

How to configure network on Ubuntu using Netplan

Netplan is the Ubuntu network configuration tool in all recent Ubuntu versions. Netplan relies on a YAML-based configuration system that simplifies the configuration process.

Netplan is the Ubuntu network configuration tool in all recent Ubuntu versions. Netplan relies on a YAML-based configuration system that simplifies the configuration process. It has replaced the old `/etc/network/interfaces` configuration file used to configure network interfaces in Ubuntu and other Linux distributions.

In this tutorial, you will learn how to configure networking in Ubuntu using Netplan. We will look at both static and dynamic IP configurations. The article will use Ubuntu 22.04 LTS to describe the process in this article, but the same steps apply to older Ubuntu 20.04.

Configure the network using Netplan

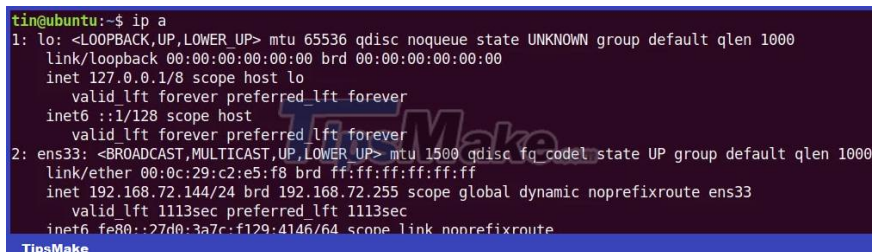
You can find the new configuration files at `/etc/netplan/*.yaml`. Ubuntu Server creates a Netplan configuration file for the system network named `01-netcfg.yaml`, while Ubuntu desktop creates a Netplan configuration file for Network-Manager named `01-network-manager-all.yaml`.

While working on the Ubuntu desktop, the author of the article has the file `01-network-manager-all.yaml` in the `/etc/netplan` directory to configure the network. `01-network-manager-all.yaml` is used to configure the first interface. If you have multiple interfaces, use `02-network-manager-all.yaml` for the second interface. Netplan applies configurations in numerical order. That means file 01 will be applied before file 02.

Now, let's move on to network configuration. Follow the steps below to configure a static or dynamic IP address in Ubuntu:

1. First, find the names of the active network interfaces you want to configure. To do so run the following command:

```
$ip a
```

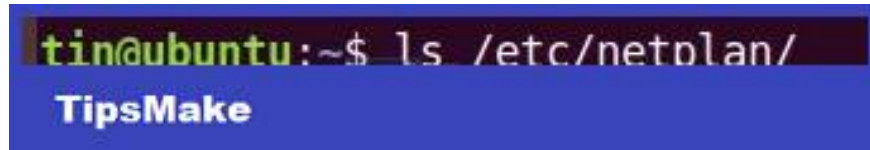


```
tin@ubuntu:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: ens33: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 00:0c:29:c2:e5:f8 brd ff:ff:ff:ff:ff:ff
    inet 192.168.72.144/24 brd 192.168.72.255 scope global dynamic noprefixroute ens33
        valid_lft 1113sec preferred_lft 1113sec
    inet6 fe80::27d0:3a7c:f129:4146/64 scope link noprefixroute
```

Note the interface name you want to configure with Netplan.

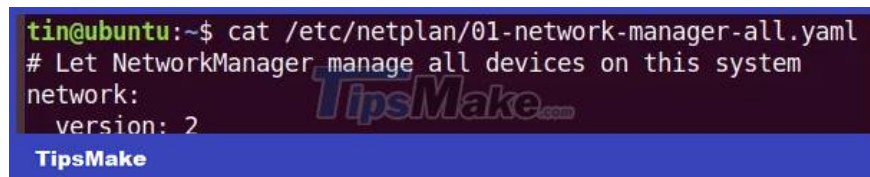
2. Netplan's default configuration file is located in the `/etc/netplan` directory. You can find that using the following command:

```
$ ls /etc/netplan/
```




3. To view the contents of the Netplan network configuration file, run the following command:

```
$ cat /etc/netplan/*.yaml
```



4. Now, you will need to open the configuration file in any editor: Because the article is using the Nano editor to edit the configuration file, the command that will be run is:

```
$ sudo nano /etc/netplan/*.yaml
```



5. Update the configuration file according to your network connection needs. For static IP address, add IP address, Gateway, DNS information while for dynamic IP address, there is no need to add this information as it will get this information from DHCP server. Use the following syntax to edit the configuration file.

```
network: Version: 2 Renderer: NetworkManager/ networkd ethernet: DEVICE_NAME: D
```

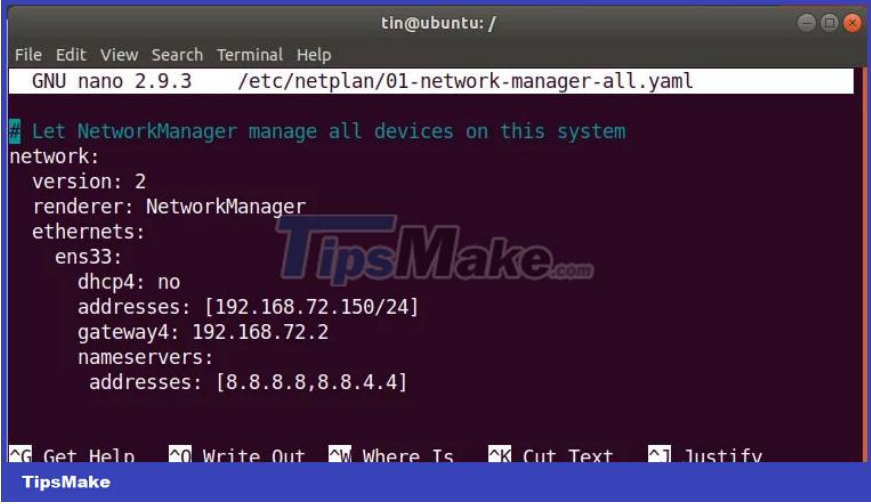
In there

1. `DEVICE_NAME`: Name of the interface.
2. `Dhcp4`: yes or no depending on dynamic or static IP address
3. `Addresses`: The device's IP address in prefix notation. Do not use netmasks.
4. `Gateway`: Gateway IP address to connect to the external network
5. `Nameservers`: Addresses of DNS name servers

Note that YAML files are quite strict in indentation. Use spaces to indent rather than pressing tab. Otherwise, you will get an error.

Configure static IP address in Ubuntu

To manually configure the IP address, use the configuration file syntax above and add the IP address, gateway, and DNS server information. Here, you can see an example configuration file for a static IP address:

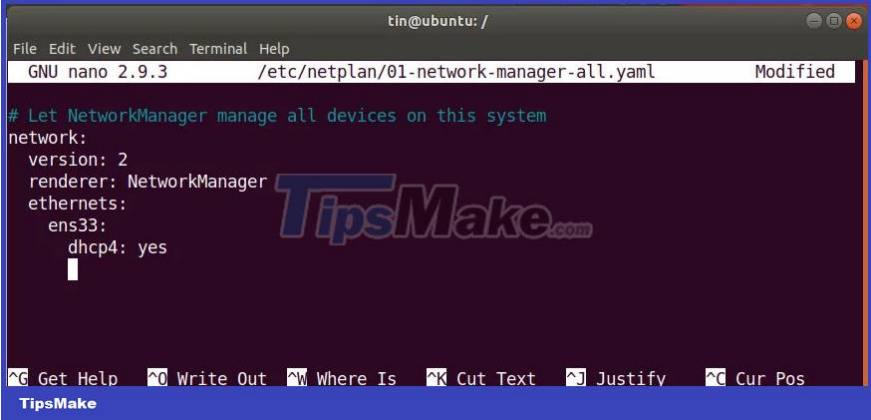


```
tin@ubuntu: /
File Edit View Search Terminal Help
GNU nano 2.9.3 /etc/netplan/01-network-manager-all.yaml
# Let NetworkManager manage all devices on this system
network:
  version: 2
  renderer: NetworkManager
  ethernets:
    ens33:
      dhcp4: no
      addresses: [192.168.72.150/24]
      gateway4: 192.168.72.2
      nameservers:
        addresses: [8.8.8.8,8.8.4.4]
```

Configure dynamic IP address in Ubuntu

To get the IP address from the DHCP server, use the same configuration file syntax above. But do not add IP address, Gateway and DNS server information.

Here, you can see an example configuration file for a dynamic IP address:



```
tin@ubuntu: /
File Edit View Search Terminal Help
GNU nano 2.9.3 /etc/netplan/01-network-manager-all.yaml Modified
# Let NetworkManager manage all devices on this system
network:
  version: 2
  renderer: NetworkManager
  ethernets:
    ens33:
      dhcp4: yes
```

Once you have completed the static or dynamic IP configuration, save and exit the configuration file.

Test configuration

Before applying any changes, check the configuration file. Run the following command as sudo to test the configuration:

```
$ sudo netplan try
```

```
tin@ubuntu:~$ sudo netplan try
Do you want to keep these settings?

Press ENTER before the timeout to accept the new configuration

Changes will revert in 118 seconds
TipsMake
```

If there are no problems, it will return a message accepting the configuration. If the configuration file does not pass the test, it will be reverted to the previous active configuration.

Apply configuration

Now apply the new configurations by running the following command as sudo:

```
$ sudo netplan apply
```

TipsMake

In case you see any errors, try debugging to investigate the problem. To run debugging, use the following command under sudo:

```
$ sudo netplan -d apply
```

Restart the network service

Once all configurations are applied successfully, restart the Network-Manager service by running the following command:

```
$ sudo systemctl restart network-manager
```

If you are using Ubuntu Server, use the following command instead:

```
$sudo systemctl restart system-networkd
```

Verify IP address

Now to verify if the new configuration was applied successfully, run the following command to verify the IP address:

```
$ip a
```

Whether you have an Ubuntu server or desktop, you can simply use Netplan to configure a static or dynamic IP address without any complicated configuration.

You finished reading the article "**How to configure network on Ubuntu using Netplan**" 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.
