

## PASO 1: INSTALACION DE BIND Y SUS HERRAMIENTAS

The screenshot shows a CentOS 7 terminal window on the left and a web browser on the right. The terminal window displays the command `yum install bind bind-utils` and its output, which lists the packages to be installed and their dependencies. The web browser shows a page with instructions on how to install BIND and its tools, including the command `yum install bind bind-utils` and the command `systemctl start named`.

Terminal Output:

```
root@localhost network-scripts# yum install bind bind-utils
Última comprobación de caducidad de metadatos hecha hace 0:50:42, el vie 23 oct 2020
Dependencias resueltas.
=====
Paquete                Arquitectura  Versión                Repositorio
-----
Instalando:
bind                   x86_64        32:9.11.13-6.el8_2.1   AppStream
bind-utils             x86_64        32:9.11.13-6.el8_2.1   AppStream
Instalando dependencias:
bind-libs              x86_64        32:9.11.13-6.el8_2.1   AppStream
bind-libs-lite         x86_64        32:9.11.13-6.el8_2.1   AppStream
bind-license           noarch        32:9.11.13-6.el8_2.1   AppStream
libmaxminddb           x86_64        1.2.0-7.el8            AppStream
python3-bind           noarch        32:9.11.13-6.el8_2.1   AppStream
python3-ply            noarch        3.9-8.el8              BaseOS
Instalando dependencias débiles:
geolite2-city          noarch        20180605-1.el8         AppStream
geolite2-country       noarch        20180605-1.el8         AppStream
Resumen de la transacción
=====
Instalar 18 Paquetes

Tamaño total de la descarga: 24 M
Tamaño instalado: 67 M
¿Está de acuerdo [s/n]? s
Descargando paquetes:
=====
[=====] --- B/s | 0 B
```

Web Browser Content:

Instalamos el servidor de DNS conocido como bind9 y las herramientas:

```
yum install bind bind-utils
```

Una vez todos los paquetes de BIND hayan sido instalados procedemos a iniciar el respectivo servicio usando los siguientes comandos en su orden:

```
systemctl start named
systemctl status named
```

El archivo de configuración de BIND lo encontramos en la ruta `/etc/named.conf` por lo cual debemos acceder a él usando el editor preferido, en este caso usaremos nano:

```
nano /etc/named.conf
```

Vamos a configurar Centos para que se reenvíen las peticiones y cache la información de las peticiones de DNS:

```
options {
    listen-on port 53 { 127.0.0.1; 192.168.0.139; };
    listen-on-v6 port 53 { ::1; };
    directory "/var/named";
    dump-file "/var/named/data/cache_dump.db";
    statistics-file "/var/named/data/named_stats.txt";
    memstatistics-file "/var/named/data/named_mem_stats.txt";
    secroots-file "/var/named/data/named.secroots";
    recursion-file "/var/named/data/named.recursion";
}
```

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Terminal Output:

```
root@localhost ~# yum install bind bind-utils
Ejecutando operación
Preparando
: bind-license-32:9.11.13-6.el8_2.1.noarch
Instalando
: python3-ply-3.9-8.el8.noarch
Instalando
: python3-bind-32:9.11.13-6.el8_2.1.noarch
Instalando
: geolite2-country-20180605-1.el8.noarch
Instalando
: geolite2-city-20180605-1.el8.noarch
Instalando
: libmaxminddb-1.2.0-7.el8.x86_64
Ejecutando scriptlet: libmaxminddb-1.2.0-7.el8.x86_64
Instalando
: bind-libs-lite-32:9.11.13-6.el8_2.1.x86_64
Instalando
: bind-libs-32:9.11.13-6.el8_2.1.x86_64
Ejecutando scriptlet: bind-32:9.11.13-6.el8_2.1.x86_64
Instalando
: bind-32:9.11.13-6.el8_2.1.x86_64
Ejecutando scriptlet: bind-32:9.11.13-6.el8_2.1.x86_64
Instalando
: bind-utils-32:9.11.13-6.el8_2.1.x86_64
Ejecutando scriptlet: bind-utils-32:9.11.13-6.el8_2.1.x86_64
Verificando
: bind-32:9.11.13-6.el8_2.1.x86_64
Verificando
: bind-libs-32:9.11.13-6.el8_2.1.x86_64
Verificando
: bind-libs-lite-32:9.11.13-6.el8_2.1.x86_64
Verificando
: bind-license-32:9.11.13-6.el8_2.1.noarch
Verificando
: bind-utils-32:9.11.13-6.el8_2.1.x86_64
Verificando
: geolite2-city-20180605-1.el8.noarch
Verificando
: geolite2-country-20180605-1.el8.noarch
Verificando
: libmaxminddb-1.2.0-7.el8.x86_64
Verificando
: python3-bind-32:9.11.13-6.el8_2.1.noarch
Verificando
: python3-ply-3.9-8.el8.noarch
Instalado:
bind-32:9.11.13-6.el8_2.1.x86_64      bind-libs-32:9.11.13-6.el8_2.1.x86_64
bind-libs-lite-32:9.11.13-6.el8_2.1.x86_64  bind-license-32:9.11.13-6.el8_2.1.noarch
bind-utils-32:9.11.13-6.el8_2.1.x86_64      geolite2-city-20180605-1.el8.noarch
geolite2-country-20180605-1.el8.noarch      libmaxminddb-1.2.0-7.el8.x86_64
python3-bind-32:9.11.13-6.el8_2.1.noarch     python3-ply-3.9-8.el8.noarch

¡Listo!
root@localhost ~# systemctl start named
root@localhost ~#
```

Web Browser Content:

Instalamos el servidor de DNS conocido como bind9 y las herramientas:

```
yum install bind bind-utils
```

Una vez todos los paquetes de BIND hayan sido instalados procedemos a iniciar el respectivo servicio usando los siguientes comandos en su orden:

```
systemctl start named
systemctl status named
```

El archivo de configuración de BIND lo encontramos en la ruta `/etc/named.conf` por lo cual debemos acceder a él usando el editor preferido, en este caso usaremos nano:

```
nano /etc/named.conf
```

Vamos a configurar Centos para que se reenvíen las peticiones y cache la información de las peticiones de DNS:

```
options {
    listen-on port 53 { 127.0.0.1; 192.168.0.139; };
    listen-on-v6 port 53 { ::1; };
    directory "/var/named";
    dump-file "/var/named/data/cache_dump.db";
    statistics-file "/var/named/data/named_stats.txt";
    memstatistics-file "/var/named/data/named_mem_stats.txt";
    secroots-file "/var/named/data/named.secroots";
    recursion-file "/var/named/data/named.recursion";
}
```

## PASO 2: INICIAR EL NAMED QUE ES EL DNS Y LO ACTIVAMOS

The screenshot shows a CentOS VM terminal window on the left and a web browser on the right. The terminal displays the installation of BIND packages and the starting of the named service. The browser shows a page with instructions in Spanish for installing and configuring BIND.

**Terminal Output:**

```
Verificando : geolite2-country-20180605-1.el8.noarch
Verificando : libmaxminddb-1.2.0-7.el8.x86_64
Verificando : python3-bind-32:9.11.13-6.el8_2.1.noarch
Verificando : python3-ply-3.9-8.el8.noarch

Instalado:
bind-32:9.11.13-6.el8_2.1.x86_64      bind-libs-32:9.11.13-6.el8_2.1.x86_64
bind-libs-lite-32:9.11.13-6.el8_2.1.x86_64  bind-license-32:9.11.13-6.el8_2.1.noarch
bind-utils-32:9.11.13-6.el8_2.1.x86_64  geolite2-city-20180605-1.el8.noarch
geolite2-country-20180605-1.el8.noarch  libmaxminddb-1.2.0-7.el8.x86_64
python3-bind-32:9.11.13-6.el8_2.1.noarch  python3-ply-3.9-8.el8.noarch

#Listo!
[root@localhost ~]# systemctl start named
[root@localhost ~]# systemctl status named
● named.service - Berkeley Internet Name Domain (DNS)
   Loaded: loaded (/usr/lib/systemd/system/named.service; disabled; vendor preset: disabled)
   Active: active (running) since Sun 2020-12-06 03:31:14 EST; 31s ago
     Process: 1911 ExecStart=/usr/sbin/named -u named -c $(NAMEDCONF) $OPTIONS (code=exited, status=0/SUCCESS)
    Process: 1988 ExecStartPre=/bin/bash -c if [ ! "$DISABLE_ZONE_CHECKING" = "yes" ]; then
 Main PID: 1913 (named)
    Tasks: 4 (limit: 23961)
   Memory: 53.7M
   CGroup: /system.slice/named.service
           └─1913 /usr/sbin/named -u named -c /etc/named.conf

dic 06 03:31:14 localhost.localdomain named[1913]: network unreachable resolving 'localhost.localdomain'
dic 06 03:31:14 localhost.localdomain named[1913]: network unreachable resolving 'localhost.localdomain'
dic 06 03:31:14 localhost.localdomain named[1913]: network unreachable resolving 'localhost.localdomain'
dic 06 03:31:14 localhost.localdomain named[1913]: network unreachable resolving 'localhost.localdomain'
dic 06 03:31:14 localhost.localdomain named[1913]: network unreachable resolving 'localhost.localdomain'
dic 06 03:31:14 localhost.localdomain named[1913]: network unreachable resolving 'localhost.localdomain'
dic 06 03:31:14 localhost.localdomain named[1913]: network unreachable resolving 'localhost.localdomain'
dic 06 03:31:14 localhost.localdomain named[1913]: network unreachable resolving 'localhost.localdomain'
dic 06 03:31:14 localhost.localdomain named[1913]: managed-keys-zone: Key 28326 for zone 'localhost.localdomain'
dic 06 03:31:14 localhost.localdomain named[1913]: resolver priming query complete
lines 1-21/21 (END)
```

**Web Browser Content:**

Instalamos el servidor de DNS conocido como bind9 y las herramientas:

```
yum install bind bind-utils
```

Una vez todos los paquetes de BIND hayan sido instalados procedemos a iniciar el respectivo servicio usando los siguientes comandos en su orden:

```
systemctl start named
systemctl status named
```

El archivo de configuración de BIND lo encontramos en la ruta /etc/named.conf por lo cual debemos acceder a él usando el editor preferido, en este caso usaremos nano:

```
nano /etc/named.conf
```

Vamos a configurar Centos para que se reenvíen las peticiones y cache la información de las peticiones de DNS:

```
options {
    listen-on port 53 { 127.0.0.1; 192.168.0.139; };
    listen-on-v6 port 53 { ::1; };
    directory "/var/named";
    dump-file "/var/named/data/cache_dump.db";
    statistics-file "/var/named/data/named_stats.txt";
    memstatistics-file "/var/named/data/named_mem_stats.txt";
    secroots-file "/var/named/data/named.secroots";
    recursion-file "/var/named/data/named.recursion";
}
```

## PASO 3: COMPROBAMOS QUE FUNCIONA

The screenshot shows a CentOS VM terminal window. The user runs the command 'nslookup google.es 192.168.0.1' and receives a response from the local DNS server.

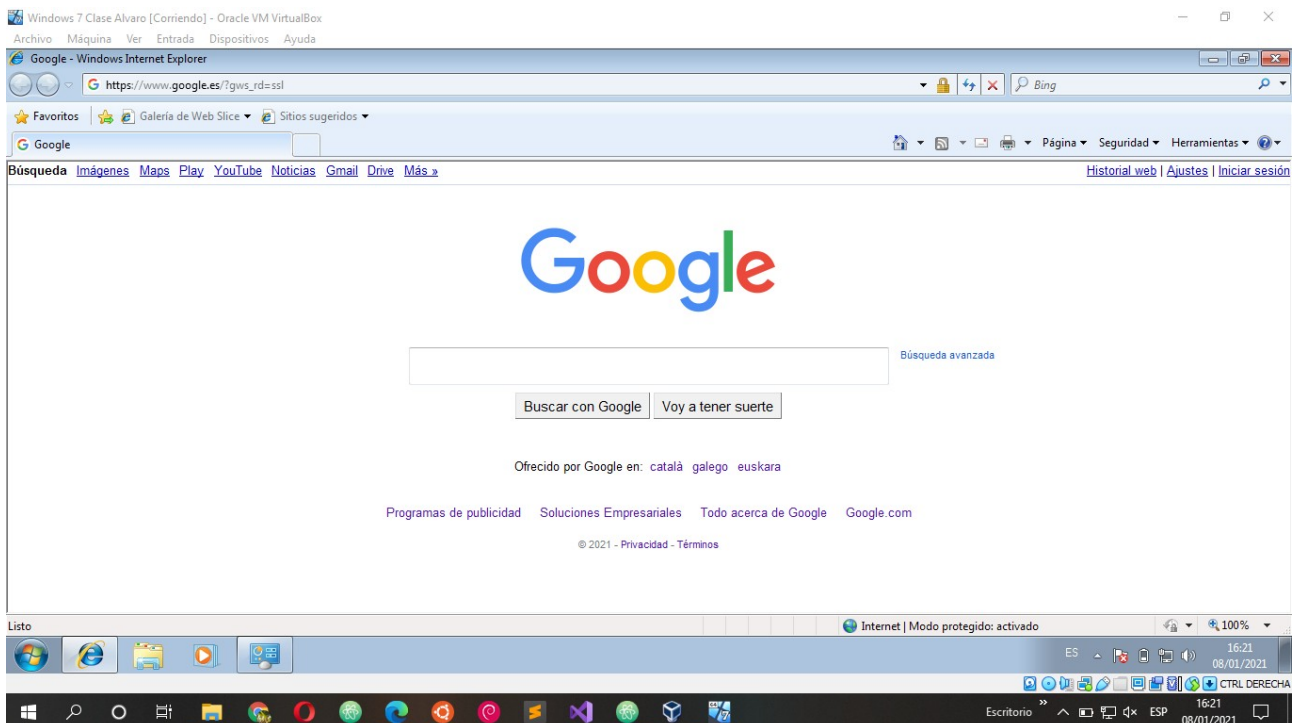
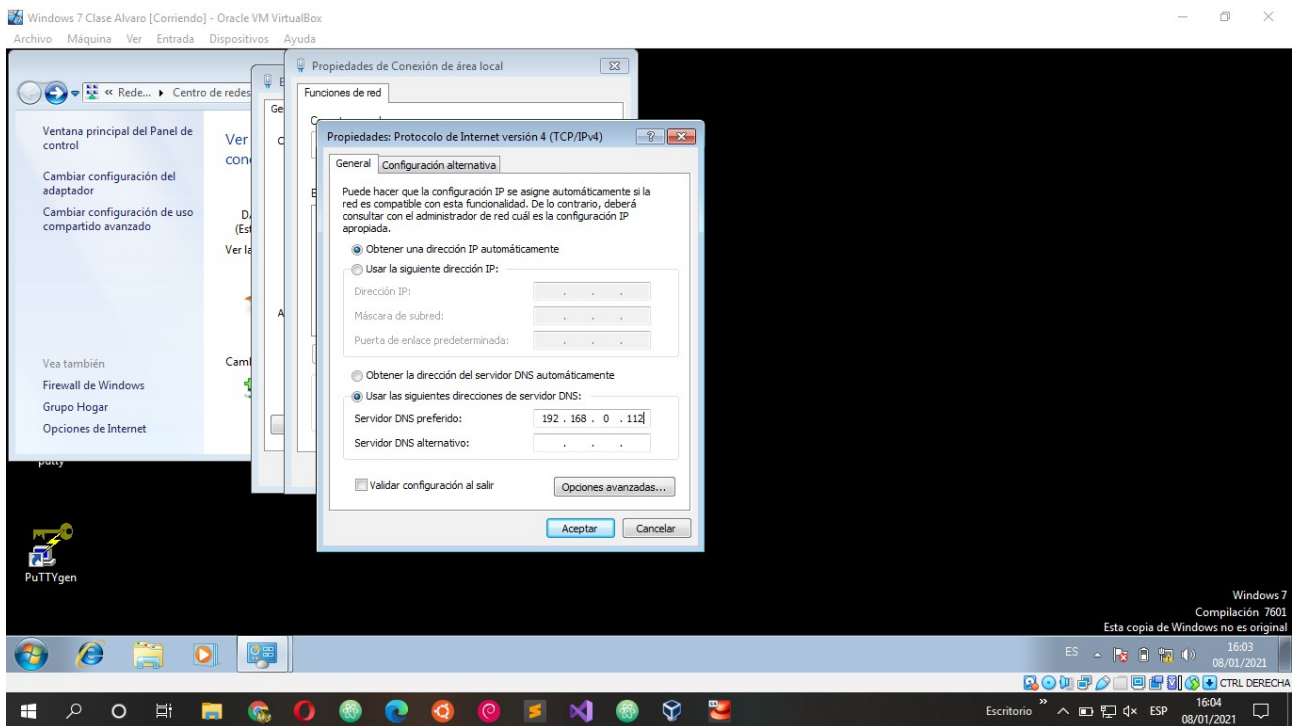
**Terminal Output:**

```
[root@localhost network-scripts]# nslookup google.es 192.168.0.1
Server:      192.168.0.1
Address:     192.168.0.1#53

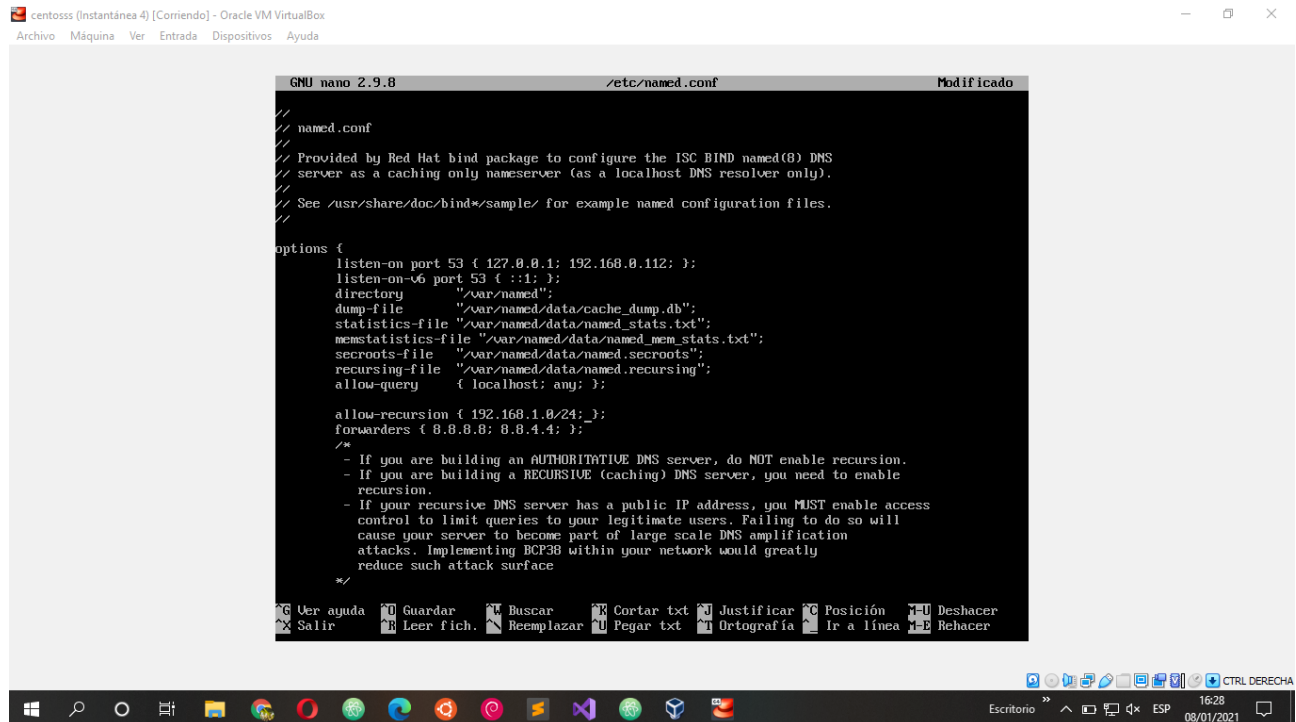
Non-authoritative answer:
Name:   google.es
Address: 216.58.209.67
Name:   google.es
Address: 2a00:1450:4003:800::2003

[root@localhost network-scripts]#
```

## PASO 4: CONFIGURAMOS EL CLIENTE PARA QUE PUEDA TENER INTERNET



## PASO 5: SEGUIMOS CONFIGURANDO NAMED



The screenshot shows a terminal window titled "centosss (Instantánea 4) [Corriendo] - Oracle VM VirtualBox". The terminal is running the nano text editor on the file "/etc/named.conf". The configuration file content is as follows:

```
GNU nano 2.9.8 /etc/named.conf Modificado

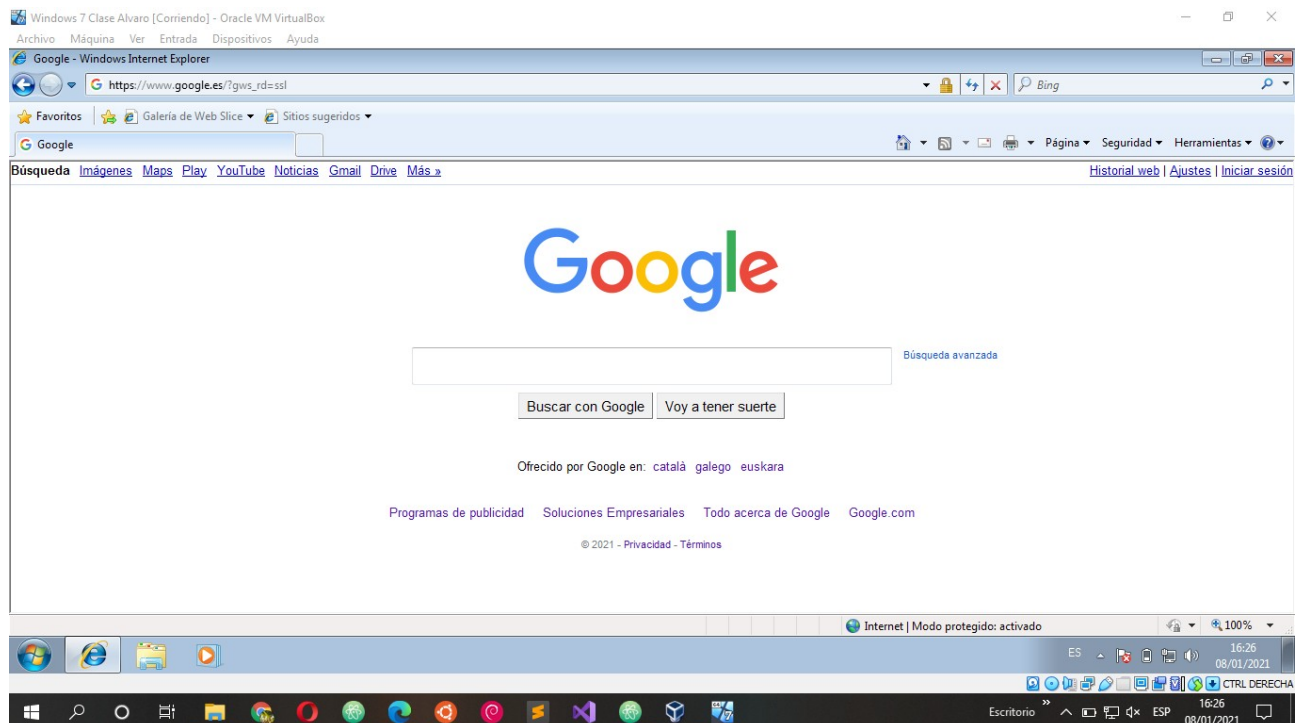
// named.conf
//
// Provided by Red Hat bind package to configure the ISC BIND named(8) DNS
// server as a caching only nameserver (as a localhost DNS resolver only).
//
// See /usr/share/doc/bind*/sample/ for example named configuration files.
//

options {
    listen-on port 53 { 127.0.0.1; 192.168.0.112; };
    listen-on-v6 port 53 { ::1; };
    directory "/var/named";
    dump-file "/var/named/data/cache_dump.db";
    statistics-file "/var/named/data/named_stats.txt";
    memstatistics-file "/var/named/data/named_mem_stats.txt";
    secroots-file "/var/named/data/named.secroots";
    recursing-file "/var/named/data/named.recursing";
    allow-query { localhost; any; };

    allow-recursion { 192.168.1.0/24; };
    forwarders { 8.8.8.8; 8.8.4.4; };
}

/*
- If you are building an AUTHORITY DNS server, do NOT enable recursion.
- If you are building a RECURSIVE (caching) DNS server, you need to enable
  recursion.
- If your recursive DNS server has a public IP address, you MUST enable access
  control to limit queries to your legitimate users. Failing to do so will
  cause your server to become part of large scale DNS amplification
  attacks. Implementing BCP38 within your network would greatly
  reduce such attack surface
*/
```

## PASO 6: VOLVEMOS A COMPROBAR QUE FUNCIONA EN EL CLIENTE



## PASO 7: CONFIGURAMOS Y COMPROBAMOS QUE FUNCIONA EN UBUNTU

