

## 1. Update & Instalare server DHCP

sudo apt update

sudo apt install isc-dhcp-server -y

```
robert@robert-VirtualBox:~$ sudo apt update
[sudo] password for robert:
Hit:1 http://ro.archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://ro.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Hit:3 http://security.ubuntu.com/ubuntu noble-security InRelease
Hit:4 http://ro.archive.ubuntu.com/ubuntu noble-backports InRelease
Get:5 http://ro.archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [1,101 kB]
Get:6 http://ro.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1,064 kB]
Fetched 2,291 kB in 1s (1,911 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
8 packages can be upgraded. Run 'apt list --upgradable' to see them.
robert@robert-VirtualBox:~$ sudo apt install isc-dhcp-server -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  isc-dhcp-common
```

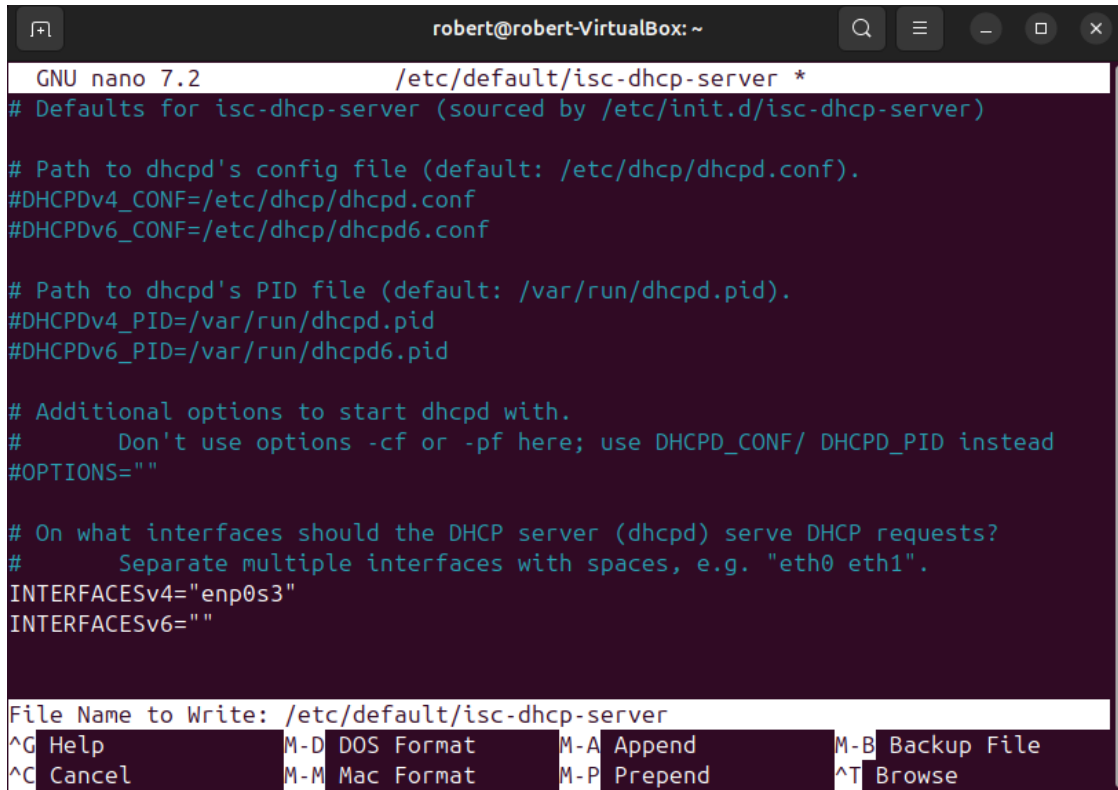
## 2. Identificarea interfetei de retea : ip a

```
robert@robert-VirtualBox:~$ 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 noprefixroute
        valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:b2:b6:33 brd ff:ff:ff:ff:ff:ff
    inet 192.168.0.164/24 brd 192.168.0.255 scope global dynamic noprefixroute enp0s3
        valid_lft 2607sec preferred_lft 2607sec
    inet6 fe80::a00:27ff:feb2:b633/64 scope link
        valid_lft forever preferred_lft forever
```

### 3. Specificarea interfeței în fișierul de configurare DHCP

`sudo nano /etc/default/isc-dhcp-server`

Modificam linia: `INTERFACESv4="enp0s3"`



```
GNU nano 7.2 /etc/default/isc-dhcp-server *
# Defaults for isc-dhcp-server (sourced by /etc/init.d/isc-dhcp-server)

# Path to dhcpd's config file (default: /etc/dhcp/dhcpd.conf).
#DHCPDv4_CONF=/etc/dhcp/dhcpd.conf
#DHCPDv6_CONF=/etc/dhcp/dhcpd6.conf

# Path to dhcpd's PID file (default: /var/run/dhcpd.pid).
#DHCPDv4_PID=/var/run/dhcpd.pid
#DHCPDv6_PID=/var/run/dhcpd6.pid

# Additional options to start dhcpd with.
# Don't use options -cf or -pf here; use DHCPD_CONF/ DHCPD_PID instead
#OPTIONS=""

# On what interfaces should the DHCP server (dhcpd) serve DHCP requests?
# Separate multiple interfaces with spaces, e.g. "eth0 eth1".
INTERFACESv4="enp0s3"
INTERFACESv6=""

File Name to Write: /etc/default/isc-dhcp-server
^G Help      M-D DOS Format  M-A Append     M-B Backup File
^C Cancel    M-M Mac Format  M-P Prepend    ^T Browse
```

### 4. Configurare IP static pentru server

`sudo nano /etc/netplan/01-netcfg.yaml`

adaugam configuratia:

network:

version: 2

ethernets:

enp0s3:

dhcp4: no

addresses:

- 192.168.0.1/24

gateway4: 192.168.0.1

nameservers:

addresses: [8.8.8.8, 1.1.1.1]

```
GNU nano 7.2 /etc/netplan/01-netcfg.yaml
network:
  version: 2
  renderer: networkd
  ethernets:
    enp0s3:
      dhcp4: no
      addresses:
        - 192.168.0.10/24
      gateway4: 192.168.0.1
      nameservers:
        addresses:
          - 8.8.8.8
          - 8.8.4.4

[ Read 14 lines ]
^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute   ^C Location
^X Exit      ^R Read File ^\ Replace   ^U Paste     ^J Justify   ^_ Go To Line
```

Aplica modificarile: `sudo netplan apply`

### 5. Configurare fisier DHCP principal

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

```
GNU nano 7.2 /etc/dhcp/dhcpd.conf
# }
# subnet 10.0.29.0 netmask 255.255.255.0 {
#   option routers rtr-29.example.org;
# }
# pool {
#   allow members of "foo";
#   range 10.17.224.10 10.17.224.250;
# }
# pool {
#   deny members of "foo";
#   range 10.0.29.10 10.0.29.230;
# }
# }
#}

subnet 192.168.0.0 netmask 255.255.255.0 {
  range 192.168.0.50 192.168.0.100;
  option routers 192.168.0.10;
  option domain-name-servers 8.8.8.8, 8.8.4.4;
}

^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute   ^C Location
^X Exit      ^R Read File ^\ Replace   ^U Paste     ^J Justify   ^_ Go To Line
```

Am adaugat:

```
subnet 192.168.0.0 netmask 255.255.255.0 {  
    range 192.168.0.50 192.168.0.100;  
    option routers 192.168.0.1;  
    option subnet-mask 255.255.255.0;  
    option domain-name-servers 8.8.8.8, 1.1.1.1;  
}
```

## 6. Verificare configuratie DHCP

```
sudo dhcpcd -t
```

## 7. Activare si pornire serviciu DHCP

```
sudo systemctl enable isc-dhcp-server
```

```
sudo systemctl start isc-dhcp-server
```

```
sudo systemctl status isc-dhcp-server
```

```
robert@robert-VirtualBox:~$ sudo systemctl restart isc-dhcp-server  
robert@robert-VirtualBox:~$ sudo systemctl enable isc-dhcp-server  
Synchronizing state of isc-dhcp-server.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.  
Executing: /usr/lib/systemd/systemd-sysv-install enable isc-dhcp-server  
robert@robert-VirtualBox:~$ sudo systemctl status isc-dhcp-server  
● isc-dhcp-server.service - ISC DHCP IPv4 server  
   Loaded: loaded (/usr/lib/systemd/system/isc-dhcp-server.service; enabled; >  
   Active: active (running) since Wed 2025-05-21 00:32:15 EEST; 20s ago  
     Docs: man:dhcpcd(8)  
  Main PID: 5402 (dhcpcd)  
    Tasks: 1 (limit: 2271)  
  Memory: 3.7M (peak: 4.0M)  
     CPU: 12ms  
   CGroup: /system.slice/isc-dhcp-server.service  
           └─5402 dhcpcd -user dhcpcd -group dhcpcd -f -4 -pf /run/dhcp-server/dh  
May 21 00:32:15 robert-VirtualBox dhcpcd[5402]: PID file: /run/dhcp-server/dhc  
May 21 00:32:15 robert-VirtualBox dhcpcd[5402]: Wrote 0 leases to leases file.  
May 21 00:32:15 robert-VirtualBox sh[5402]: Wrote 0 leases to leases file.  
May 21 00:32:15 robert-VirtualBox dhcpcd[5402]: Listening on LPF/enp0s3/08:00:27>
```

## 8.Testare

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```
ubuntu@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 noprefixroute
        valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:cf:c0:c6 brd ff:ff:ff:ff:ff:ff
    inet 192.168.0.51/24 brd 192.168.0.255 scope global dynamic noprefixroute enp0s3
        valid_lft 594sec preferred_lft 594sec
    inet6 fe80::a00:27ff:febf:c0c6/64 scope link
        valid_lft forever preferred_lft forever
ubuntu@ubuntu:~$
```

Vedem inet 192.168.0.51/24 ... dynamic, inseamna ca a primit IP prin DHCP.