DNS
SEMINARIO LINUX

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Contenido

INSTALACION Y CONFIGURACION DNS

1. Actualizar el sistema antes de iniciar con la configuración de un DNS.

sudo apt-get update

```
adminserver@atlantida:~$ sudo apt-get update
[sudo] password for adminserver:
Obj:1 http://archive.ubuntu.com/ubuntu bionic InRelease
Des:2 http://archive.ubuntu.com/ubuntu bionic-updates InRelease [88,7 kB]
Obj:3 http://archive.ubuntu.com/ubuntu bionic-backports InRelease
Obj:4 http://archive.ubuntu.com/ubuntu bionic-security InRelease
Descargados 88,7 kB en 2s (42,1 kB/s)
Leyendo lista de paquetes... Hecho
adminserver@atlantida:~$ _
```

2. Instalar paquete DNS

sudo apt-get install bind9

```
adminserver@atlantida:~$ sudo apt-get install bind9
Leyendo lista de paquetes... Hecho
Creando árbol de dependencias
Leyendo la información de estado... Hecho
Se instalarán los siguientes paquetes adicionales:
  bind9utils python3-ply
Paquetes sugeridos:
  bind9-doc resolvconf python-ply-doc
Se instalarán los siguientes paquetes NUEVOS:
  bind9 bind9utils python3-ply
0 actualizados, 3 nuevos se instalarán, 0 para eliminar y 0 no actualizados.
Se necesita descargar 659 kB de archivos.
Se utilizarán 3.552 kB de espacio de disco adicional después de esta operación.
¿Desea continuar? [S/n]
```

3. Retirar internet y configura la tarjeta de red.

```
adminserver@atlantida:/etc/netplan$ more 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:
            addresses: [192.168.2.2/24]
            dhcp4: false
    version: 2
adminserver@atlantida:/etc/netplan$
```

4. Validar estado de la tarjeta y dirección IP.

```
adminserver@atlantida:/etc/bind$ sudo netplan apply
adminserver@atlantida:/etc/bind$ ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.168.2.2  netmask 255.255.255.0  broadcast 192.168.2.255
        inet6 fe80::a00:27ff:fe2a:a1ca  prefixlen 64  scopeid 0x20<link>
        ether 08:00:27:2a:a1:ca  txqueuelen 1000  (Ethernet)
        RX packets 48569  bytes 44759905 (44.7 MB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 19691  bytes 1220510 (1.2 MB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 308  bytes 25610 (25.6 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 308  bytes 25610 (25.6 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

5. Ir a la ruta /etc/bin y realizar la copia del archivo de configuración

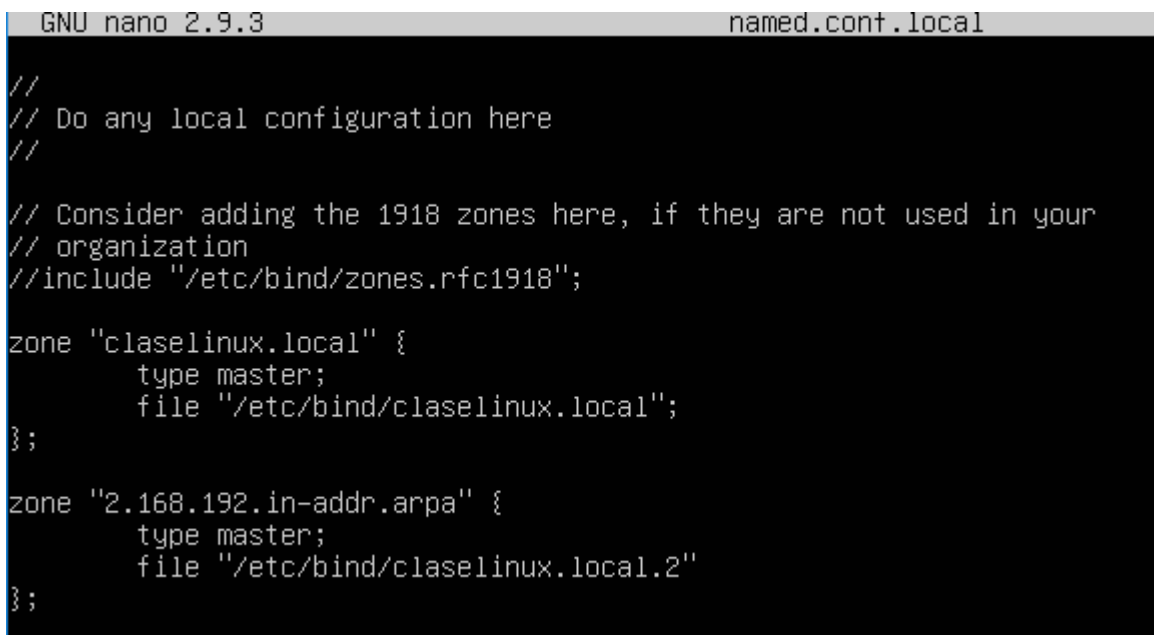sudo cp named.conf.local named.conf.local.old

```
adminserver@atlantida:/etc/bind$ sudo cp named.conf.local named.conf.local.old
adminserver@atlantida:/etc/bind$ _
```

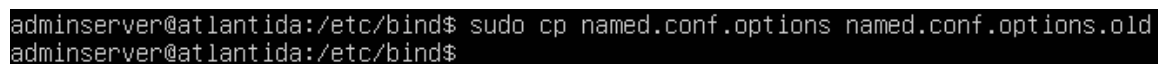6. Se configura el archivo con los siguientes valores.

zone "claselinux.local" {
      type master;
       file "/etc/bind/dominio.local";
};

zone "2.168.192.in-addr.arpa" {
      type master;
      file "/etc/bind/claselinux.local.2";
};

```
  GNU nano 2.9.3                           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 "claselinux.local" {
        type master;
        file "/etc/bind/claselinux.local";
};

zone "2.168.192.in-addr.arpa" {
        type master;
        file "/etc/bind/claselinux.local.2"
};
```

7. Realizar copia del archivo de configuración

sudo cp named.conf.options named.conf.options.old

```
adminserver@atlantida:/etc/bind$ sudo cp named.conf.options named.conf.options.old
adminserver@atlantida:/etc/bind$
```

8. Habilitar re enviadores mas el DNS de Google.

forwader   (quitar comentario)
8.8.8.8   (agregar DNS de Google)

```
  GNU nano 2.9.3                              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;
        // };

        //========================================================================
        // 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; };
};
```

9. Hacer copia del archivo db

Sudo cp db.local claselinux.local

```
adminserver@atlantida:/etc/bind$ ls
bind.keys   db.255     db.root                    named.conf.local      named.conf.options.old
db.0        db.empty   named.conf                 named.conf.local.old  rndc.key
db.127      db.local   named.conf.default-zones   named.conf.options    zones.rfc1918
adminserver@atlantida:/etc/bind$ sudo cp db.local claselinux.local
adminserver@atlantida:/etc/bind$ ls
bind.keys          db.255     named.conf                 named.conf.options
claselinux.local   db.empty   named.conf.default-zones   named.conf.options.old
db.0               db.local   named.conf.local           rndc.key
db.127             db.root    named.conf.local.old       zones.rfc1918
adminserver@atlantida:/etc/bind$
```

10. Previamente se deben tener definidas las direcciones IP de los servidores para este caso se
    utilizaron las mencionadas en la pantalla, adicionalmente se debe cambiar localhost por el
    nombre del dominio en este caso claselinux.local

intranet   IN   A   192.168.2.3
mail   IN   A   192.168.2.4
ftp   IN   A   192.168.2.5
web   IN   A   192.168.2.6
dns   IN   A   192.168.2.2

```
  GNU nano 2.9.3                              claselinux.local
;
; BIND data file for local loopback interface
;
$TTL    604800
@       IN      SOA     claselinux.local. root.claselinux.local. (
                              2         ; Serial
                         604800         ; Refresh
                          86400         ; Retry
                        2419200         ; Expire
                         604800 )       ; Negative Cache TTL
;
@       IN      NS      claselinux.local.
@       IN      A       192.168.2.2
INTRANET        IN      A       192.168.2.4
FTP     IN      A       192.168.2.5
WEB     IN      A       192.168.2.6
DHCP    IN      A       192.168.2.3
DNS     IN      A       192.168.2.2
```

11. Copia del archivo para la zona inversa

sudo cp db.local claselinux.local.2

```
adminserver@atlantida:/etc/bind$ sudo cp db.local claselinux.local.2
adminserver@atlantida:/etc/bind$ ls
bind.keys            db.127   db.root                    named.conf.local.old    zones.rfc1918
claselinux.local     db.255   named.conf                 named.conf.options
claselinux.local.2   db.empty named.conf.default-zones   named.conf.options.old
db.0                 db.local named.conf.local           rndc.key
adminserver@atlantida:/etc/bind$
```

12. Realizar las modificaciones del archivo de configuración de acuerdo con los siguientes parámetros.

1	IN	PTR	admin.claselinux.local.
4	IN	PTR	intranet.claselinux.local.
5	IN	PTR	ftp.claselinux.local.
6	IN	PTR	web.claselinux.local.
2	IN	PTR	dns.claselinux.local.
3	IN	PTR	dhcp.claselinux.local.

```
  GNU nano 2.9.3                              claselinux.local.2

;
; BIND data file for local loopback interface
;
$TTL    604800
@       IN      SOA     claselinux.local. root.claselinux.local. (
                              2         ; Serial
                         604800         ; Refresh
                          86400         ; Retry
                        2419200         ; Expire
                         604800 )       ; Negative Cache TTL
;
@       IN      NS      claselinux.local._
1       IN      PTR     ADMIN.claselinux.local.
4       IN      PTR     INTRANET.claselinux.local.
5       IN      PTR     FTP.claselinux.local.
6       IN      PTR     WEB.claselinux.local.
2       IN      PTR     DNS.claselinux.local.
3       IN      PTR     DHCP.claselinux.local.
```

13. Editar archivo host y se agrega el dominio claselinux.local con la ip 127.0.0.1

```
adminserver@atlantida:/etc/bind$ cd ..
adminserver@atlantida:/etc$ sudo nano host_
```

```
  GNU nano 2.9.3                              hosts

127.0.0.1       localhost.localdomain   localhost
::1             localhost6.localdomain6 localhost6
127.0.0.1       claselinux.local

# The following lines are desirable for IPv6 capable hosts
::1     localhost ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
ff02::3 ip6-allhosts
```

14. Reiniciar servicio

```
adminserver@atlantida:/etc$ service bind9 restart
==== AUTHENTICATING FOR org.freedesktop.systemd1.manage-units ===
Authentication is required to restart 'bind9.service'.
Authenticating as: adminserver
Password:
==== AUTHENTICATION COMPLETE ===
adminserver@atlantida:/etc$ _
```

15. Servicio activo.

```
adminserver@atlantida:/etc/bind$ service bind9 status
● bind9.service - BIND Domain Name Server
   Loaded: loaded (/lib/systemd/system/bind9.service; enabled; vendor preset: enabled)
   Active: active (running) since Mon 2019-06-03 04:18:35 UTC; 6s ago
     Docs: man:named(8)
  Process: 21579 ExecStop=/usr/sbin/rndc stop (code=exited, status=0/SUCCESS)
 Main PID: 21621 (named)
    Tasks: 4 (limit: 1110)
   CGroup: /system.slice/bind9.service
           └─21621 /usr/sbin/named -f -u bind

jun 03 04:18:36 atlantida named[21621]: network unreachable resolving 'E.ROOT-SERVERS.NET/AAAA/IN':
jun 03 04:18:36 atlantida named[21621]: network unreachable resolving 'E.ROOT-SERVERS.NET/AAAA/IN':
jun 03 04:18:36 atlantida named[21621]: network unreachable resolving 'G.ROOT-SERVERS.NET/AAAA/IN':
jun 03 04:18:36 atlantida named[21621]: network unreachable resolving 'G.ROOT-SERVERS.NET/AAAA/IN':
jun 03 04:18:36 atlantida named[21621]: network unreachable resolving 'E.ROOT-SERVERS.NET/AAAA/IN':
jun 03 04:18:36 atlantida named[21621]: network unreachable resolving 'E.ROOT-SERVERS.NET/AAAA/IN':
jun 03 04:18:36 atlantida named[21621]: network unreachable resolving 'E.ROOT-SERVERS.NET/AAAA/IN':
jun 03 04:18:36 atlantida named[21621]: network unreachable resolving 'G.ROOT-SERVERS.NET/AAAA/IN':
jun 03 04:18:36 atlantida named[21621]: network unreachable resolving 'G.ROOT-SERVERS.NET/AAAA/IN':
jun 03 04:18:36 atlantida named[21621]: network unreachable resolving 'G.ROOT-SERVERS.NET/AAAA/IN':
lines 1-20/20 (END)
```