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## Mise en place dhcp failover

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Je vais me baser sur ce tuto

<https://www.it-connect.fr/redondance-de-serveurs-dhcp-sous-linux/>

Le failover sera mis en place entre notre DHCP master et notre dhcp slave qui sera héberger sur la machine qui fait tourner le proxy

-J'installe le paquet isc-dhcp-server

Et sur mon DHCP master je mets ceci

Je rajoute la directive authoritative qui permet de définir que c'est ce serveur qui a autorité sur les réseaux

Et je met master pour définir que c'est lui le master

```
failover peer "test"{
primary ;
address 172.17.1.88;
port 520;
peer address 172.17.1.84;
peer port 520;
max-response-delay 60;
max-unacked-updates 10;
mclt 3600;
split 128;
load balance max seconds 3;
}
```

Je définis un nom pour cette liaison failover

Je définis que c'est le serveur primaire

Je définis ensuite l'adresse du serveur master et son port

Ensuite **peer address** c'est l'ip du serveur slave et son port de communication pour le failover

max-response-delay = le temps en seconde apres lequel le slave prend le relais

**mclt = temps en seconde pendant lequel le slave opérera si le master ne répond pas**

**split = c'est pour la répartition de charge le slave gérera 128 ip**

**NE PAS OUBLIER DE TOUJOURS METTRE UN ESPACE ENTRE FAILOVER ET PEER AINSI QUE PEER ET ADDRESS**

Je commente la directive split car je ne veux pas de load balancing pour le moment

### Config de mon serveur slave

J'ai copié la conf du serveur DHCP master vers le serveur DHCP slave et j'ai modifier quelques directives

Ensuite sur le slave je mets cette même configuration sauf que au début je mets secondary au lieu de primary et j'inverse les ip ports source et destination et je ne mets pas les directive mclt et split

```

authoritative ;
failover peer "test"{
secondary ;
address 172.17.1.84;
port 520;
peer address 172.17.1.88;
peer port 520;
max-response-delay 60;
max-unacked-updates 10;
#mclt 3600;
#split 128;
load balance max seconds 3;
}

allow unknown-clients;
max-lease-time 3600;
default-lease-time 3600;
#VLAN 10 DATA
option domain-name-servers 172.17.1.8, 172.17.1.88;
subnet 172.17.1.0 netmask 255.255.255.0{
pool{
failover peer "test";
range 172.17.1.2 172.17.1.16;
option routers 172.17.1.1;
# option domain-name-servers 192.168.0.21,192.168.0.204 ;
option domain-name-servers 172.17.1.8, 172.17.1.88;
}
}
#VLAN 20 USERS
subnet 172.17.10.0 netmask 255.255.255.0{
pool{
failover peer "test";
range 172.17.10.2 172.17.10.16;
option routers 172.17.10.1;
# option domain-name-servers 192.168.0.21,192.168.0.204 ;
option domain-name-servers 172.17.1.8, 172.17.1.88;
}
}
#VLAN 50 WIFI
subnet 172.19.0.0 netmask 255.255.255.0{
pool{
failover peer "test";
range 172.19.0.2 172.19.0.16;
option routers 172.19.0.1;
# option domain-name-servers 192.168.0.21,192.168.0.204 ;
option domain-name-servers 172.17.1.8, 172.17.1.88;
}
}

```

Sur le master en dessous de chaque plage je mets ceci en dessous du subnet pareil pour le slave

```

pool{
failoverpeer « failover » ;
<range etc>
}

```

Je redémarre les deux serveur la liaison c'est correctement effectuer le dhcp slave a reçu les baux du serveur master

```

Oct 13 15:41:47 smtp systemd[1]: isc-dhcp-server.service: Found left-over process 27870 (dhcpcd) in control group while starting unit. Ignoring.
Oct 13 15:41:47 smtp systemd[1]: This usually indicates unclean termination of a previous run, or service implementation deficiencies.
Oct 13 15:41:47 smtp systemd[1]: isc-dhcp-server.service: Found left-over process 27968 (dhcpcd) in control group while starting unit. Ignoring.
Oct 13 15:41:47 smtp systemd[1]: This usually indicates unclean termination of a previous run, or service implementation deficiencies.
Oct 13 15:41:47 smtp systemd[1]: Starting LSB: DHCP server...
Oct 13 15:41:47 smtp isc-dhcp-server[28063]: Launching IPv4 server only.
Oct 13 15:41:47 smtp kernel: [1230338.442770] audit: type=1400 audit(1634132507.664:167806): apparmor="ALLOWED" operation="open" profile="/usr/sbin/sss
d_nss" name="/proc/28073/cmdline" pid=457 comm="sssd_nss" requested_mask="r" denied_mask="r" fsuid=0 ouid=0
Oct 13 15:41:47 smtp dhcpcd[28079]: Wrote 0 deleted host decls to leases file.
Oct 13 15:41:47 smtp kernel: [1230338.450861] audit: type=1400 audit(1634132507.672:167807): apparmor="ALLOWED" operation="open" profile="/usr/sbin/sss
d_nss" name="/proc/28079/cmdline" pid=457 comm="sssd_nss" requested_mask="r" denied_mask="r" fsuid=0 ouid=0
Oct 13 15:41:47 smtp dhcpcd[28079]: Wrote 0 new dynamic host decls to leases file.
Oct 13 15:41:47 smtp dhcpcd[28079]: Wrote 27 leases to leases file.
Oct 13 15:41:47 smtp dhcpcd[28079]: failover peer test: I move from communications-interrupted to startup
Oct 13 15:41:47 smtp dhcpcd[28079]: Server starting service.
Oct 13 15:44:11 srvdhcp dhcpcd[17259]: Failover CONNECTACK from test: already connected
Oct 13 15:44:16 srvdhcp dhcpcd[17259]: Failover CONNECTACK from test: already connected
Oct 13 15:44:21 srvdhcp dhcpcd[17259]: Failover CONNECTACK from test: already connected
Oct 13 15:44:26 srvdhcp dhcpcd[17259]: Failover CONNECTACK from test: already connected
Oct 13 15:44:30 srvdhcp systemd-timesyncd[270]: Timed out waiting for reply from 37.187.5.167:123 (0.debian.pool.ntp.org).
Oct 13 15:44:31 srvdhcp dhcpcd[17259]: Failover CONNECTACK from test: already connected
Oct 13 15:44:36 srvdhcp dhcpcd[17259]: Failover CONNECTACK from test: already connected
Oct 13 15:44:40 srvdhcp systemd-timesyncd[270]: Timed out waiting for reply from 82.64.172.48:123 (0.debian.pool.ntp.org).
Oct 13 15:44:41 srvdhcp dhcpcd[17259]: Failover CONNECTACK from test: already connected
Oct 13 15:44:42 srvdhcp dhcpcd[17259]: Dynamic and static leases present for 172.17.1.9.
Oct 13 15:44:42 srvdhcp dhcpcd[17259]: Remove host declaration SwitchCisco or remove 172.17.1.9
Oct 13 15:44:42 srvdhcp dhcpcd[17259]: from the dynamic address pool for 172.17.1.9/24
Oct 13 15:44:42 srvdhcp dhcpcd[17259]: DHCPREQUEST for 172.17.1.9 from 00:19:30:19:86:c1 via eth0
Oct 13 15:44:42 srvdhcp dhcpcd[17259]: DHCPACK on 172.17.1.9 to 00:19:30:19:86:c1 via eth0
Oct 13 15:44:46 srvdhcp dhcpcd[17259]: Failover CONNECTACK from test: already connected
Oct 13 15:44:50 srvdhcp systemd-timesyncd[270]: Timed out waiting for reply from 162.159.200.123:123 (0.debian.pool.ntp.org).
Oct 13 15:44:51 srvdhcp dhcpcd[17259]: Failover CONNECTACK from test: already connected
Oct 13 15:44:56 srvdhcp dhcpcd[17259]: Failover CONNECTACK from test: already connected
Oct 13 15:45:00 srvdhcp systemd-timesyncd[270]: Timed out waiting for reply from 51.255.95.80:123 (0.debian.pool.ntp.org).
Oct 13 15:45:01 srvdhcp dhcpcd[17259]: Failover CONNECTACK from test: already connected
Oct 13 15:45:06 srvdhcp dhcpcd[17259]: Failover CONNECTACK from test: already connected
Oct 13 15:45:11 srvdhcp systemd-timesyncd[270]: Timed out waiting for reply from 51.254.83.231:123 (1.debian.pool.ntp.org).
Oct 13 15:45:11 srvdhcp dhcpcd[17259]: Failover CONNECTACK from test: already connected
Oct 13 15:45:16 srvdhcp dhcpcd[17259]: Failover CONNECTACK from test: already connected
Oct 13 15:45:21 srvdhcp systemd-timesyncd[270]: Timed out waiting for reply from 37.187.205.149:123 (1.debian.pool.ntp.org).
Oct 13 15:45:21 srvdhcp dhcpcd[17259]: Failover CONNECTACK from test: already connected
Oct 13 15:45:26 srvdhcp dhcpcd[17259]: Failover CONNECTACK from test: already connected
Oct 13 15:45:31 srvdhcp systemd-timesyncd[270]: Timed out waiting for reply from 162.159.200.1:123 (1.debian.pool.ntp.org).
Oct 13 15:45:31 srvdhcp dhcpcd[17259]: Failover CONNECTACK from test: already connected
Oct 13 15:45:36 srvdhcp dhcpcd[17259]: Failover CONNECTACK from test: already connected
root@srvdhcp:/etc/dhcp#

```

Dans les logs du serveur dhcp master on voit ceci

La liaison c'est correctement effectuer je vais maintenant stopper le serveur dhcp master et demander une ip avec une machine pour voir si c'est le slave qui répond  
Ça fonctionne correctement

```
Oct 13 16:06:13 srvdhcp dhcpcd[17567]: Failover CONNECTACK from test: already connected
Oct 13 16:06:18 srvdhcp dhcpcd[17567]: Failover CONNECTACK from test: already connected
Oct 13 16:06:23 srvdhcp dhcpcd[17567]: Failover CONNECTACK from test: already connected
Oct 13 16:06:28 srvdhcp dhcpcd[17567]: Failover CONNECTACK from test: already connected
Oct 13 16:06:33 srvdhcp dhcpcd[17567]: Failover CONNECTACK from test: already connected
Oct 13 16:06:38 srvdhcp dhcpcd[17567]: Failover CONNECTACK from test: already connected
Oct 13 16:06:43 srvdhcp dhcpcd[17567]: DHCPDISCOVER from 00:15:5d:13:1a:08 via eth0: load balance to peer test
Oct 13 16:06:43 srvdhcp dhcpcd[17567]: DHCPDISCOVER from 00:15:5d:13:1a:08 via 172.17.1.1: load balance to peer test
Oct 13 16:06:43 srvdhcp dhcpcd[17567]: Failover CONNECTACK from test: already connected
Oct 13 16:06:44 srvdhcp dhcpcd[17567]: DHCPREQUEST for 172.17.1.6 (172.17.1.84) from 00:15:5d:13:1a:08 via eth0: lease owned by peer
Oct 13 16:06:44 srvdhcp dhcpcd[17567]: DHCPREQUEST for 172.17.1.6 (172.17.1.84) from 00:15:5d:13:1a:08 via 172.17.1.1: lease owned by peer
Oct 13 16:06:48 srvdhcp dhcpcd[17567]: Failover CONNECTACK from test: already connected
```

Je

réactive le DHCP primaire et je refais une demande de bail avec la même machine

C'est bien le primaire qui répond

```
(root@kali)~# dhclient -v
Internet Systems Consortium DHCP Client 4.4.1
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For info, please visit https://www.isc.org/software/dhcp/

Listening on LPF/eth0/00:15:5d:13:1a:08
Sending on LPF/eth0/00:15:5d:13:1a:08
Sending on Socket/fallback
DHCPREQUEST for 172.17.1.6 on eth0 to 255.255.255.255 port 67
DHCPACK of 172.17.1.6 from 172.17.1.88
RTNETLINK answers: File exists
bound to 172.17.1.6 -- renewal in 1735 seconds.
```

Tout fonctionne donc correctement