

### (3.)Automatic(Dynamic) Assign IP Address to Machine

IP address is a numerical label such as **192.0.2.1** that is connected to a computer network that uses the Internet Protocol for communication. An IP address serves two main functions: network interface identification and location addressing.

Basically Ip address is also four type **public, private, static, and Dynamic.**

**STEP:1----->** First i run the following command on my terminal after that i will check the current ip address(**centOS8-11-01-2022 on KVM**).

Basically this command used to check ip address.

```
[root@localhost ~]# ip -4 a
```

```
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
```

```
inet 127.0.0.1/8 scope host lo
```

Static Ip Address

```
valid_lft forever preferred_lft forever
```

```
2: enp1s0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
```

```
inet 192.168.122.10/24 brd 192.168.122.255 scope global noprefixroute enp1s0
```

```
valid_lft forever preferred_lft forever
```

```
3: virbr0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc noqueue state DOWN group default qlen 1000
```

```
inet 192.168.124.1/24 brd 192.168.124.255 scope global virbr0
```

```
valid_lft forever preferred_lft forever
```

```
[root@localhost ~]#
```

**STEP:-2 --->**

If we want to assign ip address automatically, we always remember **DHCP** is a network protocol that enables a server to automatically assign an IP address to a computer from a defined range of numbers configured for a given network.

After that i will edit file with help of vim editor like this.

```
[root@localhost ~]# vim /etc/sysconfig/network-scripts/ifcfg-enp1s0
```

In this file make the following changes,because currently i am also using **manual ip address** in our Virtual machine.

You will only need to edit the settings for. **IPADDR, NETMASK, HOSTNAME and GATEWAY, DNS1 and DNS2.**

Enter all details in our configuration file and save file.

**TYPE=Ethernet**

**PROXY\_METHOD=none**

**BROWSER\_ONLY=no**

**BOOTPROTO=dhcp**

**DEFROUTE=yes**

```
IPV4_FAILURE_FATAL=no
IPV6INIT=no
NAME=enp1s0
UUID=49dfbdbc-5064-4431-b011-843bd66169d9
DEVICE=enp1s0
ONBOOT=yes
```

if you forget UUID (Universal Unique Identifier) for network interface card can be generated using **uuidgen** command.

```
[root@localhost ~]# uuidgen
7a002105-85a0-4144-9b4b-435eed92d792
```

Save all changes, and always remember **BOOTPROTO** is **dhcp**,

### STEP:-(3)

After this process you can restart your network Manager with help of Systemctl command like this.  
[root@localhost ~]# **systemctl restart NetworkManager**.

In the other hand, you can reload the network interface in our virtual machine. When you ssh into the machine you don't use this command because if you run this command then your terminal also hangs. your ip address is also changed.

```
[root@localhost ~]# nmcli con down enp1s0 && nmcli con up enp1s0
```

### STEP:(4)

Now i will check ip address with help **ip -4 a** command.

```
[root@localhost ~]# ip -4 a
```

```
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default
qlen 1000
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
2: enp1s0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP
group default qlen 1000
    inet 192.168.122.144/24 brd 192.168.122.255 scope global dynamic noprefixroute enp1s0
        valid_lft 2557sec preferred_lft 2557sec
3: virbr0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc noqueue state
DOWN group default qlen 1000
    inet 192.168.124.1/24 brd 192.168.124.255 scope global virbr0
        valid_lft forever preferred_lft forever
```

**Dynamic Ip Address**

**Thank you**