Youness benbakka TP2 : DNS
INFO3

Update Mantenant utilise la commande apt-get update

```
┌──(root㉿kali)-[~]
└─# apt-get update
Get:1 http://mirror.leitecastro.com/kali kali-rolling InRelease [41.5 kB]
Get:2 http://mirror.leitecastro.com/kali kali-rolling/main amd64 Packages [19
.3 MB]
Get:3 http://mirror.leitecastro.com/kali kali-rolling/main amd64 Contents (de
b) [45.8 MB]
Get:4 http://mirror.leitecastro.com/kali kali-rolling/contrib amd64 Packages
[115 kB]
Get:5 http://mirror.leitecastro.com/kali kali-rolling/contrib amd64 Contents
(deb) [246 kB]
Get:6 http://mirror.leitecastro.com/kali kali-rolling/non-free amd64 Packages
 [192 kB]
Get:7 http://mirror.leitecastro.com/kali kali-rolling/non-free amd64 Contents
 (deb) [883 kB]
Get:8 http://mirror.leitecastro.com/kali kali-rolling/non-free-firmware amd64
 Packages [33.1 kB]
Get:9 http://mirror.leitecastro.com/kali kali-rolling/non-free-firmware amd64
 Contents (deb) [16.9 kB]
Fetched 66.7 MB in 1min 37s (688 kB/s)
Reading package lists ... Done
```

Installation bind9

```
┌──(root㉿kali)-[~]
└─# apt-get install bind9
Reading package lists ... Done
Building dependency tree ... Done
Reading state information ... Done
The following additional packages will be installed:
  bind9-dnsutils bind9-host bind9-libs bind9-utils liburcu8
Suggested packages:
  bind-doc resolvconf ufw
The following NEW packages will be installed:
  bind9 bind9-utils liburcu8
The following packages will be upgraded:
  bind9-dnsutils bind9-host bind9-libs
3 upgraded, 3 newly installed, 0 to remove and 1002 not upgraded.
Need to get 3,155 kB of archives.
After this operation, 2,793 kB disk space will be freed.
Do you want to continue? [Y/n] y
Get:1 http://kali.download/kali kali-rolling/main amd64 bind9-host amd64 1:9
19.21-1 [314 kB]
Get:2 http://kali.download/kali kali-rolling/main amd64 bind9-dnsutils amd64
1:9.19.21-1 [422 kB]
Get:3 http://kali.download/kali kali-rolling/main amd64 liburcu8 amd64 0.14
```

Youness benbakka TP2 : DNS
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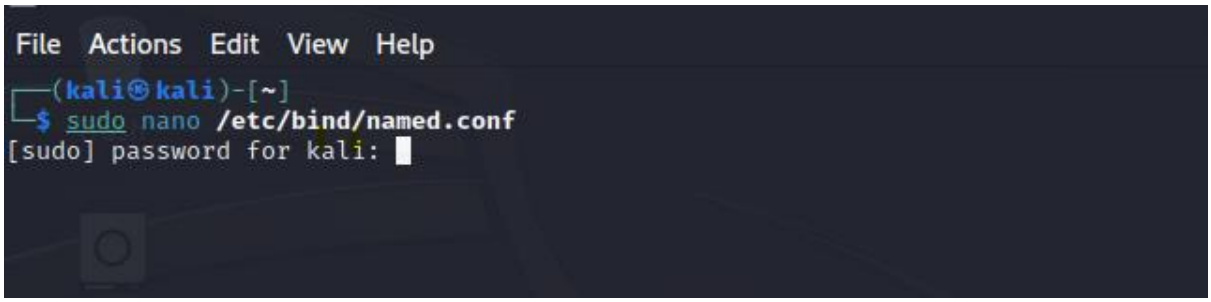
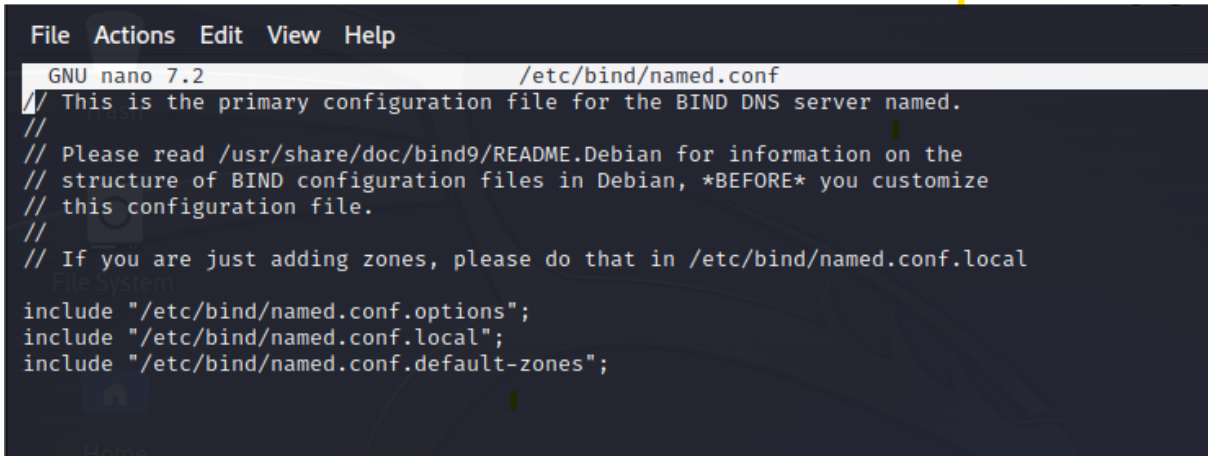
Utilise cette commande pour acceder dans le fichier sudo nano /etc/bind/named.conf



/etc/bind/named.conf

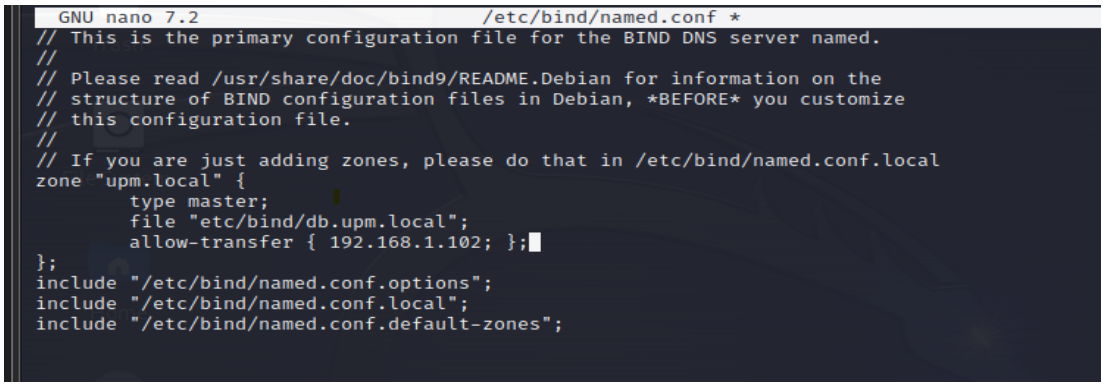


Et on ajoute la zone d'autorité

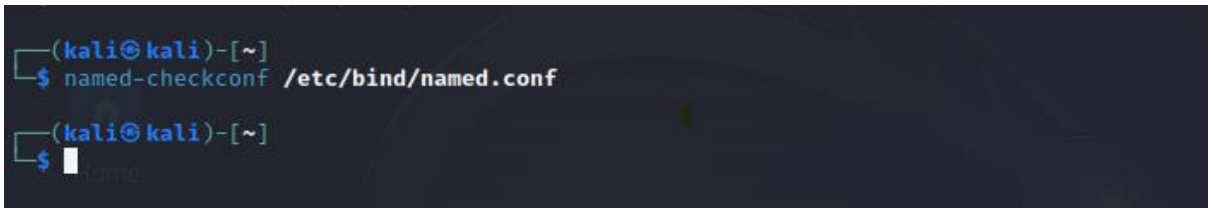
Type : dns praimaire.

File : comme une base de donne .dans cette fichier existe les enrrgistrement.

Allow-transfer : dns primaire transfer les enregistrement vers a dns seconaire (cette address secondaire).

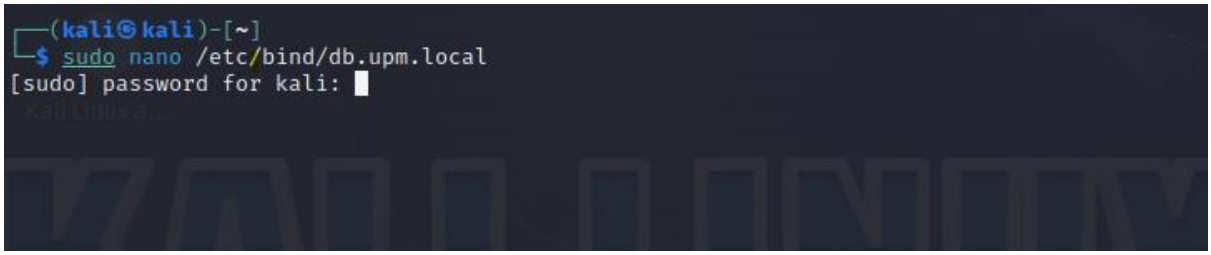


Vous pouvez vérifier la syntaxe du fichier named.conf grâce à la commande named-checkconf /etc/bind/named.conf

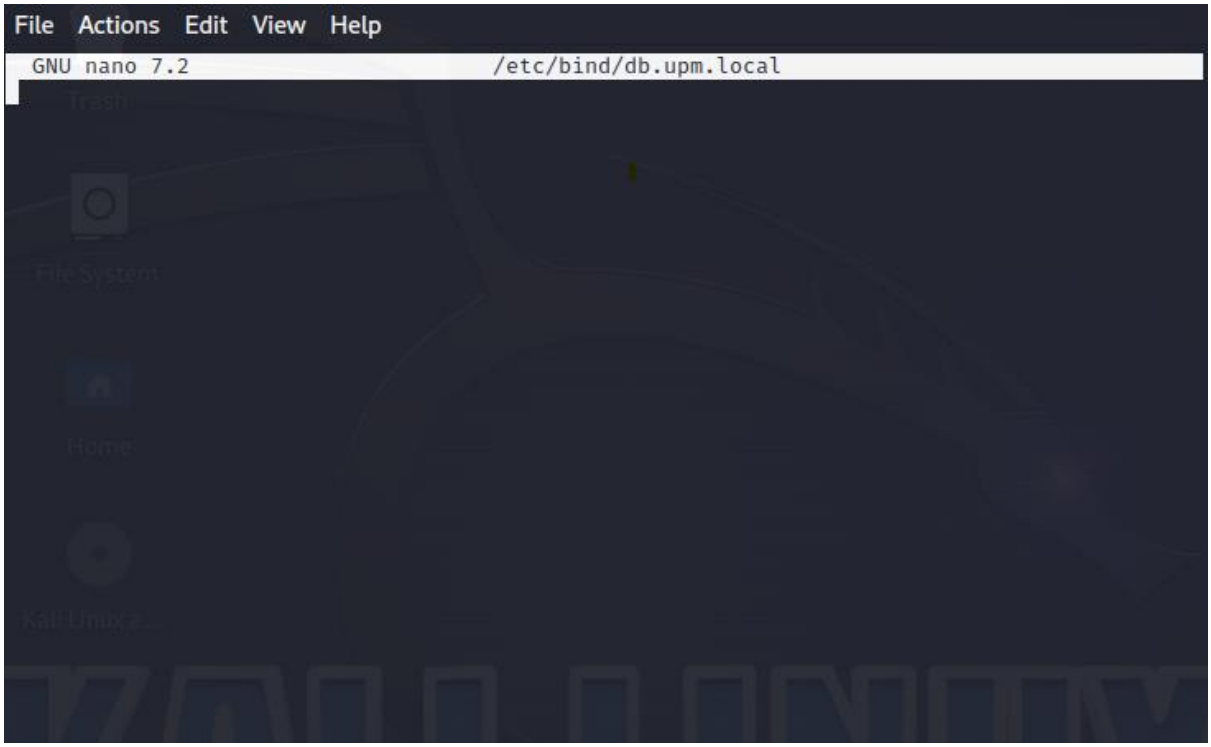


c. Configuration de la zone du serveur maître

On édite donc le fichier acceder le fichie en utilise la command : /etc/bind/db.upm.local



Cette fichier vite



Afin d'avoir une configuration "basique", vous pouvez faire une copie de /etc/bind/db.local.

On utilise la commande : cp /etc/bind/db.local /etc/bind/db.upm.local

Youness benbakka TP2 : DNS
INFO3

```
┌──(kali㉿kali)-[~]
└─$ sudo cp /etc/bind/db.local /etc/bind/db.upm.local

┌──(kali㉿kali)-[~]
└─$ sudo nano /etc/bind/db.upm.local
```

/etc/bind/db.upm.local

```
File  Actions  Edit  View  Help
  GNU nano 7.2                        /etc/bind/db.upm.local
;
; BIND data file for local loopback interface
;
$TTL    604800
@       IN      SOA     localhost. root.localhost. (
                              2         ; Serial
                         604800         ; Refresh
                          86400         ; Retry
                        2419200         ; Expire
                         604800 )       ; Negative Cache TTL
;
@       IN      NS      localhost.
@       IN      A       127.0.0.1
@       IN      AAAA    ::1
```

Maintenant modifier le fichie au-dessus :

Nouvelle modification dans le fichier db.upm.local

```
  GNU nano 7.2                        /etc/bind/db.upm.local *
;
; BIND data file for local loopback interface
;
$TTL    604800
@       IN      SOA     ns1.upm.local. admin.upm.local. (
                              2         ; Serial
                         604800         ; Refresh
                          86400         ; Retry
                        2419200         ; Expire
                         604800 )       ; Negative Cache TTL
;
@       IN      NS      ns1.upm.local.
@       IN      NS      ns2
@       IN      MX      10 mx1
@       IN      MX      20 mx2
ns1     IN      A       192.168.1.101
ns2     IN      A       192.168.1.102
mx1     IN      A       192.168.1.103
mx2     IN      A       192.168.1.104
cours   IN      A       192.168.1.105
www     IN      A       192.168.1.106
blog    IN      CNAME   www
```

Youness benbakka TP2 : DNS
INFO3

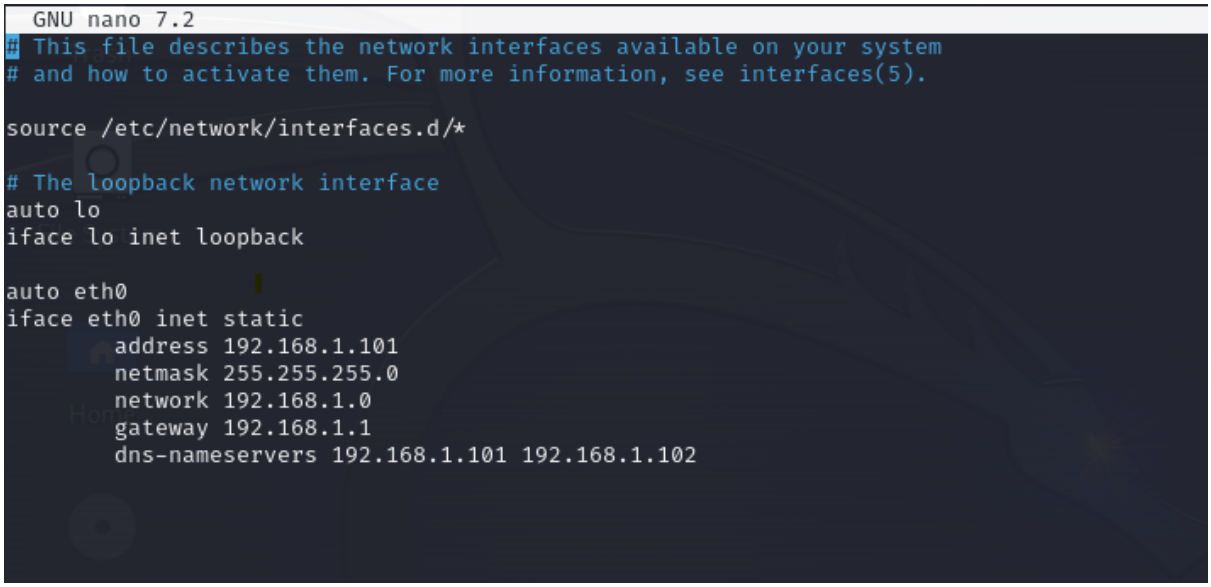
Ce fichier de zone DNS configure les enregistrements nécessaires pour le domaine **upm.local**, spécifiant les serveurs de noms, les serveurs de messagerie, les adresses IP des hôtes, ainsi qu'un alias pour le sous-domaine **blog** pointant vers **www**.

redémarrer BIND pour que les changements soient prises en compte

cette commande ne fonctionnent pas vous lancez un problème d'atteinte à l'ennemi bind9.service change a la cammande systemctl restart bind9

Enter dans nano /etc/network/interfaces

Et enfin assigner une adresse IP fixe au serveur DNS maître



Redémarrer l'interface réseau :

Avant redemarer vider les adrdres avec utlise cette commande la

Sudo ip addr flush ens33

Redémarrer l'interface avec cette commande └─# systemctl restart networking

```
┌──(root㉿kali)-[~]
└─# systemctl restart networking

┌──(root㉿kali)-[~]
└─#
```

d. Configuration du serveur esclave

Lors de l'utilisation cette commnd por update **http.kali.org**

```
┌──(root㉿kali)-[~]
└─# apt-get update
Ign:1 http://http.kali.org/kali kali-rolling InRelease
Ign:1 http://http.kali.org/kali kali-rolling InRelease
Ign:1 http://http.kali.org/kali kali-rolling InRelease
Err:1 http://http.kali.org/kali kali-rolling InRelease
  Temporary failure resolving 'http.kali.org'
Reading package lists ... Done
W: Failed to fetch http://http.kali.org/kali/dists/kali-rolling/InRelease  Te
mporary failure resolving 'http.kali.org'
W: Some index files failed to download. They have been ignored, or old ones u
sed instead.
```

Soulition :

Essais sur l'utilisation du timer sur un serveur DNS pour voir si ce problème se produit. Vous pouvez utiliser le serveur DNS public de Google (8.8.8.8) comme nous l'avons testé auparavant.

```
┌──(root㉿kali)-[~]
└─# cat /etc/resolv.conf

# Generated by NetworkManager
search localdomain
nameserver 192.168.181.2

┌──(root㉿kali)-[~]
└─# echo "nameserver 8.8.8.8" > /etc/resolv.conf


┌──(root㉿kali)-[~]
└─# cat /etc/resolv.conf

nameserver 8.8.8.8
```

Mantenant utilise la commande apt-get update

```
┌──(root㉿kali)-[~]
└─# apt-get update
Get:1 http://mirror.leitecastro.com/kali kali-rolling InRelease [41.5 kB]
Get:2 http://mirror.leitecastro.com/kali kali-rolling/main amd64 Packages [19
.3 MB]
Get:3 http://mirror.leitecastro.com/kali kali-rolling/main amd64 Contents (de
b) [45.8 MB]
Get:4 http://mirror.leitecastro.com/kali kali-rolling/contrib amd64 Packages
[115 kB]
Get:5 http://mirror.leitecastro.com/kali kali-rolling/contrib amd64 Contents
(deb) [246 kB]
Get:6 http://mirror.leitecastro.com/kali kali-rolling/non-free amd64 Packages
 [192 kB]
Get:7 http://mirror.leitecastro.com/kali kali-rolling/non-free amd64 Contents
 (deb) [883 kB]
Get:8 http://mirror.leitecastro.com/kali kali-rolling/non-free-firmware amd64
 Packages [33.1 kB]
Get:9 http://mirror.leitecastro.com/kali kali-rolling/non-free-firmware amd64
 Contents (deb) [16.9 kB]
Fetched 66.7 MB in 1min 37s (688 kB/s)
Reading package lists ... Done
```

Maintenant install bind9 en utilise la cammande apt-get install bind9

```
┌──(root㉿kali)-[~]
└─# apt-get install bind9
Reading package lists ... Done
Building dependency tree ... Done
Reading state information ... Done
The following additional packages will be installed:
  bind9-dnsutils bind9-host bind9-libs bind9-utils liburcu8
Suggested packages:
  bind-doc resolvconf ufw
The following NEW packages will be installed:
  bind9 bind9-utils liburcu8
The following packages will be upgraded:
  bind9-dnsutils bind9-host bind9-libs
3 upgraded, 3 newly installed, 0 to remove and 1002 not upgraded.
Need to get 3,155 kB of archives.
After this operation, 2,793 kB disk space will be freed.
Do you want to continue? [Y/n] y
Get:1 http://kali.download/kali kali-rolling/main amd64 bind9-host amd64 1:9.
19.21-1 [314 kB]
Get:2 http://kali.download/kali kali-rolling/main amd64 bind9-dnsutils amd64
1:9.19.21-1 [422 kB]
Get:3 http://kali.download/kali kali-rolling/main amd64 liburcu8 amd64 0.14.0
-3 [72.7 kB]
```

Youness benbakka
INFO3

TP2 : DNS

édite le fichier /etc/bind/named.conf

```
  GNU nano 7.2                  /etc/bind/named.conf *
// This is the primary configuration file for the BIND DNS server named.
//
// Please read /usr/share/doc/bind9/README.Debian for information on the
// structure of BIND configuration files in Debian, *BEFORE* you customize
// this configuration file.
//
// If you are just adding zones, please do that in /etc/bind/named.conf.loc>
zone "upm.loccal" {
    type slave;
    masters { 192.168.1.101; };
    file "/var/cache/bind/db.upm.local";
};
include "/etc/bind/named.conf.options";
include "/etc/bind/named.conf.local";
include "/etc/bind/named.conf.default-zones";
```

Type : slave => dns secondaire

Masters => address dns primaire

File =>enregistrement dns secondaire

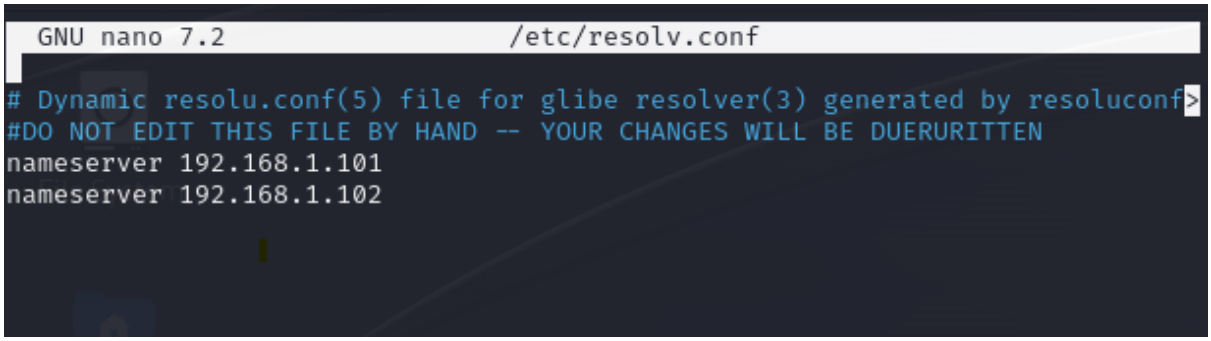
assigner une adresse IP fix au serveur esclave

```
  GNU nano 7.2                  /etc/network/interfaces
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).

source /etc/network/interfaces.d/*

# The loopback network interface
auto lo
iface lo inet loopback

auto eth0
iface eth0 inet static
    address 192.168.1.102
    netmask 255.255.255.0
    network 192.168.1.0
    gateway 192.168.1.1
    dns-nameservers 192.168.1.101  192.168.1.102

                [ Read 16 lines ]
^G Help       ^O Write Out  ^W Where Is  ^K Cut        ^T Execute
```

Youness benbakka TP2 : DNS
INFO3

Redémarrer l'interface réseau : systemctl restart networking

nano /etc/resolv.conf



Youness benbakka
INFO3

TP2 : DNS

CONFIGIRATION INVERS

/etc/bind/named.conf

Ajouter la zone inverse en dessous de la zone normale comme suit :

```
zone "upm.local" {
        type master;
        file "etc/bind/db.upm.local";
        allow-transfer { 192.168.1.102; };
};

zone "1.168.192.in-addr.arpa." {
        type master;
        file "etc/bind/db.192.168.1";

};
```

On crée ensuite le fichier de zone db.192.168.1 et le remplir comme suit :

LE FICHIER /etc/bind/db192.168.1 vide pour gagner le temps utilise la commande

Cp /etc/bind/db.upm.local /etc/bind/ db.192.168.1

Maintenannt entre le fichier

/etc/bind/ db.192.168.1

```
 GNU nano 7.2                                                                /et
;
; BIND data file for local loopback interface
;
$TTL    604800
@       IN      SOA     ns1.upm.local. admin.upm.local. (
                              2         ; Serial
                         604800         ; Refresh
                          86400         ; Retry
                        2419200         ; Expire
                         604800 )       ; Negative Cache TTL
;
@       IN      NS      ns1.upm.local.
@       IN      NS      ns2.upm.local.
101     IN      PTR     ns1.upm.local.
102     IN      PTR     ns2.upm.local.
103     IN      PTR     mx1.upm.local.
104     IN      PTR     mx2.upm.local.
105     IN      PTR     cours.upm.local.
106     IN      PTR     WWW.upm.local.
```

une zone inverse ne contient que des enregistrements de type NS ou PTR ; • dans notre zone "normale", blog redirigeait vers www, mais là une adresse IP ne peut pointer que vers un seul hôte ;

redémarrer bind9

Youness benbakka TP2 : DNS
INFO3

```
┌──(root㉿kali)-[~]
└─# systemctl start bind9
```

On peut maintenant commencer nos tests :

Démarrer la machine client.

si l'on cherche l'adresse des serveurs DNS du domaine upm.local : ulise la cammande : host -t ns upm.local

```
┌──(root㉿kali)-[~]
└─# host -t ns upm.local
upm.local name server ns1.upm.local.
upm.local name server ns2.upm.local.

┌──(root㉿kali)-[~]
└─#
```

utiliser la commande ping

```
┌──(root㉿kali)-[~]
└─# ping ns1.upm.local
PING ns1.upm.local(192.168.1.101) 56(84) bytes of data.
64 bytes from ns1. upm. local (192.168.1.101): 1cmp_seq=1 ttl=61 time=0.111 ms
64 bytes from ns1.upm. local (192.168.1.101): icmp_seq=2 tt1=64 time=0.656 ms
64 bytes from ns1.upm. local (192.168.1.101): icmp_seq=3 tt1=64 time=0.677 ms
```

résolution inverse

```
┌──(root㉿kali)-[~]
└─# host 192.168.1.103
 103.1.168.192.in-addr.arpa domain name pointer mx1.upm.local.
```