



**TECNOLÓGICO
NACIONAL DE MÉXICO**

TECNOLÓGICO DE COLIMA

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ACTIVIDAD

Instalación de DNS en ubuntu linux

Periodo:

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Docente:

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Investigar e instalar y configurar el DNS en Ubuntu Server

\$ sudo apt update

\$ sudo apt upgrade

```
root@kevin: /home/kevin x + v
kevin@kevin:~$ ls -l
total 0
kevin@kevin:~$ sudo apt update
[sudo] password for kevin:
Obj:1 http://mx.archive.ubuntu.com/ubuntu lunar InRelease
Des:2 http://mx.archive.ubuntu.com/ubuntu lunar-updates InRelease [109 kB]
Obj:3 http://mx.archive.ubuntu.com/ubuntu lunar-backports InRelease
Des:4 http://mx.archive.ubuntu.com/ubuntu lunar-security InRelease [109 kB]
Des:5 http://mx.archive.ubuntu.com/ubuntu lunar-updates/main amd64 Packages [512 kB]
Des:6 http://mx.archive.ubuntu.com/ubuntu lunar-updates/main Translation-en [121 kB]
Des:7 http://mx.archive.ubuntu.com/ubuntu lunar-updates/universe amd64 Packages [820 kB]
Des:8 http://mx.archive.ubuntu.com/ubuntu lunar-updates/universe Translation-en [102 kB]
Des:9 http://mx.archive.ubuntu.com/ubuntu lunar-updates/multiverse amd64 Packages [6.300 B]
Des:10 http://mx.archive.ubuntu.com/ubuntu lunar-security/multiverse amd64 Packages [6.300 B]
Descargados 1.785 kB en 3s (676 kB/s)
Leyendo lista de paquetes... Hecho
Creando árbol de dependencias... Hecho
Leyendo la información de estado... Hecho
Se puede actualizar 1 paquete. Ejecute «apt list --upgradable» para verlo.
kevin@kevin:~$ ^C
kevin@kevin:~$ sudo su
root@kevin:/home/kevin# sudo apt upgrade
Leyendo lista de paquetes... Hecho
Creando árbol de dependencias... Hecho
Leyendo la información de estado... Hecho
Calculando la actualización... Hecho
Los siguientes paquetes se han retenido:
  ubuntu-advantage-tools
0 actualizados, 0 nuevos se instalarán, 0 para eliminar y 1 no actualizados.
root@kevin:/home/kevin#
```

\$ sudo apt install bind9 -y

```
root@kevin:/home/kevin# sudo apt install bind9 -y
Leyendo lista de paquetes... Hecho
Creando árbol de dependencias... Hecho
Leyendo la información de estado... Hecho
bind9 ya está en su versión más reciente (1:9.18.18-0ubuntu0.23.04.1).
0 actualizados, 0 nuevos se instalarán, 0 para eliminar y 1 no actualizados.
root@kevin:/home/kevin#
```

\$ systemctl status named

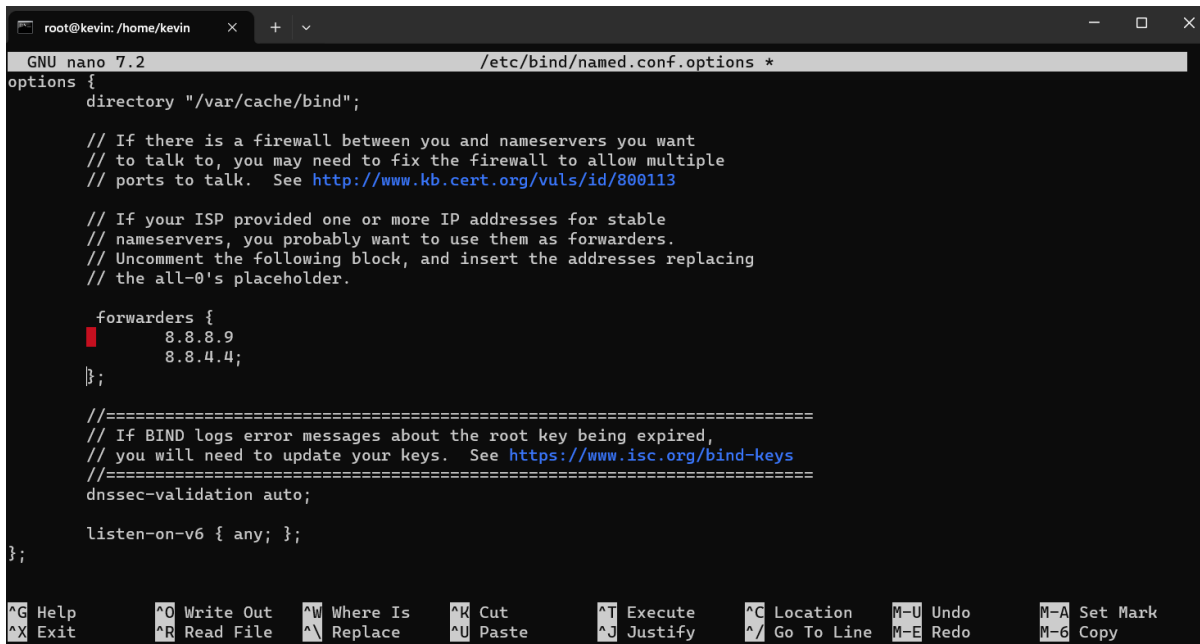
```
root@kevin:/home/kevin# systemctl status named
● named.service - BIND Domain Name Server
   Loaded: loaded (/lib/systemd/system/named.service; enabled; preset: enabled)
   Active: active (running) since Fri 2023-11-17 22:00:56 UTC; 14min ago
     Docs: man:named(8)
   Main PID: 689 (named)
    Status: "running"
   Tasks: 18 (limit: 9124)
  Memory: 13.4M
     CPU: 97ms
   CGroup: /system.slice/named.service
           └─689 /usr/sbin/named -f -u bind

nov 17 22:00:56 kevin named[689]: network unreachable resolving './DNSKEY/IN': 199.9.14.201#53
nov 17 22:00:56 kevin named[689]: network unreachable resolving './NS/IN': 199.9.14.201#53
nov 17 22:00:56 kevin named[689]: network unreachable resolving './DNSKEY/IN': 198.41.0.4#53
nov 17 22:00:56 kevin named[689]: network unreachable resolving './NS/IN': 198.41.0.4#53
nov 17 22:00:56 kevin named[689]: network unreachable resolving './DNSKEY/IN': 192.5.5.241#53
nov 17 22:00:56 kevin named[689]: network unreachable resolving './NS/IN': 192.5.5.241#53
nov 17 22:00:56 kevin named[689]: resolver priming query complete: failure
nov 17 22:00:56 kevin named[689]: managed-keys-zone: Unable to fetch DNSKEY set '': failure
nov 17 22:00:57 kevin named[689]: listening on IPv6 interface eno1, fe80::6e0b:84ff:fe41:6743%2#53
nov 17 22:01:04 kevin named[689]: listening on IPv4 interface eno1, 10.0.1.137#53
root@kevin:/home/kevin#
```

\$ sudo ufw allow bind9

```
root@kevin:/home/kevin# sudo ufw allow bind9
Skipping adding existing rule
Skipping adding existing rule (v6)
root@kevin:/home/kevin#
```

\$ sudo nano /etc/bind/named.conf.options



```
GNU nano 7.2 /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.

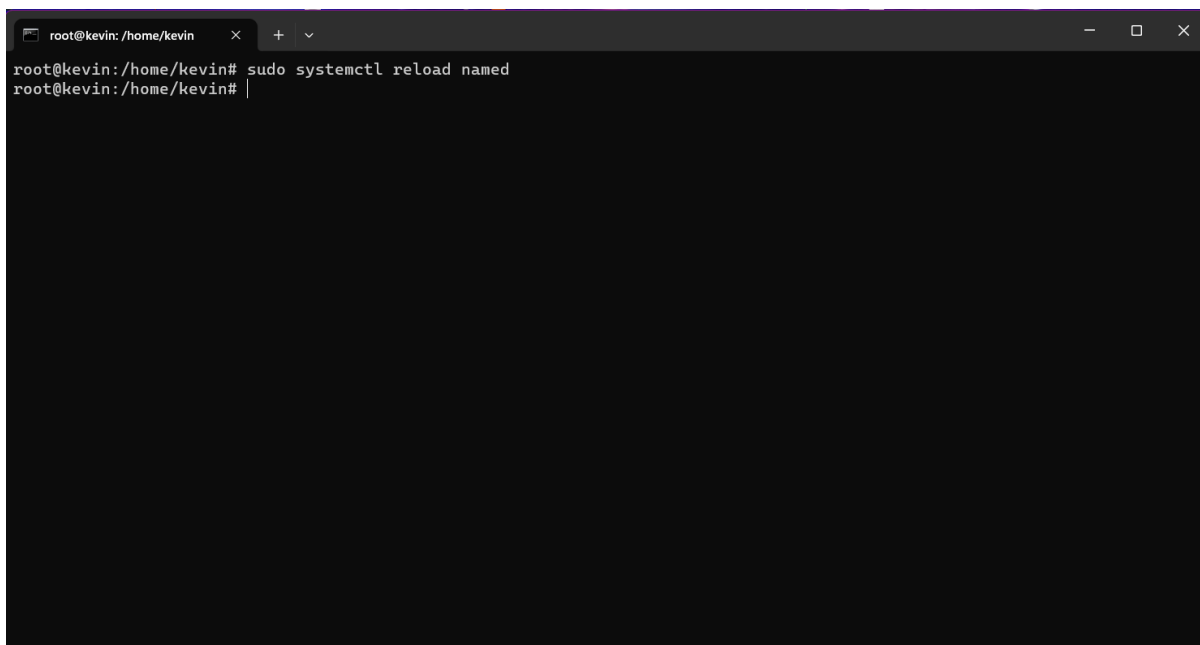
    forwarders {
        8.8.8.9
        8.8.4.4;
    };

    //=====
    // 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;

    listen-on-v6 { any; };
};

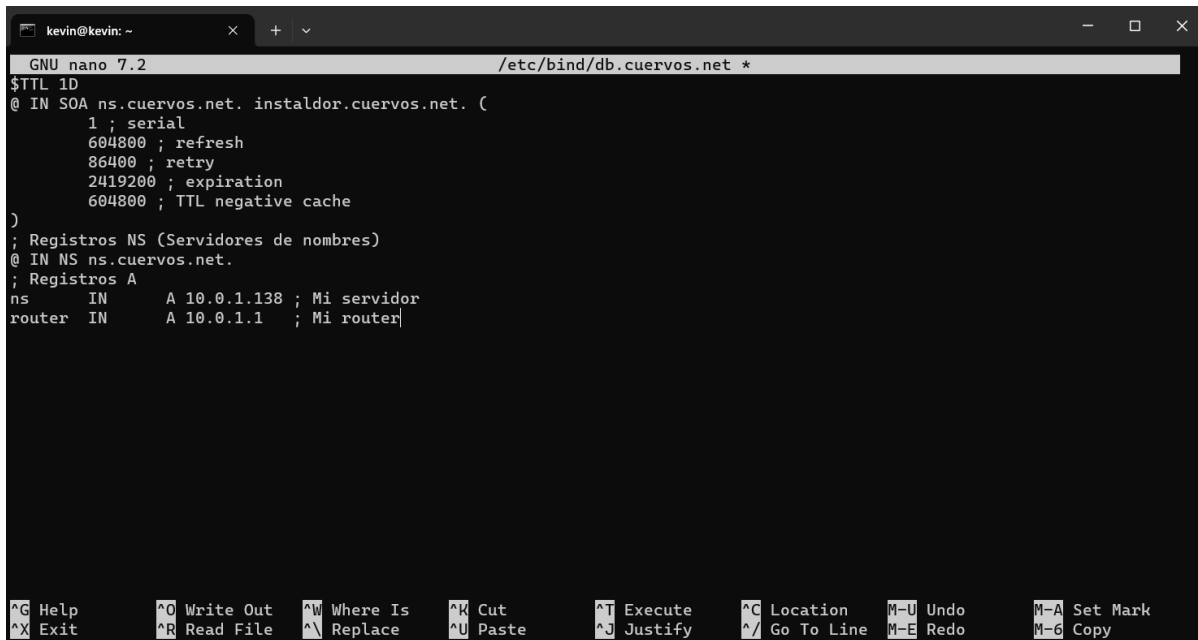
^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location   ^U Undo       ^A Set Mark
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^J Justify    ^_ Go To Line  ^E Redo       ^6 Copy
```

\$ sudo systemctl reload named



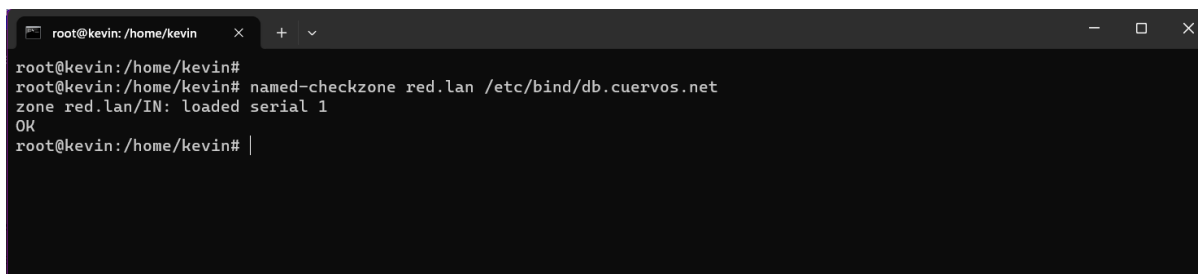
```
root@kevin:/home/kevin# sudo systemctl reload named
root@kevin:/home/kevin#
```

\$ sudo nano /etc/bind/db.cuervos.net



```
GNU nano 7.2 /etc/bind/db.cuervos.net *
$TTL 1D
@ IN SOA ns.cuervos.net. instaldor.cuervos.net. (
    1 ; serial
    604800 ; refresh
    86400 ; retry
    2419200 ; expiration
    604800 ; TTL negative cache
)
; Registros NS (Servidores de nombres)
@ IN NS ns.cuervos.net.
; Registros A
ns      IN      A 10.0.1.138 ; Mi servidor
router  IN      A 10.0.1.1  ; Mi router
```

\$ named-checkzone red.lan /etc/bind/db.cuervos.net



```
root@kevin:/home/kevin#
root@kevin:/home/kevin# named-checkzone red.lan /etc/bind/db.cuervos.net
zone red.lan/IN: loaded serial 1
OK
root@kevin:/home/kevin#
```

\$ sudo nano /etc/bind/named.conf.local



```
GNU nano 7.2 /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 "cuervos.net" IN {
    type master;
    file "/etc/bind/db.cuervos.net";
};
```

\$ sudo systemctl reload named

```
root@kevin: /home/kevin x + v
root@kevin:/home/kevin# sudo systemctl reload named
root@kevin:/home/kevin# |
```

Equipos registrados:

```
GNU nano 7.2 /etc/bind/db.cuervos.net
$TTL 1D
@ IN SOA ns.cuervos.net. instalador.cuervos.net. (
    1 ; serial
    604800 ; refresh
    86400 ; retry
    2419200 ; expiration
    604800 ; TTL negative cache
)
; Registros NS (Servidores de nombres)
@ IN NS ns.cuervos.net.
; Registros A
ns      IN      A 10.0.1.138 ; Mi servidor
router  IN      A 10.0.1.1  ; Mi router
eq1     IN      A 10.180.23.145 ; Host de prueba 1
```

Pruebas:

```
root@kevin: /home/kevin x + v
root@kevin:/home/kevin#
root@kevin:/home/kevin# nslookup eq1.cuervos.net 10.0.1.138
Server:      10.0.1.138
Address:     10.0.1.138#53

Name:   eq1.cuervos.net
Address: 10.180.23.145

root@kevin:/home/kevin# |
```