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# DHCP EN UBUNTU SERVER

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SRI



2ºASIR  
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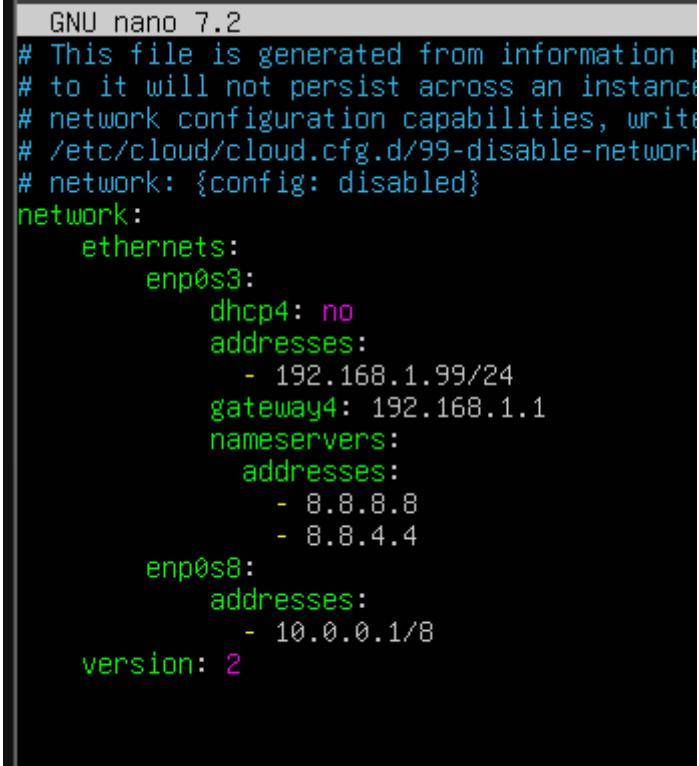
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## Cambiar IP.

Para cambiar la IP en modo comando haremos:

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



```
GNU nano 7.2
# This file is generated from information provided
# to it will not persist across an instance
# network configuration capabilities, write
# /etc/cloud/cloud.cfg.d/99-disable-networkd
# network: {config: disabled}
network:
  ethernets:
    enp0s3:
      dhcp4: no
      addresses:
        - 192.168.1.99/24
      gateway4: 192.168.1.1
      nameservers:
        addresses:
          - 8.8.8.8
          - 8.8.4.4
    enp0s8:
      addresses:
        - 10.0.0.1/8
  version: 2
```

Para aplicarlo haremos

```
Sudo netplan apply
```

```
ana@ana:~$  
ana@ana:~$ sudo netplan apply
```

\*Importante:

hacer sudo apt update y sudo apt upgrade

# Instalación.

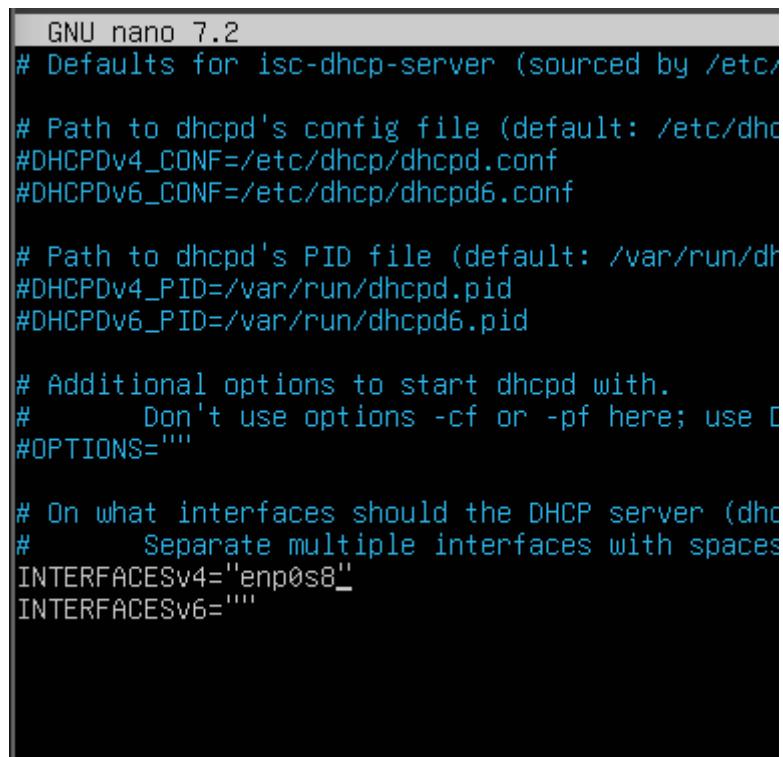
Haremos la instalación

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

## Cambiar el archivo de interfaces.

Cambiar en archivo para poner la interfaz de la red interna:

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



```
GNU nano 7.2
# Defaults for isc-dhcp-server (sourced by /etc/init.d/isc-dhcp-server)
# Path to dhcpcd's config file (default: /etc/dhcpcd.conf)
#DHCPDV4_CONF=/etc/dhcp/dhcpd.conf
#DHCPDV6_CONF=/etc/dhcp/dhcpd6.conf

# Path to dhcpcd's PID file (default: /var/run/dhcpcd.pid)
#DHCPDV4_PID=/var/run/dhcpd.pid
#DHCPDV6_PID=/var/run/dhcpd6.pid

# Additional options to start dhcpcd with.
#       Don't use options -cf or -pf here; use DHCPCDARGS instead.
#OPTIONS=""

# On what interfaces should the DHCP server (dhcpcd) listen?
#       Separate multiple interfaces with spaces
INTERFACESv4="enp0s8"
INTERFACESv6=""
```

## Cambiar archivo de configuración del servidor DHCP.

Haremos

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

Y una vez dentro del archivo haremos que se parezca a esta captura:

```
# configuration file instead of this file.
#
# option definitions common to all supported networks...
option domain-name "example.org";
option domain-name-servers ns1.example.org, ns2.example.org;

default-lease-time 600;
max-lease-time 7200;

# The ddns-updates-style parameter controls whether or not the server will
# attempt to do a DNS update when a lease is confirmed. We default to the
# behavior of the version 2 packages ('none', since DHCP v2 didn't
# have support for DDNS.)
ddns-update-style none;

# If this DHCP server is the official DHCP server for the local
# network, the authoritative directive should be uncommented.
#authoritative;

# Use this to send dhcp log messages to a different log file (you also
# have to hack syslog.conf to complete the redirection).
#log-facility local7;

# No service will be given on this subnet, but declaring it helps the
# DHCP server to understand the network topology.

#subnet 10.152.187.0 netmask 255.255.255.0 {
#}

# This is a very basic subnet declaration.

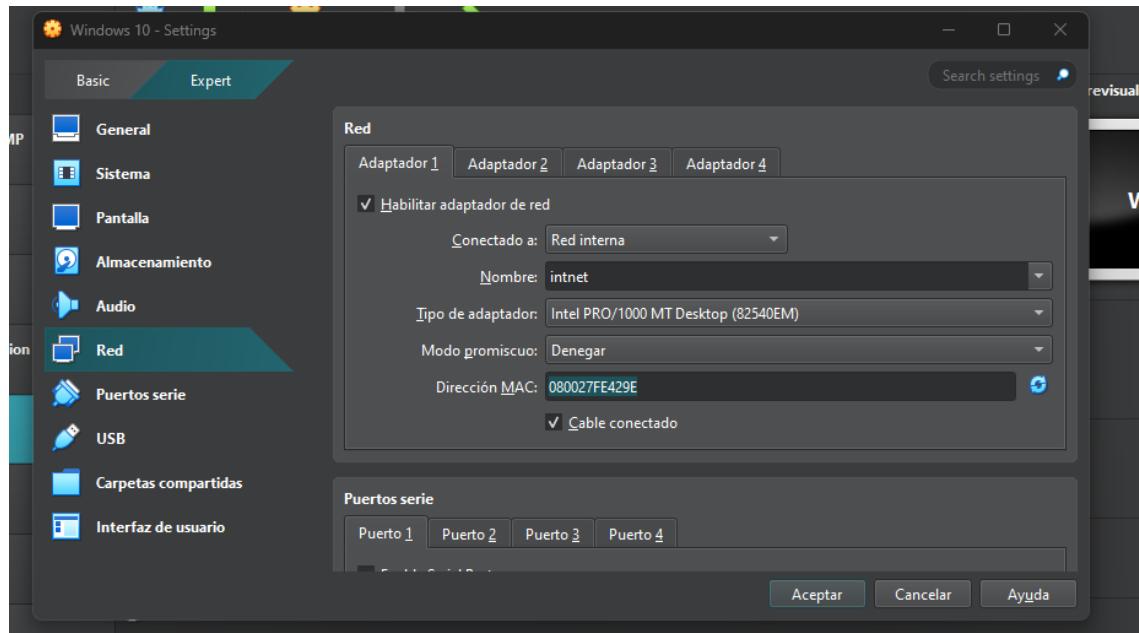
subnet 10.0.0.0 netmask 255.0.0.0 {
    range 10.0.0.100 10.0.0.200;
    option routers 10.0.0.1;
    option subnet-mask 255.0.0.0;
    option domain-name-servers 8.8.8.8, 8.8.4.4;_
}

# This declaration allows BOOTP clients to get dynamic addresses,
# which we don't really recommend.
```

## Asignar IP fija fuera del rango a una máquina cliente.

En el cliente iremos a la configuración de la maquina virtual > Red y veremos la MAC del adaptador red(red interna).

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En el servidor iremos a

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

Lo cambiaremos para que se parezca a esto:

```
# option broadcast-address 10.5.5.31;
# default-lease-time 600;
# max-lease-time 7200;
#}

# Hosts which require special configuration options can be listed in
# host statements. If no address is specified, the address will be
# allocated dynamically (if possible), but the host-specific information
# will still come from the host declaration.

host ana {
    hardware ethernet 08:00:27:FE:42:9E;
    fixed-address 10.0.0.99;
}

# Fixed IP addresses can also be specified for hosts. These addresses
# should not also be listed as being available for dynamic assignment.

^G Help      ^O Write Out   ^W Where Is   ^K Cut        ^T Execute   ^C Local
^X Exit      ^R Read File   ^L Replace    ^U Paste     ^J Justify   ^/ Go To
```

**Activar el forwarding de los paquetes (para que haya trafico entre amas interfaces).**

\*importante: poner sudo su

Pondremos:

```
sudo echo "1" > /proc/sys/net/ipv4/ip_forward
```

```
root@ana:/home/ana# echo "1" > /proc/sys/net/ipv4/ip_forward
root@ana:/home/ana# _
```

## IPTABLES.

Pondremos este comando

```
Sudo iptables -t nat -A POSTROUTING -o enp0s3 -j MASQUERADE
```

```
ana@ana:~$ sudo iptables -t nat -A POSTROUTING -o enp0s3 -j MASQUERADE
ana@ana:~$ _
```

# Reiniciar servicio y comprobar status.

```
ana@ana:~$ sudo systemctl restart isc-dhcp-server
ana@ana:~$ 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; preset: enabled)
     Active: active (running) since Tue 2024-10-22 17:05:05 UTC; 9s ago
       Docs: man:dhcpd(8)
   Main PID: 10567 (dhcpd)
      Tasks: 1 (limit: 2276)
     Memory: 4.1M (peak: 4.3M)
        CPU: 15ms
      CGroup: /system.slice/isc-dhcp-server.service
              └─10567 dhcpd -user dhcpd -group dhcpd -f -4 -pf /run/dhcp-server/dhcpd.pid -cf /etc/dhcp/dhcpd.conf enp0s8

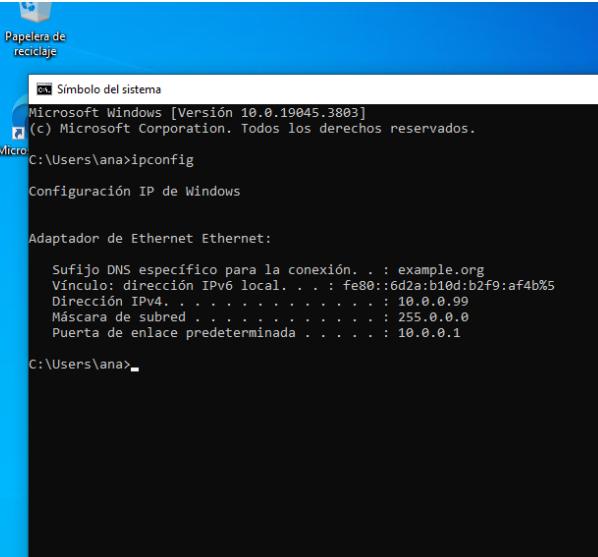
oct 22 17:05:05 ana dhcpd[10567]: Wrote 0 deleted host decls to leases file.
oct 22 17:05:05 ana dhcpd[10567]: Wrote 0 new dynamic host decls to leases file.
oct 22 17:05:05 ana dhcpd[10567]: Wrote 0 leases to leases file.
oct 22 17:05:05 ana dhcpd[10567]: Listening on LPF/enp0s8/08:00:27:ea:89:f4/10.0.0.0/8
oct 22 17:05:05 ana dhcpd[10567]: Listening on LPF/enp0s8/08:00:27:ea:89:f4/10.0.0.0/8
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oct 22 17:05:05 ana dhcpd[10567]: Sending on  Socket/fallback/fallback-net
oct 22 17:05:05 ana dhcpd[10567]: Sending on  Socket/fallback/fallback-net
oct 22 17:05:05 ana dhcpd[10567]: Server starting service.
```

## Comprobar en cliente.

Comprobamos que esté puesto obtener ip automáticamente, es decir DHCP.

Desactivar Firewall > Activar o desactivar ...

Haremos ipconfig :



```
#}
# Hosts which require special configuration options can be listed
# host statements. If no address is specified, the address will
# be allocated dynamically (if possible), but the host-specific info
# will still come from the host declaration.

host ana {
    hardware ethernet 08:00:27:FE:42:9E;
    fixed-address 10.0.0.99;
}

# Fixed IP addresses can also be specified for hosts. These addresses
# should not also be listed as being available for dynamic assignment.

ana@ana:~$ sudo echo "1" > /proc/sys/net/ipv4/ip_forward
bash: /proc/sys/net/ipv4/ip_forward: Permission denied
ana@ana:~$ sudo su
root@ana:/home/ana# echo "1" > /proc/sys/net/ipv4/ip_forward
root@ana:/home/ana# exit
exit
ana@ana:~$ sudo iptables -t nat -A POSTROUTING -o enp0s3 -j MASQ
ana@ana:~$ sudo systemctl restart isc-dhcp-server
ana@ana:~$ 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; preset: enabled)
     Active: active (running) since Tue 2024-10-22 17:05:05 UTC;
       Docs: man:dhcpd(8)
   Main PID: 10567 (dhcpd)
      Tasks: 1 (limit: 2276)
     Memory: 4.1M (peak: 4.3M)
        CPU: 15ms
      CGroup: /system.slice/isc-dhcp-server.service
              └─10567 dhcpd -user dhcpd -group dhcpd -f -4 -pf /run/dhcp-server/dhcpd.pid -cf /etc/dhcp/dhcpd.conf enp0s8

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```