

DNS con Bind

Creamos un par de maquinas que sirvan como servidor DNS y usuario respectivamente.

Instancias (2) Información

Última actualización
Hace less than a minute

Conectar

Estado de la instancia

Acciones

Lan

Q

Buscar Instancia por atributo o etiqueta (case-sensitive)

Todos los ...

<input type="checkbox"/>	Name	ID de la instancia	Estado de la i...	Tipo de inst...	Comprobación de	Estado de la al	Zona de dispon
<input type="checkbox"/>	DNS-Server	i-0c7a80e9a5ba3c1d1	En ejecución	t2.micro	2/2 comprobaci	Ver alarmas	us-east-1c
<input type="checkbox"/>	PC1	i-001f472453328b773	En ejecución	t2.micro	2/2 comprobaci	Ver alarmas	us-east-1c

Despues accedemos a la maquina servidor e instalaremos bind9.

```
ubuntu@ip-172-31-95-47:~$ sudo apt install bind9
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  bind9-utils dns-root-data
Suggested packages:
  bind-doc
The following NEW packages will be installed:
  bind9 bind9-utils dns-root-data
0 upgraded, 3 newly installed, 0 to remove and 0 not upgraded.
Need to get 418 kB of archives.
After this operation, 1617 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 bind9-utils amd
64 1:9.18.28-0ubuntu0.24.04.1 [159 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 dns-root-data all 20231
42702~willsync1 [4450 B]
```

Creamos copias de seguridad de los archivos named por si algo va mal.

```
(ubuntu) ec2-54-234-243-248.compute-1.amazonaws.com — Konsole
Archivo Editar Ver Marcadores Complementos Preferencias Ayuda
ubuntu@ip-172-31-95-47:/$ cd /etc/bind/
ubuntu@ip-172-31-95-47:/etc/bind$ ls
bind.keys  db.127  db.empty  named.conf          named.conf.local  rndc.key
db.0       db.255  db.local  named.conf.default-zones  named.conf.options  zones.rfc1918
ubuntu@ip-172-31-95-47:/etc/bind$ mkdir copia
mkdir: cannot create directory 'copia': Permission denied
ubuntu@ip-172-31-95-47:/etc/bind$ sudo cp named.conf named.conf.old
ubuntu@ip-172-31-95-47:/etc/bind$ sudo cp named.conf.options named.conf.options.old
ubuntu@ip-172-31-95-47:/etc/bind$ sudo cp named.conf.local named.conf.local.old
ubuntu@ip-172-31-95-47:/etc/bind$ ls
bind.keys  db.255  named.conf          named.conf.local.old  named.conf.options.old
db.0       db.empty  named.conf.default-zones  named.conf.old        rndc.key
db.127     db.local  named.conf.local      named.conf.options    zones.rfc1918
ubuntu@ip-172-31-95-47:/etc/bind$
```

```
// If your ISP provided one or more IP address
// nameservers, you probably want to use them
// Uncomment the following block, and insert
// the all-0's placeholder.
```

```
forwarders {
    8.8.8.8;8.8.4.4;
};
```

```
//=====
```

Ahora modificamos el archivo local con nuestros datos.

```

Archivo  Editar  Ver  Marcadores  Complementos  Preferencias  Ayuda
GNU nano 7.2                                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 "oscar.abastos.edu"{
    type master;
    file "/etc/bind/db.oscar.abastos";
};

```

```

> (ubuntu) ec2-54-234-243-248.compute-1.amazonaws.com — Konsole
Archivo  Editar  Ver  Marcadores  Complementos  Preferencias  Ayuda
GNU nano 7.2                                db.oscar.abastos
;
; BIND data file for local loopback interface
;
$TTL      604800
@         IN      SOA      oscar.abastos.edu. admin@oscar.abastos.edu. (
                                2          ; Serial
                                604800     ; Refresh
                                86400      ; Retry
                                2419200    ; Expire
                                604800 )   ; Negative Cache TTL
;
@         IN      NS       ns1.oscar.abastos.edu.
ns1       IN      A        172.31.95.47
pc1       IN      A        172.31.94.218
pc2       IN      A        172.31.43.41

[ Read 15 lines ]
^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location
^X Exit      ^R Read File  ^\ Replace    ^U Paste       ^J Justify    ^_ Go To Line

```

```

Archivo  Editar  Ver  Marcadores  Complementos  Preferencias  Ayuda
ubuntu@ip-172-31-95-47:/etc/bind$ named-checkzone oscar.abastos.edu. db.oscar.abastos
zone oscar.abastos.edu/IN: loaded serial 2
OK
ubuntu@ip-172-31-95-47:/etc/bind$ █

```

Hacemos restart al servicio named y comprobamos su funcionamiento.

```

ubuntu@ip-172-31-95-47:/etc/bind$ nslookup
> server 127.0.0.1
Default server: 127.0.0.1
Address: 127.0.0.1#53
> pc1.oscar.abastos.edu
Server:      127.0.0.1
Address:     127.0.0.1#53

Name:   pc1.oscar.abastos.edu
Address: 172.31.94.218
> █

```

```

> set type=soa
> oscar.abastos.edu
Server:      127.0.0.1
Address:     127.0.0.1#53

oscar.abastos.edu
    origin = oscar.abastos.edu
    mail addr = admin\@oscar.abastos.edu
    serial = 2
    refresh = 604800
    retry = 86400
    expire = 2419200
    minimum = 604800
> █

```

Ahora entramos a PC1 y comprobamos nuestro resolver.

```

> (ubuntu) ec2-54-175-236-161.compute-1.amazonaws.com — Konsole
Archivo  Editar  Ver  Marcadores  Complementos  Preferencias  Ayuda
ubuntu@ip-172-31-94-218:~$ resolvectl
Global
    Protocols: -LLMNR -mDNS -DNSOverTLS DNSSEC=no/unsupported
    resolv.conf mode: stub

Link 2 (enX0)
    Current Scopes: DNS
    Protocols: +DefaultRoute -LLMNR -mDNS -DNSOverTLS DNSSEC=no/unsupported
Current DNS Server: 172.31.0.2
    DNS Servers: 172.31.0.2
    DNS Domain: ec2.internal
ubuntu@ip-172-31-94-218:~$ █

```



```

ubuntu@ip-172-31-94-218:/etc$ sudo netplan apply
ubuntu@ip-172-31-94-218:/etc$ resolvectl
Global
    Protocols: -LLMNR -mDNS -DNSOverTLS DNSSEC=no/unsupported
    resolv.conf mode: stub

Link 2 (enX0)
    Current Scopes: DNS
    Protocols: +DefaultRoute -LLMNR -mDNS -DNSOverTLS DNSSEC=no/unsupported
    DNS Servers: 172.31.95.47 172.31.0.2
    DNS Domain: ec2.internal
ubuntu@ip-172-31-94-218:/etc$ ping ns1.oscar.abastos.edu
PING ns1.oscar.abastos.edu (172.31.95.47) 56(84) bytes of data.
64 bytes from 172.31.95.47: icmp_seq=1 ttl=64 time=0.308 ms
64 bytes from 172.31.95.47: icmp_seq=2 ttl=64 time=1.69 ms
64 bytes from 172.31.95.47: icmp_seq=3 ttl=64 time=0.506 ms
64 bytes from 172.31.95.47: icmp_seq=4 ttl=64 time=0.641 ms

```

Ahora añadimos un alias a las maquinas modificando el db de nuestro servidor.

```

Archivo  Editar  Ver  Marcadores  Complementos  Preferencias  Ayuda
GNU nano 7.2                                db.oscar.abastos
$TTL      604800
@          IN      SOA      oscar.abastos.edu. admin@oscar.abastos.edu. (
                                2          ; Serial
                                604800     ; Refresh
                                86400      ; Retry
                                2419200    ; Expire
                                604800 )   ; Negative Cache TTL
;
@          IN      NS       ns1.oscar.abastos.edu.
@          IN      MX       10 correo.oscar.abastos.edu.
ns1        IN      A        172.31.95.47
www        IN      CNAME    ns1
pc1        IN      A        172.31.94.218
pc2        IN      A        172.31.43.41
correo.oscar.abastos.edu.  IN      A        172.31.95.47
;

^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^J Justify    ^/ Go To Line

```

```

> (ubuntu) ec2-54-234-243-248.compute-1.amazonaws.com — Konsole
Archivo  Editar  Ver  Marcadores  Complementos  Preferencias  Ayuda
ubuntu@ip-172-31-95-47:/etc/bind$ sudo nano db.oscar.abastos
ubuntu@ip-172-31-95-47:/etc/bind$ sudo nano db.oscar.abastos
ubuntu@ip-172-31-95-47:/etc/bind$ named-checkzone oscar.abastos.edu db.oscar.abastos
zone oscar.abastos.edu/IN: loaded serial 2
OK
ubuntu@ip-172-31-95-47:/etc/bind$ sudo systemctl restart named
ubuntu@ip-172-31-95-47:/etc/bind$

```

Guardamos y reiniciamos el servicio.

Ahora desde PC1 hacemos ping a los nuevos registros.


```
Archivo  Editar  Ver  Marcadores  Complementos  Preferencias  Ayuda
ubuntu@ip-172-31-94-218:/etc$ ping www.oscar.abastos.edu
PING ns1.oscar.abastos.edu (172.31.95.47) 56(84) bytes of data.
64 bytes from 172.31.95.47: icmp_seq=1 ttl=64 time=0.394 ms
64 bytes from 172.31.95.47: icmp_seq=2 ttl=64 time=0.508 ms
^C
--- ns1.oscar.abastos.edu ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 1053ms
rtt min/avg/max/mdev = 0.394/0.451/0.508/0.057 ms
ubuntu@ip-172-31-94-218:/etc$ ping correo.oscar.abastos.edu
PING correo.oscar.abastos.edu (172.31.95.47) 56(84) bytes of data.
64 bytes from 172.31.95.47: icmp_seq=1 ttl=64 time=0.579 ms
64 bytes from 172.31.95.47: icmp_seq=2 ttl=64 time=0.754 ms
^C
--- correo.oscar.abastos.edu ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 1002ms
rtt min/avg/max/mdev = 0.579/0.666/0.754/0.087 ms
ubuntu@ip-172-31-94-218:/etc$
```

Y podemos verificar que funcionan correctamente.