

Práctica 2+: Servicio DHCP en Ubuntu 22.04 una LAN

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Servicios de red e Internet

2º ASIR

Establecemos una ip estática en el servidor. Para ello debemos modificar el archivo “yaml” que se encuentre en: /etc/netplan/

```
/etc/netplan/00-installer-config.yaml
```

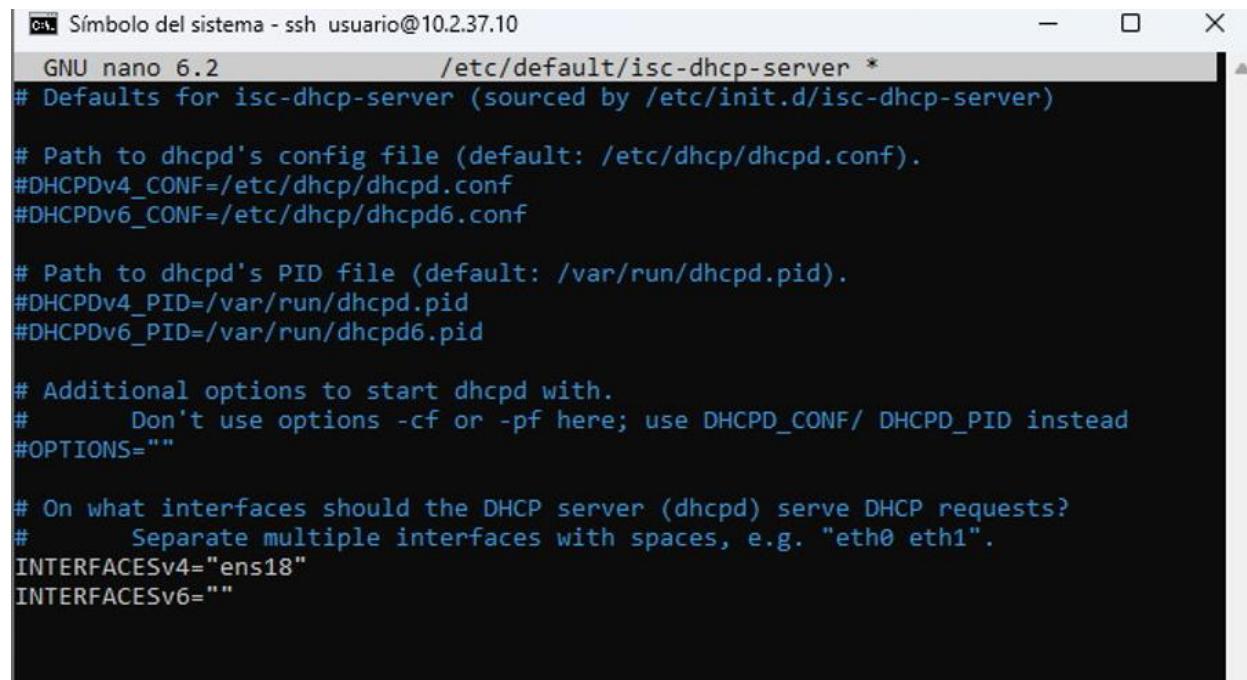
```
GNU nano 6.2
# This is the network config written by 'subiquity'
network:
  ethernets:
    ens18:
      #      dhcp4: false
      addresses:
        - 10.2.37.1/24
      routes:
        - to: 0.0.0.0/0
          via: 10.2.37.1
      nameservers:
        search: [google]
        addresses: [8.8.8.8]
  version: 2
```

Debemos ejecutar: **netplan apply** para que se ejecuten los cambios.

Instalamos el servicio de DHCP: **apt install isc-dhcp-server**

Ahora modificamos el archivo: **/etc/default/isc-dhcp-server**

Debemos poner el nombre de la interfaz que vamos a usar para dar el servicio de DHCP.



The screenshot shows a terminal window titled "Símbolo del sistema - ssh usuario@10.2.37.10". The window contains the contents of the /etc/default/isc-dhcp-server file, which is being edited with the nano text editor. The file includes configuration options for the DHCP server, such as the path to the config file (DHCPDv4_CONF), the PID file (DHCPDv4_PID), additional options (OPTIONS), and the interfaces (INTERFACESv4) to serve DHCP requests. The interface specified is "ens18".

```
GNU nano 6.2          /etc/default/isc-dhcp-server *
# Defaults for isc-dhcp-server (sourced by /etc/init.d/isc-dhcp-server)

# Path to dhcpcd's config file (default: /etc/dhcp/dhcpcd.conf).
#DHCPDv4_CONF=/etc/dhcp/dhcpcd.conf
#DHCPDv6_CONF=/etc/dhcp/dhcpcd6.conf

# Path to dhcpcd's PID file (default: /var/run/dhcpcd.pid).
#DHCPDv4_PID=/var/run/dhcpcd.pid
#DHCPDv6_PID=/var/run/dhcpcd6.pid

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

# On what interfaces should the DHCP server (dhcpcd) serve DHCP requests?
#       Separate multiple interfaces with spaces, e.g. "eth0 eth1".
INTERFACESv4="ens18"
INTERFACESv6=""
```

Modificamos: **/etc/dhcp/dhcpd.conf**

```
# A slightly different configuration for an internal subnet.
subnet 10.2.37.0 netmask 255.255.255.0 {
    range 10.2.37.100 10.2.37.254;
    option domain-name-servers 1.1.1.1, 1.0.0.1;
    option domain-name "2asir.edu 2asir.me";
    option subnet-mask 255.255.255.0;
    option routers 10.2.37.1;
#    option broadcast-address 10.5.5.31;
    default-lease-time 57600;
    max-lease-time 57600;
}
```

En subnet: Subred y máscara.

Rango de IPs a repartir.

“Option domain-name-servers”: Los servidores DNS que recibirán los clientes.

“Option domain-name”: Define el dominio de búsqueda que recibirán los clientes.

Máscara de la subred.

Gateway.

Y los tiempos de concesión.

Para reservar IPs:

```
# Fixed IP addresses can also be specified if  
# they should not also be listed as being available.  
# Hosts for which fixed IP addresses have been  
# assigned via BOOTP or DHCP. Hosts for which no fixed  
# address has been assigned via either BOOTP or DHCP  
# will be booted with DHCP, unless there is an address  
# lease available for them.  
# to which a BOOTP client is connected which  
# has requested a fixed address.  
host ct-amarillo {  
    hardware ethernet BC:24:11:13:B0:FE;  
    fixed-address 10.2.37.50;  
}
```

Nombre del host.

MAC.

IP para reservar.

IP en contenedor SIN IP reservada.

```
root@ctcliente:~# 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: eth0@if1664: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP group default qlen 1000
    link/ether bc:24:11:33:c6:6b brd ff:ff:ff:ff:ff:ff link-netnsid 0
        inet 10.2.37.100/24 metric 1024 brd 10.2.37.255 scope global dynamic eth0
            valid_lft 57576sec preferred_lft 57576sec
            inet6 fe80::be24:11ff:fe33:c66b/64 scope link
                valid_lft forever preferred_lft forever
root@ctcliente:~#
```

En el mismo contenedor, ejecutamos “resolvectl status” para comprobar los DNS que se están usando.

```
search institutodh.net
nameserver 172.16.200.1
# --- END PVE ---
root@ctcliente:~# resolvectl status
Could not find command-not-found database. Run 'sudo apt update' to populate it.
resolvectl: command not found
root@ctcliente:~# resolvectl status
Global
      Protocols: -LLMNR -mDNS -DNSOverTLS DNSSEC=no/unsupported
  resolv.conf mode: foreign
Current DNS Server: 172.16.200.1
      DNS Servers: 172.16.200.1
      DNS Domain: institutodh.net

Link 2 (eth0)
  Current Scopes: DNS
      Protocols: +DefaultRoute -LLMNR -mDNS -DNSOverTLS DNSSEC=no/unsupported
      DNS Servers: 1.1.1.1 1.0.0.1
      DNS Domain: 2asir.edu0322asir.me
root@ctcliente:~#
```

Contenedor CON IP reservada.

```
root@ct-amarillo:~# 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: eth0@if1688: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP group default qlen 1000
    link/ether bc:24:11:13:b0:fe brd ff:ff:ff:ff:ff:ff link-netnsid 0
        inet 10.2.37.50/24 metric 1024 brd 10.2.37.255 scope global dynamic eth0
            valid_lft 57587sec preferred_lft 57587sec
        inet6 fe80::be24:11ff:fe13:b0fe/64 scope link
            valid_lft forever preferred_lft forever
root@ct-amarillo:~#
```