**DHCP Server setup:**

<space> means a real space

**1. Updating app packages:**

CODE: sudo apt update

**2. Installing isc-dhcp-server package**

CODE: sudo apt install isc-dhcp-server

**3. Checking isc-dhcp-server installed correctly or not**

a. Check the version of the isc-dhcp-server

CODE : dhcpd - -version

OUTPUT : isc-dhcpd-4.4.1 (or any version)

b. Check the status of DHCP server

CODE : sudo systemctl status isc-dhcp-server

* If the ACTIVE: failed is showed, then you need to configure the config file

**4. Configuring the DHCP server:**

a.) Enter the config file of dhcpd:

CODE : sudo nano<space>/etc/dhcp/dhcpd.conf

b.) Enter the following code:

subnet 192.168.10.0 netmask 255.255.255.0 {

range 192.168.10.0<space>192.168.10.150;

option routers 192.168.10.1;

option subnet-mask 255.255.255.0;

option domain-name-servers 192.168.10.1;

}

**Save File : CTRL + O**

c.) Test the config file:

CODE: sudo dhcpd -t -cf /etc/dhcp/dhcpd.conf

d.) Open default file:

CODE: sudo nano /etc/default/isc-dhcp-server

ENTER:

INTERFACESv4="enp2s0" (Replace empty “” with enp2s0)

**5. Start the service**

CODE: sudo systemctl start isc-dhcp-server

**6. Check status again code at point 3 b.)**

**If the DHCP port is disabled, enable it with the following command:**

**CODE :** sudo systemctl enable isc-dhcp-server

**If, still the dhcp status shows error, enter the following code:**

CODE: sudo journalctl -u isc-dhcp-server

The above code will give details for the cause of error

**7. Check again the IP**

CODE : ip a

**If the ip for enp2s0 is absent, then reassign the ip**

**RECOMMENDED IP: 192.168.10.<system No.>**

**8. Reassign IP**

CODE: sudo ip addr add 192.168.10.29/24 dev enp2s0

**9. Restart the DHCP service**

CODE: sudo systemctl restart isc-dhcp-server

**10. Check the status again**

**11. ACTIVE: failed? Check whether the system was used as a DHCP client, then undo the process you did for DHCP client.**

**DHCP CLIENT**

**1. Enter the file ‘/etc/network/interfaces’**

CODE: sudo nano /etc/network/interfaces

**2. Content to add in conf file**

CODE :

auto enp2s0

iface enp2s0 inet dhcp

**3. Restart Network manager and systemd-networkd**

CODE: sudo systemctl restart NetworkManager

CODE: sudo systemctl restart systemd-networkd

**4. Check status of both of above:**

CODE : sudo systemctl status NetworkManager

CODE : sudo systemctl status systemd-networkd

**5. Manually obtain IP Address**

For flushing out the already assigned or engaged port or IP

CODE : sudo dhclient -r

CODE : sudo dhclient enp2s0

**6. Verify the address obtained from DHCP server**

CODE : ip addr show

**7. To check the network interface status**

It’s working depends on the network connectivity

CODE : ip link show

RESOURCE LINK: [github.com/ManishPraa24/Computer-Networks/tree/main](https://github.com/ManishPraa24/Computer-Networks/tree/main)

