
2. Type in `GATEWAY=192.168.2.1` and press `?Enter`. Substitute your preferred gateway address if different.

12.

```
test — vi test.html — 88x24
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3.org/TR/htm
">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8">
<meta http-equiv="Content-Style-Type" content="text/css">
<title></title>
<meta name="Generator" content="Cocoa HTML Writer">
<meta name="CocoaVersion" content="1671.5">
<style type="text/css">
p.p1 {margin: 0.0px 0.0px 0.0px 0.0px; line-height: 14.0px; font: 12.0p
lor: #000000}
span.s1 {font-kerning: none}
</style>
</head>
<body>
<p class="p1"><span class="s1">Test File for Vi and Vim</span></p>
</body>
</html>
~
~
~
:wq!
```



Save and exit the file. You can use the **File** menu to do this, or you can type in `:wq` and press `?Enter`.

You finished reading the article "**How to Assign an IP Address on a Linux Computer**" edited by the [TipsMake](#) team. We hope this article has provided you with many useful tech tips and tricks. You can search for similar articles on tips and guides. Thank you for reading and for following us regularly.

