

SOMMAIRE

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1. Modification sur US3

Dans le fichier ,etplan je modifie l'adresse du serveur DNS

```
root@US3:~# ls /etc/netplan
00-installer-config.yaml
root@US3:~# _
```

```
GNU nano 6.2 /etc/netplan/00-installer-config.yaml
# This is the network config written by 'subiquity'
network:
  ethernets:
    enp0s3:
      addresses: [172.17.250.218/24]
      dhcp4: no
      gateway4: 172.17.250.11
      nameservers:
        addresses: [80.10.246.2]
    enp0s8:
      addresses: [192.168.2.254/24]
      dhcp4: no
    enp0s9:
      addresses: [192.168.3.254/24]
      dhcp4: no
  version: 2
```

2. Modifications sur DS2

Sur DS2 je modifie

```
GNU nano 8.4 /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

# The primary network interface
allow-hotplug enp0s3
iface enp0s3 inet static
address 192.168.2.1
netmask 255.255.255.0
network 192.168.2.0
broadcast 192.168.2.255
gateway 192.168.2.254
dns-search sio-exupery.fr
dns-domain sio-exupery.fr
dns-nameservers 192.168.2.1
# This is an autoconfigured IPv6 interface
iface enp0s3 inet6 auto

auto enp0s3:0
iface enp0s3:0 inet static
address 192.168.2.9
netmask 255.255.255.0
network 192.168.2.0
broadcast 192.168.2.255
```

Je désactive et réactive la carte pour appliquer les changements

```
root@DS2: ~#ifdown enp0s3
root@DS2: ~#ifup enp0s3
root@DS2: ~#
```

Je vérifie la prise en compte des modifications

```
root@DS2: ~#ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host noprefixroute
        valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:34:06:db brd ff:ff:ff:ff:ff:ff
    altname enx0800273406db
    inet 192.168.2.1/24 brd 192.168.2.255 scope global enp0s3
        valid_lft forever preferred_lft forever
    inet6 fe80::a00:27ff:fe34:6db/64 scope link proto kernel_ll
        valid_lft forever preferred_lft forever
root@DS2: ~#_
```

Je modifie les hôtes virtuels

```
GNU nano 8.4 /etc/apache2/sites-available/sites-sio.conf
<VirtualHost 192.168.2.9:80>
    ServerName secu.sio-exupery.fr
    ServerAdmin webmaster@localhost
    DocumentRoot /var/www/html/secu
    ErrorLog /var/www/html/secu/logs/error.log
    CustomLog /var/www/html/secu/logs/access.log combined
</VirtualHost>
<VirtualHost 192.168.2.1:80>
    ServerName www.sio-exupery.fr
    ServerAdmin webmaster@localhost
    DocumentRoot /var/www/html/web
    ErrorLog /var/www/html/web/logs/error.log
    CustomLog /var/www/html/web/logs/access.log combined
</VirtualHost>
<VirtualHost 192.168.2.1:80>
    ServerName projet1.sio-exupery.fr
    ServerAdmin webmaster@localhost
    DocumentRoot /var/www/html/projet1/repweb
    ErrorLog /var/www/html/projet1/repweb/logs/error.log
    CustomLog /var/www/html/projet1/repweb/logs/access.log combined
</VirtualHost>
<VirtualHost 192.168.2.1:80>
    ServerName projet2.sio-exupery.fr
    ServerAdmin webmaster@localhost
    DocumentRoot /var/www/html/projet2/repweb
    ErrorLog /var/www/html/projet2/repweb/logs/access.log
    CustomLog /var/www/html/projet2/repweb/logs/access.log combined
</VirtualHost>
<VirtualHost 192.168.2.1:80>
    ServerName blog.sio-exupery.fr
    ServerAdmin blog.sio-exupery.fr
    DocumentRoot /var/www/html/sitewordpress/wordpress
    ErrorLog /var/www/html/sitewordpress/wordpress/logs/error.log
    CustomLog /var/www/html/sitewordpress/wordpress/logs/access.log combined
</VirtualHost>
```

Je recharge la configuration d'apache2 pour prendre en compte les modifications

```
root@DS2: ~#systemctl reload apache2
root@DS2: ~#
```

Je modifie le fichier named.conf.local

```
GNU nano 8.4 /etc/bind/named.conf.local
//
// Do any local configuration here
//
// Consider adding the 1918 zone here, if they are not used in your
// organization
//include "/etc/bind/zones.rfc1918";
//les zones
zone "sio-exupery.fr" IN {
    type master;
    file "db.sio-exupery.fr";
    allow-update { none; };
};
zone "2.168.192.in-addr.arpa" IN {
    type master;
    file "rev.sio-exupery.fr";
    allow-update { none; };
};
```

Je modifie le fichier db.sio-exupery.fr pour la zone de recherche directe

```
GNU nano 8.4 /var/cache/bind/db.sio-exupery.fr
; Fichier pour la résolution directe
$TTL 86400
@ IN SOA DS2.sio-exupery.fr. root.sio-exupery.fr. (
    0503202601
    1w
    1d
    4w
    1w)
@ IN NS DS2.sio-exupery.fr.
intra.sio-exupery.fr IN NS DS1.intra.sio-exupery.fr.
DS2.sio-exupery.fr. IN A 192.168.2.1
DS1.intra.sio-exupery.fr. IN A 192.168.3.1
ftp IN CNAME DS2
www IN CNAME DS2
secu IN A 192.168.2.9
projet1 IN CNAME DS2
projet2 IN CNAME DS2
blog IN CNAME DS2
```

Je modifie le fichier rev.sio-exupery.fr pour la zone de recherche inverse

```
GNU nano 8.4 /var/cache/bind/rev.sio-exupery.fr
; Fichier pour la résolution inverse
$TTL 86400
@ IN SOA DS2.sio-exupery.fr. root.sio-exupery.fr. (
    0503202601
    1w
    1d
    4w
    1w )
@ IN NS DS2.sio-exupery.fr.
1 IN PTR DS2.sio-exupery.fr.
```

Je modifie le fichier named.conf.options

```
GNU nano 8.4 /etc/bind/named.conf.options
options {
    directory "/var/cache/bind";
    forward only;
    forwarders {8.8.8.8;};
    dnssec-validation no;
    listen-on-v6 { any; };
    allow-query { any; };
    allow-recursion { 192.168.2.0/24;192.168.3.0/24; };
};
```

Je redémarre le service bind9 pour prendre en compte les modifications

```
root@DS2: ~#systemctl restart bind9
root@DS2: ~#
```

3. Modifications sur DS1

Je modifie le fichier named.conf.options

```
GNU nano 8.4 /etc/bind/named.conf.options
options {
    directory "/var/cache/bind";
    forward only;
    forwarders { 192.168.2.1; };
    allow-recursion { localnets; };
    allow-query { any; };
    dnssec-validation no;
};
```

Je redémarre le service DNS pour prendre en compte les modifications

```
root@DS1: ~#systemctl restart bind9
root@DS1: ~#
```

4. Tests depuis DD1/UD1

Depuis DD1 je test les deux résolutions DNS

```
sio@DEB13Desktop:~$ dig soa sio-exupery.fr

; <<>> DiG 9.20.21-1~deb13u1-Debian <<>> soa sio-exupery.fr
;; global options: +cmd
;; Got answer:
;; ->HEADER<<- opcode: QUERY, status: NOERROR, id: 44791
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
; COOKIE: b9e4d675c4814c070100000069d4c57e66ecc7ef0df5dc15 (good)
;; QUESTION SECTION:
;sio-exupery.fr.                IN      SOA

;; ANSWER SECTION:
sio-exupery.fr.                86025  IN     SOA     DS2.sio-exupery.fr. root.sio-exu
pery.fr. 503202601 604800 86400 2419200 604800

;; Query time: 0 msec
;; SERVER: 192.168.4.254#53(192.168.4.254) (UDP)
;; WHEN: Tue Apr 07 10:51:15 CEST 2026
;; MSG SIZE rcvd: 116
```

Je vérifie la résolution hors zone

```
sio@DEB13Desktop:~$ dig www.ac-nice.fr

; <<>> DiG 9.20.21-1-deb13u1-Debian <<>> www.ac-nice.fr
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 53532
;; flags: qr rd ra; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
; COOKIE: e02e63623ee497460100000069d4c5d54f76ac28299132c8 (good)
;; QUESTION SECTION:
;www.ac-nice.fr.                IN      A

;; ANSWER SECTION:
www.ac-nice.fr.                2911    IN      CNAME   www.ac-nice.fr.cdn.cloudflare.net.
www.ac-nice.fr.cdn.cloudflare.net. 300    IN      A       141.101.90.104
www.ac-nice.fr.cdn.cloudflare.net. 300    IN      A       141.101.90.107
www.ac-nice.fr.cdn.cloudflare.net. 300    IN      A       141.101.90.106
www.ac-nice.fr.cdn.cloudflare.net. 300    IN      A       141.101.90.105

;; Query time: 59 msec
;; SERVER: 192.168.4.254#53(192.168.4.254) (UDP)
```

```
sio@DEB13Desktop:~$ dig soa intra.sio-exupery.fr

;<> DiG 9.20.21-1~deb13u1-Debian <> soa intra.sio-exupery.fr
;; global options: +cmd
;; Got answer:
;; ->HEADER<- opcode: QUERY, status: NOERROR, id: 3864
;; flags: qr aa rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
;; EDNS: version: 0, flags:; udp: 1232
;; COOKIE: 6956fc5e9de4dff60100000069d4c153f36b38672c2dfcb1 (good)
;; QUESTION SECTION:
;intra.sio-exupery.fr.          IN      SOA

;; ANSWER SECTION:
intra.sio-exupery.fr.  86400  IN     SOA    DS1.intra.sio-exupery.fr.  root.i
ntra.sio-exupery.fr.  503202605 604800 86400 2419200 604800

;; Query time: 0 msec
;; SERVER: 192.168.4.254#53(192.168.4.254) (UDP)
;; WHEN: Tue Apr 07 10:33:22 CEST 2026
;; MSG SIZE rcvd: 122

sio@DEB13Desktop:~$ █
```

Je vérifie l'accessibilité aux différents sites hébergés sur DS2





5. Test du pare-feu

J'ajoute une route statique

```
Administrateur : Invite de commandes
Microsoft Windows [version 10.0.26200.8037]
(c) Microsoft Corporation. Tous droits réservés.

C:\Windows\System32>route add 192.168.2.0 mask 255.255.255.0 172.17.110.218
OK!

C:\Windows\System32>
```

Je mets le DNS de DS2 et je que le site hébergé soit accessible depuis la machine physique

