

TP03 : Création d'un réseau privé à administrer

Compte-rendu :

Plage sélectionnée : de 192.168.0.120 à 192.168.0.139

1. Création du serveur de services et vérification de la NAT

Contenu de /etc/network/interfaces (srv-admin-ge) :

```
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 192.168.0.120/24
# The secondary (internal) network interface
allow-hotplug enp0s8
iface enp0s8 inet static
    address 172.16.0.254
```

Résultat du ping vers gwsio pour démontrer la NAT :

```
root@srv-service-ge:~# ping 192.168.0.1
PING 192.168.0.1 (192.168.0.1) 56(84) bytes of data.
64 bytes from 192.168.0.1: icmp_seq=1 ttl=63 time=0.692 ms
64 bytes from 192.168.0.1: icmp_seq=2 ttl=63 time=0.760 ms
64 bytes from 192.168.0.1: icmp_seq=3 ttl=63 time=0.860 ms
64 bytes from 192.168.0.1: icmp_seq=4 ttl=63 time=0.860 ms
```

2. Configuration du DHCP

/etc/dhcp/dhcpd.conf :

```
subnet 172.16.0.0 netmask 255.255.255.0 {
    range 172.16.0.100 172.16.0.200;
    option routers 172.16.0.254;
}
host srv-admin-ge {
    hardware ethernet 08:00:27:6e:32:49;
    fixed-address 172.16.0.254;
}
```

Adresse IP de srv-admin-ge interne après la configuration DHCP pour l'adresse fixée :

```
3: enp0s8: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
```

```
link/ether 08:00:27:6e:32:49 brd ff:ff:ff:ff:ff:ff
```

```
inet 172.16.0.254/24 brd 172.16.0.255 scope global dynamic enp0s8
```

Adresse IP de pc-cli-ge après la configuration automatique DHCP :

```
inet 172.16.0.100/24 brd 172.16.0.255 scope global dynamic enp0s3
```

Configuration DNS de srv-service-ge :

```
GNU nano 7.2 /etc/bind/db.monlabo.lan
;
; BIND data file for local loopback interface
;
$TTL      604800
@         IN      SOA     srv-service-ge.monlabo.lan. root.monlabo.lan. (
                2635478965      ; Serial
                216              ; Refresh
                3600             ; Retry
                2419200          ; Expire
                86400 )         ; Negative Cache TTL
;
                IN      NS      srv-service-ge.monlabo.lan.
                IN      NS      srv-dns2-ge.monlabo.lan.
;
                IN      A       172.16.0.1
                IN      A       172.16.0.2
                IN      A       172.16.0.100
                IN      A       172.16.0.254
;
srv-service-ge IN      A       172.16.0.1
srv-dns2-ge   IN      A       172.16.0.2
srv-admin-ge  IN      A       172.16.0.254
pc-cli-ge     IN      A       172.16.0.100
;
srvdns        IN      CNAME    srv-service-ge
dns           IN      CNAME    srv-service-ge
dns1          IN      CNAME    srv-service-ge
srvdhcp       IN      CNAME    srv-service-ge
dhcp          IN      CNAME    srv-service-ge
srvadmin      IN      CNAME    srv-admin-ge
router        IN      CNAME    srv-admin-ge
pc            IN      CNAME    pc-cli-ge
client        IN      CNAME    pc-cli-ge
pccli         IN      CNAME    pc-cli-ge
srvdns2       IN      CNAME    srv-dns2-ge
dns2          IN      CNAME    srv-dns2-ge
```

```
; BIND data file for local loopback interface
;
$TTL      604800
@         IN      SOA      srv-service-ge.monlabo.lan. root.monlabo.lan. (
                2635478965      ; Serial
                216              ; Refresh
                3600             ; Retry
                2419200          ; Expire
                86400 )         ; Negative Cache TTL

                IN      NS      srv-service-ge.monlabo.lan.
                IN      NS      srv-dns2-ge.monlabo.lan.

1         IN      PTR      srv-service-ge.monlabo.lan.
2         IN      PTR      srv-dns2-ge.monlabo.lan.
100      IN      PTR      pc-cli-ge.monlabo.lan.
254      IN      PTR      srv-admin-ge.monlabo.lan.

srv-service-ge      IN      A      172.16.0.1
srv-dns2-ge         IN      A      172.16.0.2
srv-admin-ge        IN      A      172.16.0.254
pc-cli-ge           IN      A      172.16.0.100
```

```
//
// Do any local configuration here
//

// zone directe
zone "monlabo.lan" {
    type master;
    file "/etc/bind/db.monlabo.lan";
};

// zone inverse
zone "0.16.172.in-addr.arpa" {
    type master;
    notify no;
    file "/etc/bind/db.monlabo.lan.rev";
};

// Consider adding the 1918 zones here, if they are not used in your
// organization
//include "/etc/bind/zones.rfc1918";
```

Configuration du second serveur DNS :

```
$ORIGIN .
$TTL      604800
@         IN      SOA      srv-service-ge.monlabo.lan. root.monlabo.lan. (
                        2635478965      ; Serial
                        216              ; Refresh
                        3600             ; Retry
                        2419200          ; Expire
                        86400 )          ; Negative Cache TTL

                        IN      NS      srv-service-ge.monlabo.lan.
                        IN      NS      srv-dns2-ge.monlabo.lan.

                        IN      A       172.16.0.1
                        IN      A       172.16.0.2
                        IN      A       172.16.0.254
                        IN      A       172.16.0.100

$ORIGIN monlabo.lan.

srv-service-ge IN      A       172.16.0.1
srv-dns2-ge   IN      A       172.16.0.2
srv-admin-ge  IN      A       172.16.0.254
pc-cli-ge     IN      A       172.16.0.100

srvdns        IN      CNAME     srv-service-ge
dns           IN      CNAME     srv-service-ge
dns1          IN      CNAME     srv-service-ge
srvdhcp       IN      CNAME     srv-service-ge
dhcp          IN      CNAME     srv-service-ge
srvadmin      IN      CNAME     srv-admin-ge
router        IN      CNAME     srv-admin-ge
pc            IN      CNAME     pc-cli-ge
client        IN      CNAME     pc-cli-ge
pccli         IN      CNAME     pc-cli-ge
srvdns2       IN      CNAME     srv-dns2-ge
dns2          IN      CNAME     srv-dns2-ge
```

```
$ORIGIN .
$TTL 604800
@      IN      SOA      srv-service-ge.monlabo.lan. root.monlabo.lan. (
        2635478965      ; Serial
        216              ; Refresh
        3600             ; Retry
        2419200          ; Expire
        86400 )          ; Negative Cache TTL

        IN      NS      srv-service-ge.monlabo.lan.
        IN      NS      srv-dns2-ge.monlabo.lan.

$ORIGIN 0.16.172.in-addr.arpa.

1      IN      PTR      srv-service-ge.monlabo.lan.
2      IN      PTR      srv-dns2-ge.monlabo.lan.
100    IN      PTR      pc-cli-ge.monlabo.lan.
254    IN      PTR      srv-admin-ge.monlabo.lan.

srv-service-ge      IN      A      172.16.0.1
srv-dns2-ge         IN      A      172.16.0.2
srv-admin-ge        IN      A      172.16.0.254
pc-cli-ge           IN      A      172.16.0.100
```

```
//
// Do any local configuration here
//

// zone directe
zone "monlabo.lan" {
    type slave;
    file "/etc/bind/db.monlabo.lan";
    masters { 172.16.0.1; };
    masterfile-format text;
};

// zone inverse
zone "0.16.172.in-addr.arpa" {
    type slave;
    notify no;
    file "/etc/bind/db.monlabo.lan.rev";
    masters { 172.16.0.1; };
    masterfile-format text;
};
```