Installing DHCP Server in Ubuntu

1. Install the DCHP server package

```
sudo apt install isc-dhcp-server
```

2. edit the file `/etc/default/isc-dhcp-server` to define the interfaces DHCPD should use to serve DHCP requests, with the `INTERFACES` option.

For example, if you want the DHCPD daemon to listen on eth0, set it like so:

```
INTERFACES="eth0"
```

Configuring DHCP Server in Ubuntu

3. The main DHCP configuration file is `/etc/dhcp/dhcpd.conf`, you must add all your network information to be sent to clients here.

And, there are two types of statements defined in the DHCP configuration file, these are:

parameters– specify how to perform a task, whether to carry out a task, or what network configuration options to send to the DHCP client. ***declarations*** – define the network topology, state the clients, offer addresses for the clients, or apply a group of parameters to a group of declarations.

4. Open and modify the main configuration file, define your DHCP server options:

```
sudo vi /etc/dhcp/dhcpd.conf
```

Set the following global parameters at the top of the file, they will apply to all the declarations below (do specify values that apply to your scenario):

```
option domain-name "tecmint.lan";
option domain-name-servers ns1.tecmint.lan, ns2.tecmint.lan;
default-lease-time 3600;
max-lease-time 7200;
authoritative;
```

5. Define a subnetwork; here, we'll setup DHCP for 192.168.10.0/24 LAN network (use parameters that apply to your scenario).

```
subnet 192.168.10.0 netmask 255.255.255.0 {
        option routers                  192.168.10.1;
        option subnet-mask              255.255.255.0;
```

```
        option domain-search            "tecmint.lan";
        option domain-name-servers      192.168.10.1;
        range   192.168.10.10   192.168.10.100;
        range   192.168.10.110   192.168.10.200;
}
```

Configure Static IP on DHCP Client Machine

6. To assign a fixed (static) IP address to a particular client computer, add the section below where you need to explicitly specify it's MAC addresses and the IP to be statically assigned:

```
host centos-node {
     hardware ethernet 00:f0:m4:6y:89:0g;
     fixed-address 192.168.10.105;
 }

host fedora-node {
     hardware ethernet 00:4g:8h:13:8h:3a;
     fixed-address 192.168.10.106;
 }
```

Save the file and close it.

7. Start the DHCP service for the time being, and enable it to start automatically from the next system boot, like so:

```
$ sudo systemctl start isc-dhcp-server.service
$ sudo systemctl enable isc-dhcp-server.service
```

8. Do not forget to permit DHCP service (DHCPD daemon listens on port 67/UDP) on firewall as below:

```
$ sudo ufw allow  67/udp
$ sudo ufw reload
$ sudo ufw show
```

Configuring DHCP Client Machines

9. You can configure your clients computers on the network to automatically receive IP addresses from the DHCP server.

Login to the client computers and edit the Ethernet interface configuration file as follows (take note of the interface name/number):

```
$ sudo vi /etc/network/interfaces
```

And define the options below:

```
auto  eth0
iface eth0 inet dhcp
```

Save the file and exit. And restart network services like so (or reboot the system):

```
$ sudo systemctl restart networking
```