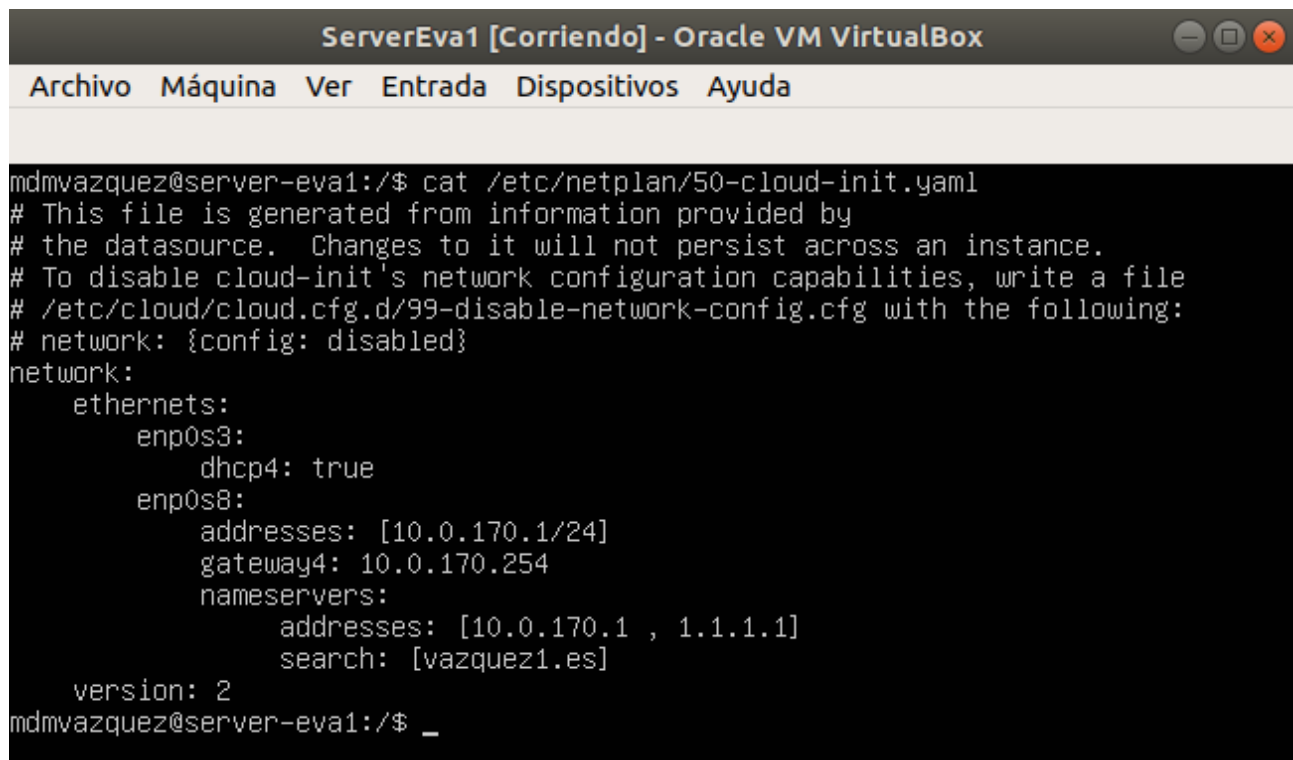


1.-

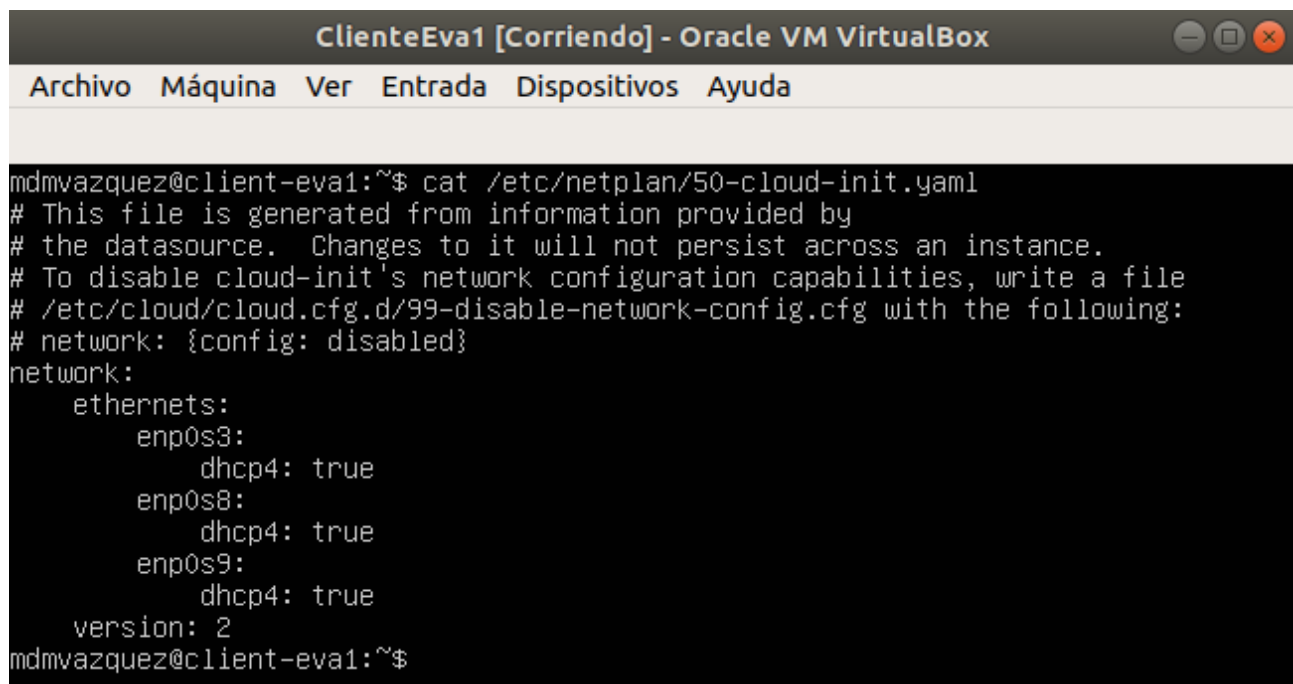
a) Servidor



```
ServerEva1 [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda

mdmvazquez@server-eva1:/$ cat /etc/netplan/50-cloud-init.yaml
# This file is generated from information provided by
# the datasource.  Changes to it will not persist across an instance.
# To disable cloud-init's network configuration capabilities, write a file
# /etc/cloud/cloud.cfg.d/99-disable-network-config.cfg with the following:
# network: {config: disabled}
network:
  ethernets:
    enp0s3:
      dhcp4: true
    enp0s8:
      addresses: [10.0.170.1/24]
      gateway4: 10.0.170.254
      nameservers:
        addresses: [10.0.170.1 , 1.1.1.1]
        search: [vazquez1.es]
  version: 2
mdmvazquez@server-eva1:/$ _
```

b) Cliente

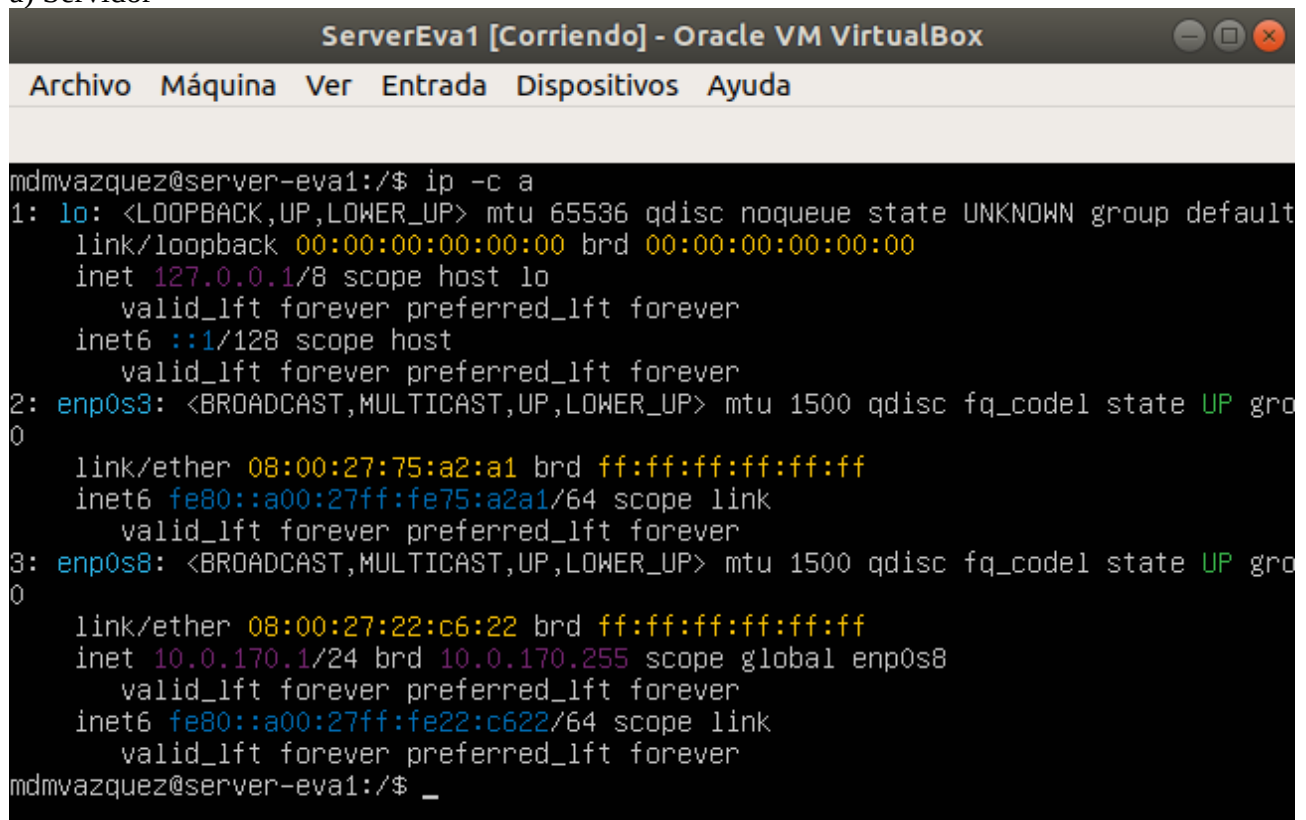


```
ClienteEva1 [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda

mdmvazquez@client-eva1:~$ cat /etc/netplan/50-cloud-init.yaml
# This file is generated from information provided by
# the datasource.  Changes to it will not persist across an instance.
# To disable cloud-init's network configuration capabilities, write a file
# /etc/cloud/cloud.cfg.d/99-disable-network-config.cfg with the following:
# network: {config: disabled}
network:
  ethernets:
    enp0s3:
      dhcp4: true
    enp0s8:
      dhcp4: true
    enp0s9:
      dhcp4: true
  version: 2
mdmvazquez@client-eva1:~$
```

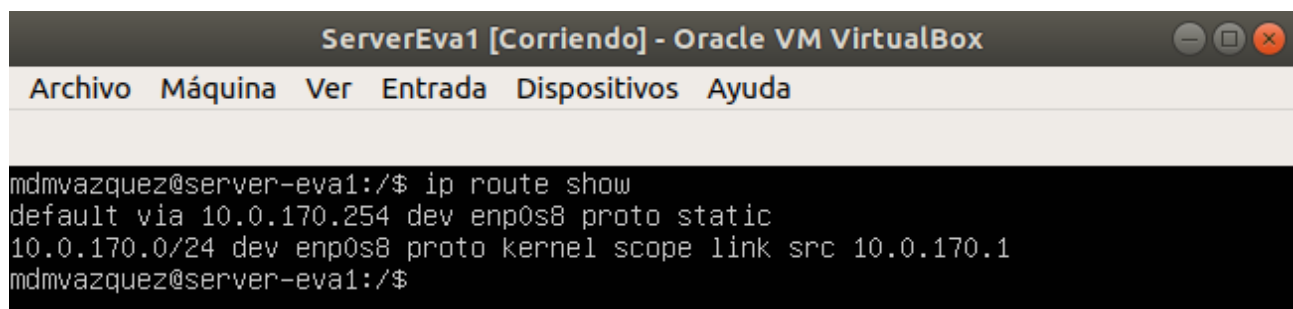
2.-

a) Servidor



```
ServerEva1 [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda

mdmvazquez@server-eva1:/$ ip -c a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default
    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 gro
0
    link/ether 08:00:27:75:a2:a1 brd ff:ff:ff:ff:ff:ff
    inet6 fe80::a00:27ff:fe75:a2a1/64 scope link
        valid_lft forever preferred_lft forever
3: enp0s8: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP gro
0
    link/ether 08:00:27:22:c6:22 brd ff:ff:ff:ff:ff:ff
    inet 10.0.170.1/24 brd 10.0.170.255 scope global enp0s8
        valid_lft forever preferred_lft forever
    inet6 fe80::a00:27ff:fe22:c622/64 scope link
        valid_lft forever preferred_lft forever
mdmvazquez@server-eva1:/$ _
```



```
ServerEva1 [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda

mdmvazquez@server-eva1:/$ ip route show
default via 10.0.170.254 dev enp0s8 proto static
10.0.170.0/24 dev enp0s8 proto kernel scope link src 10.0.170.1
mdmvazquez@server-eva1:/$
```

```
ServerEva1 [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda

Global
    DNSSEC NTA: 10.in-addr.arpa
                16.172.in-addr.arpa
                168.192.in-addr.arpa
                17.172.in-addr.arpa
                18.172.in-addr.arpa
                19.172.in-addr.arpa
                20.172.in-addr.arpa
                21.172.in-addr.arpa
                22.172.in-addr.arpa
                23.172.in-addr.arpa
                24.172.in-addr.arpa
                25.172.in-addr.arpa
                26.172.in-addr.arpa
                27.172.in-addr.arpa
                28.172.in-addr.arpa
                29.172.in-addr.arpa
                30.172.in-addr.arpa
                31.172.in-addr.arpa
                corp
                d.f.ip6.arpa
                home
                internal
                intranet
                lan
                local
                private
                test

Link 3 (enp0s8)
    Current Scopes: DNS
    LLMNR setting: yes
MulticastDNS setting: no
    DNSSEC setting: no
    DNSSEC supported: no
    DNS Servers: 10.0.170.1
lines 1-36
```

b) Cliente

```

ClienteEva1 [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda

mdmvazquez@client-eva1:~$ ip -c a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default
    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 gro
0
    link/ether 08:00:27:5b:ed:49 brd ff:ff:ff:ff:ff:ff
    inet6 fe80::a00:27ff:fe5b:ed49/64 scope link
        valid_lft forever preferred_lft forever
3: enp0s8: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP gro
0
    link/ether 08:00:27:30:e2:d2 brd ff:ff:ff:ff:ff:ff
    inet 10.0.170.100/24 brd 10.0.170.255 scope global dynamic enp0s8
        valid_lft 86366sec preferred_lft 86366sec
    inet6 fe80::a00:27ff:fe30:e2d2/64 scope link
        valid_lft forever preferred_lft forever
4: enp0s9: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP gro
0
    link/ether 08:00:27:1b:b3:83 brd ff:ff:ff:ff:ff:ff
    inet 10.0.170.150/24 brd 10.0.170.255 scope global dynamic enp0s9
        valid_lft 7152sec preferred_lft 7152sec
    inet6 fe80::a00:27ff:fe1b:b383/64 scope link
        valid_lft forever preferred_lft forever
mdmvazquez@client-eva1:~$ _

```

```

ClienteEva1 [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda

mdmvazquez@client-eva1:~$ ip route show
default via 10.0.170.254 dev enp0s9 proto dhcp src 10.0.170.150 metric 100
default via 10.0.170.254 dev enp0s8 proto dhcp src 10.0.170.100 metric 100
10.0.170.0/24 dev enp0s9 proto kernel scope link src 10.0.170.150
10.0.170.0/24 dev enp0s8 proto kernel scope link src 10.0.170.100
10.0.170.254 dev enp0s9 proto dhcp scope link src 10.0.170.150 metric 100
10.0.170.254 dev enp0s8 proto dhcp scope link src 10.0.170.100 metric 100
mdmvazquez@client-eva1:~$ _

```

```
ClienteEva1 [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda

Global
    DNSSEC NTA: 10.in-addr.arpa
                16.172.in-addr.arpa
                168.192.in-addr.arpa
                17.172.in-addr.arpa
                18.172.in-addr.arpa
                19.172.in-addr.arpa
                20.172.in-addr.arpa
                21.172.in-addr.arpa
                22.172.in-addr.arpa
                23.172.in-addr.arpa
                24.172.in-addr.arpa
                25.172.in-addr.arpa
                26.172.in-addr.arpa
                27.172.in-addr.arpa
                28.172.in-addr.arpa
                29.172.in-addr.arpa
                30.172.in-addr.arpa
                31.172.in-addr.arpa
                corp
                d.f.ip6.arpa
                home
                internal
                intranet
                lan
                local
                private
                test

Link 4 (enp0s9)
    Current Scopes: DNS
    LLMNR setting: yes
MulticastDNS setting: no
    DNSSEC setting: no
    DNSSEC supported: no
    DNS Servers: 10.0.170.1
lines 1-36
```

3.-

```

ServerEva1 [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda

GNU nano 2.9.3 /etc/bind/named.conf.local

//
// Do any local configuration here
//

// Consider adding the 1918 zones here, if they are not used in your
// organization
//include "/etc/bind/zones.rfc1918";

zone "vazquez1.es" {
    type master;
    file "/etc/bind/db.vazquez1.es";
};

zone "170.0.10.in-addr.arpa" {
    type master;
    file "/etc/bind/db.10";
};

```

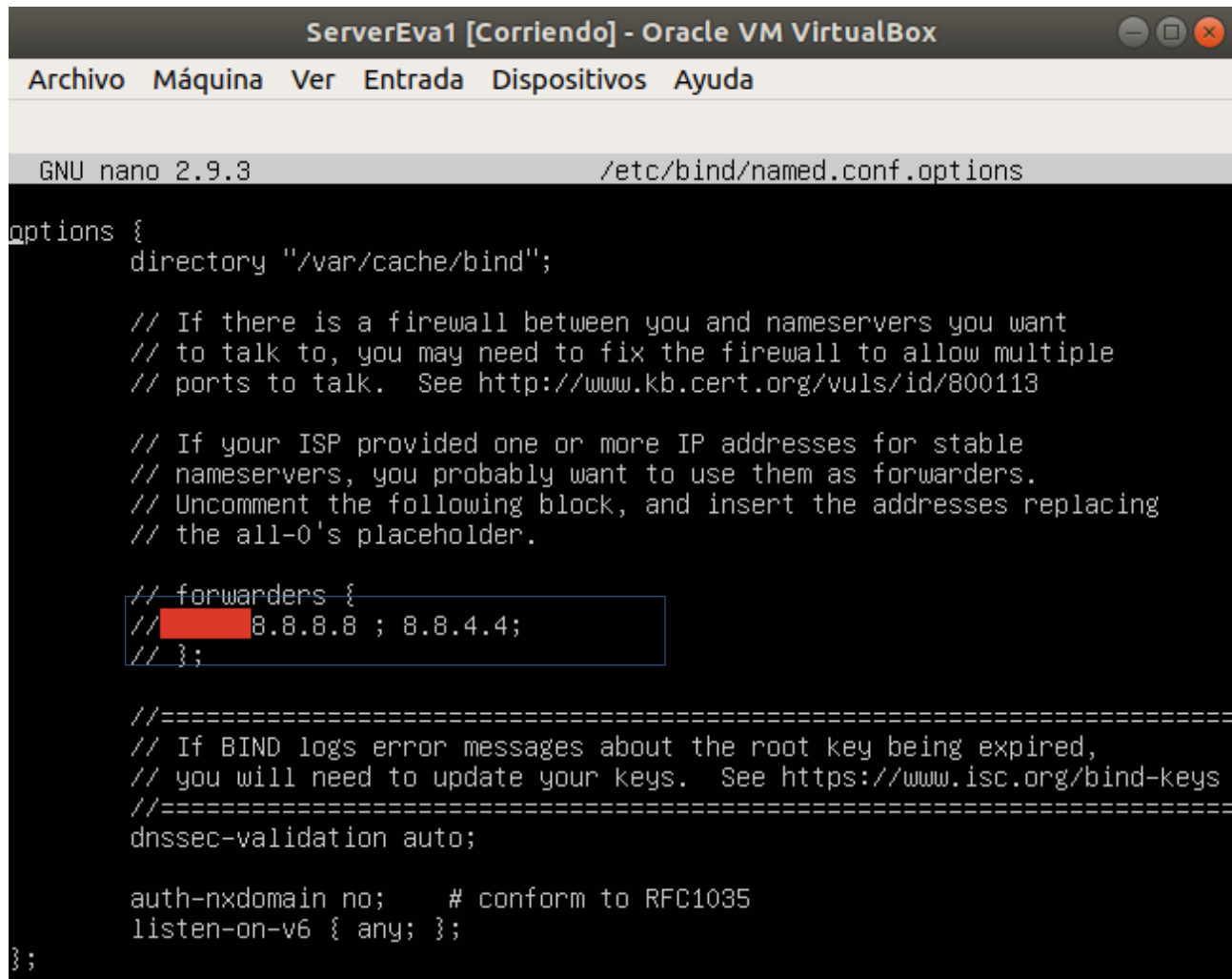
```

ServerEva1 [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda

GNU nano 2.9.3 /etc/bind/db.vazquez1.es

;
; BIND data file for local loopback interface
;
$TTL      604800
@         IN      SOA      domain.vazquez1.es. administrador.vazquez1.es. (
                                2020011705      ; Serial
                                604800           ; Refresh
                                86400            ; Retry
                                2419200          ; Expire
                                604800 )         ; Negative Cache TTL
;
@         IN      NS       domain.vazquez1.es.
@         IN      A        10.0.170.1
domain.vazquez1.es. IN      A        10.0.170.1 ; nombre completo
router    IN      A        10.0.170.254 ; nombre abreviado
cliente   IN      A        10.0.170.100
ns        IN      CNAME     domain
www       IN      CNAME     cliente

```



```
ServerEva1 [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda

GNU nano 2.9.3 /etc/bind/named.conf.options

options {
    directory "/var/cache/bind";

    // If there is a firewall between you and nameservers you want
    // to talk to, you may need to fix the firewall to allow multiple
    // ports to talk.  See http://www.kb.cert.org/vuls/id/800113

    // If your ISP provided one or more IP addresses for stable
    // nameservers, you probably want to use them as forwarders.
    // Uncomment the following block, and insert the addresses replacing
    // the all-0's placeholder.

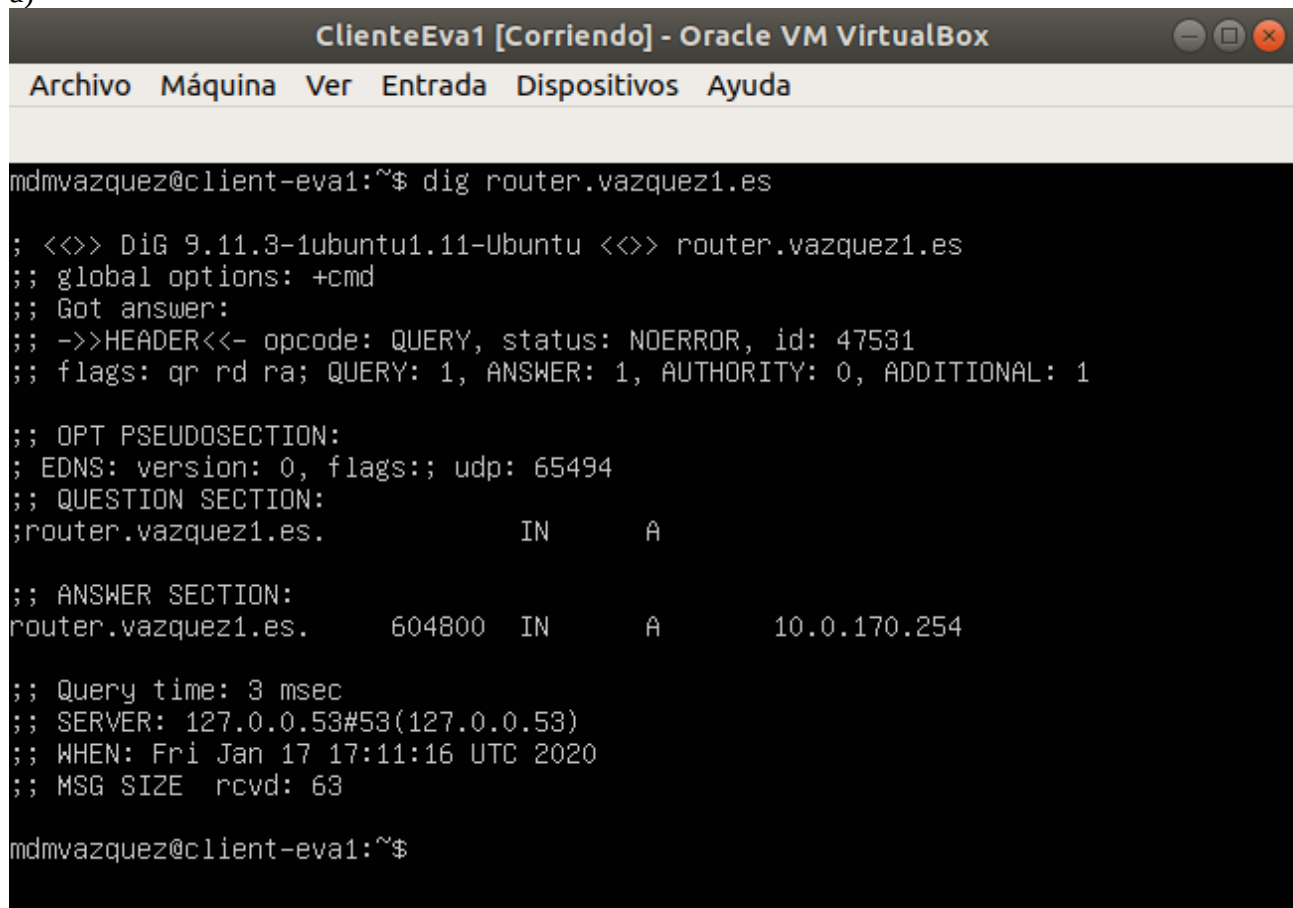
    // forwarders {
    // 8.8.8.8 ; 8.8.4.4;
    // };

    //=====
    // If BIND logs error messages about the root key being expired,
    // you will need to update your keys.  See https://www.isc.org/bind-keys
    //=====
    dnssec-validation auto;

    auth-nxdomain no;      # conform to RFC1035
    listen-on-v6 { any; };
};
```

4.-

a)



```
ClienteEva1 [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda

mdmvazquez@client-eva1:~$ dig router.vazquez1.es

; <>> DiG 9.11.3-1ubuntu1.11-Ubuntu <>> router.vazquez1.es
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 47531
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

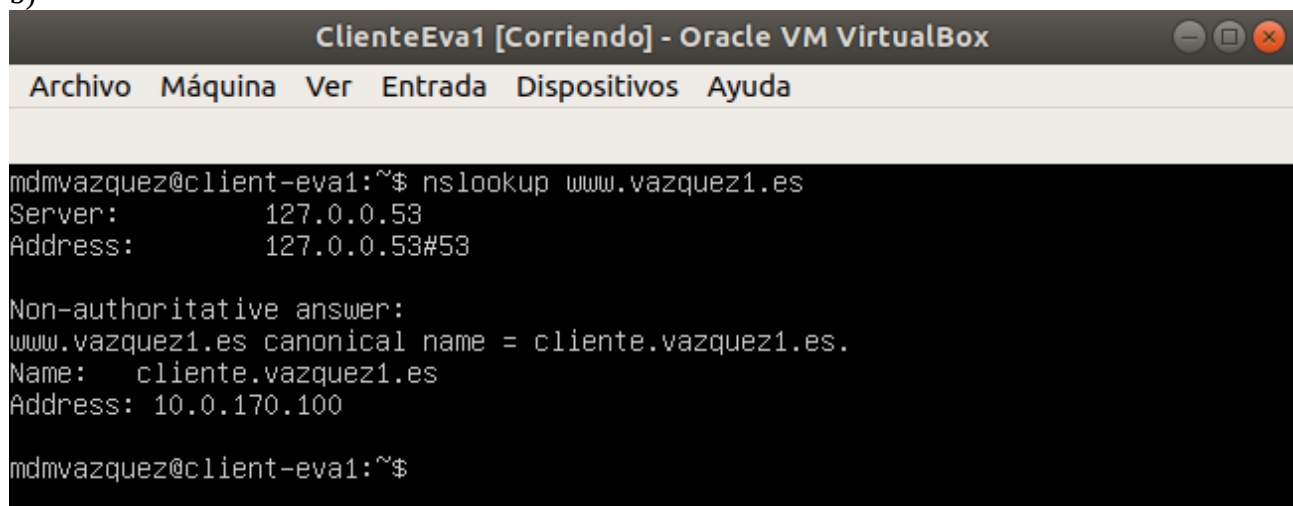
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; QUESTION SECTION:
;router.vazquez1.es.          IN      A

;; ANSWER SECTION:
router.vazquez1.es.         604800  IN      A      10.0.170.254

;; Query time: 3 msec
;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Fri Jan 17 17:11:16 UTC 2020
;; MSG SIZE rcvd: 63

mdmvazquez@client-eva1:~$
```

b)



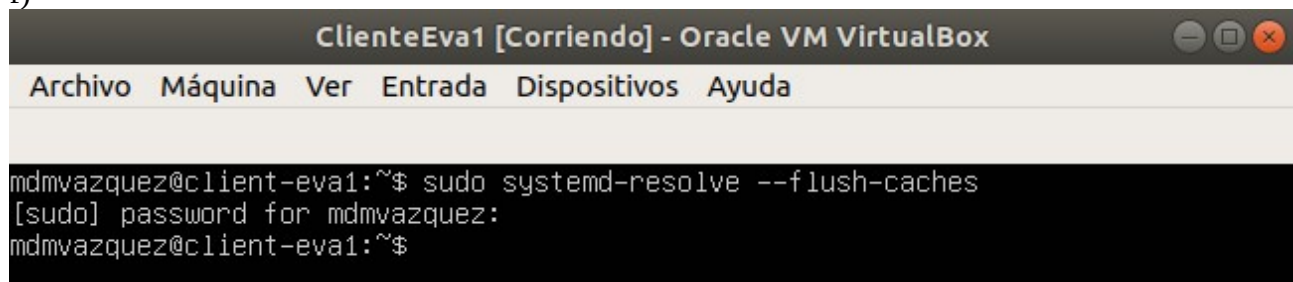
```
ClienteEva1 [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda

mdmvazquez@client-eva1:~$ nslookup www.vazquez1.es
Server:         127.0.0.53
Address:        127.0.0.53#53

Non-authoritative answer:
www.vazquez1.es canonical name = cliente.vazquez1.es.
Name:   cliente.vazquez1.es
Address: 10.0.170.100

mdmvazquez@client-eva1:~$
```


f)



```
mdmvazquez@client-eva1:~$ sudo systemd-resolve --flush-caches
[sudo] password for mdmvazquez:
mdmvazquez@client-eva1:~$
```