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Ejercicio 1

a) Configuración cliente DNS en GNU/Linux a bajo nivel (archivos de configuración). Cambiar el funcionamiento del “resolver”.

Solución:

Escenario

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Nombre DNS: migueliro.

Debian12Miguel-1

Ubuntu2-1



Configuramos la tarjeta de red

Ubuntu2 [Corriendo] - Oracle VM VirtualBox

Archivo Máquina Ver Entrada Dispositivos Ayuda

```
Activities Terminal nov 13 13:55
miguel2@miguel2-SRI: ~
miguel2@miguel2-SRI:~$ sudo nano /etc/netplan/01-network-manager-all.yaml
Miguelillo
```

Configuramos la IP el gateway y los servidores dns

Ubuntu2 [Corriendo] - Oracle VM VirtualBox

Archivo Máquina Ver Entrada Dispositivos Ayuda

```
Activities Terminal nov 13 13:58
miguel2@miguel2-SRI: ~
GNU nano 6.2 /etc/netplan/01-network-man
Let NetworkManager manage all devices on this system
network:
  version: 2
  renderer: networkd
  ethernets:
    enp0s3:
      addresses:
        - 192.168.20.11/24
      gateway4: 192.168.20.1
      nameservers:
        addresses:
          - 192.168.20.1
      # Puedes agregar más servidores DNS si es necesario
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```

Hacemos una apply

```

Ubuntu2 [Corriendo] - Oracle VM VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda
Activities Terminal nov 13 14:00
miguell2@miguell2-SRI: ~
miguell2@miguell2-SRI:~$ sudo netplan apply
** (generate:2999): WARNING **: 14:00:12.023: `gateway4` has been deprecated, use default routes instead.
See the 'Default routes' section of the documentation for more details.
** (process:2997): WARNING **: 14:00:12.803: `gateway4` has been deprecated, use default routes instead.
See the 'Default routes' section of the documentation for more details.
** (process:2997): WARNING **: 14:00:12.827: `gateway4` has been deprecated, use default routes instead.
See the 'Default routes' section of the documentation for more details.
** (process:2997): WARNING **: 14:00:13.160: `gateway4` has been deprecated, use default routes instead.
See the 'Default routes' section of the documentation for more details.
** (process:2997): WARNING **: 14:00:13.161: `gateway4` has been deprecated, use default routes instead.
See the 'Default routes' section of the documentation for more details.
miguell2@miguell2-SRI:~$ Miguelillo

```

Revisamos que se haya cambiado la configuración

```

Ubuntu2 [Corriendo] - Oracle VM VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda
Activities Terminal nov 13 14:02
miguell2@miguell2-SRI: ~
miguell2@miguell2-SRI:~$ 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
       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 08:00:27:68:51:95 brd ff:ff:ff:ff:ff:ff
   inet 192.168.20.11/24 brd 192.168.20.255 scope global enp0s3
       valid_lft forever preferred_lft forever
   inet6 fe80::a199:f1c6:ad10:c38c/64 scope link noprefixroute
       valid_lft forever preferred_lft forever
miguell2@miguell2-SRI:~$ Miguelillo

```

Cambiamos la configuración del resolv

```

Ubuntu2 [Corriendo] - Oracle VM VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda
Activities Terminal nov 13 14:03
miguell2@miguell2-SRI: ~
miguell2@miguell2-SRI:~$ sudo nano /etc/resolv.conf
miguell2@miguell2-SRI:~$ Miguelillo

```

Le indicamos los nameservers IPv4 e IPv6

```

Ubuntu2 [Corriendo] - Oracle VM VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda
Activities Terminal nov 13 14:06
miguell2@miguell2-SRI: ~
GNU nano 6.2 /etc/resolv.conf
# internal DNS stub resolver of systemd-resolved. This file lists all
# configured search domains.
#
# Run "resolvectl status" to see details about the uplink DNS servers
# currently in use.
#
# Third party programs should typically not access this file directly, but only
# through the symlink at /etc/resolv.conf. To manage man:resolv.conf(5) in a
# different way, replace this symlink by a static file or a different symlink.
#
# See man:systemd-resolved.service(8) for details about the supported modes of
# operation for /etc/resolv.conf.
nameserver 192.168.20.1
nameserver 2001:db8:20::1
options edns0 trust-ad
search .
Wrote 24 lines
Help Write Out Where Is Cut Execute Location M-U Undo
Exit Read File Replace Paste Justify Go To Line M-E Redo
Miguelillo

```


Pruebo que funciona el archivo host

```

Ubuntu2 [Corriendo] - Oracle VM VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda
Actividades Terminal nov 13 19:46
miguel2@miguel2-SRI: ~
miguel2@miguel2-SRI:~$ nslookup
> 192.168.20.11
11.20.168.192.in-addr.arpa      name = ubuntu.
> ubuntu
Server:          127.0.0.53
Address:         127.0.0.53#53

Name:   ubuntu
Address: 192.168.20.11
Miguelillo

```

Cambio el archivo nsswitch para que solamente use el servidor DNS

```

Ubuntu2 [Corriendo] - Oracle VM VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda
Actividades Terminal nov 13 20:00
miguel2@miguel2-SRI: ~
GNU nano 6.2 /etc/nsswitch.conf
# /etc/nsswitch.conf
#
# Example configuration of GNU Name Service Switch functionality.
# If you have the 'glibc-doc-reference' and 'info' packages installed, try:
# 'info libc "Name Service Switch"' for information about this file.

passwd:          files systemd
group:           files systemd
shadow:         files
gshadow:        files

hosts:          dns

networks:       files

protocols:     db files
services:     db files
ethers:       db files
rpc:          db files

netgroup:     nis
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```

Comprobación

```

Ubuntu2 [Corriendo] - Oracle VM VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda
Actividades Terminal nov 13 20:02
miguel2@miguel2-SRI: ~
miguel2@miguel2-SRI:~$ cat /etc/hosts
127.0.0.1    localhost
127.0.1.1    miguel2-SRI
192.168.20.11  ubuntu
# The following lines are desirable for IPv6 capable hosts
::1         ip6-localhost ip6-loopback
fe00::0    ip6-localnet
ff00::0    ip6-mcastprefix
ff02::1    ip6-allnodes
ff02::2    ip6-allrouters
miguel2@miguel2-SRI:~$ ping ubuntu
ping: ubuntu: Temporary failure in name resolution
miguel2@miguel2-SRI:~$ nslookup
> ubuntu
;; communications error to 192.168.20.1#53: timed out
;; communications error to 192.168.20.1#53: timed out
Server:          192.168.20.1
Address:         192.168.20.1#53

** server can't find ubuntu: SERVFAIL
>
Miguelillo

```