

Actividad B2 – GONZALO OSCO HERNANDEZ

Crear 3 redes de ejemplo y proceder a asociar a los contenedores.

Para este ejercicio usaremos los siguientes contenedores que ya fueron creados anteriormente.

```
lxc list
```

```
gonzalo@HP-Pavilion-Notebook: ~$ lxc list
```

NAME	STATE	IPV4	IPV6	TYPE	SNAPSHOTS
media-server	RUNNING	10.19.238.103 (eth0)	fd42:79fd:5a0d:6889:216:3eff:fe19:44bb (eth0)	CONTAINER	0
nfs-server	RUNNING	10.19.238.246 (eth0)	fd42:79fd:5a0d:6889:216:3eff:fe6a:62fe (eth0)	CONTAINER	0
repository-server	RUNNING	10.19.238.248 (eth0)	fd42:79fd:5a0d:6889:216:3eff:fe33:5c11 (eth0)	CONTAINER	0

Seguidamente se procede a crear tres nuevas redes, que corresponden a los segmentos 10.10.10.0/24, 10.10.20.0/24, 10.10.30.0/24.

```
lxc network create dev-network ipv6.address=None ipv4.address=10.10.10.1/24 ipv4.nat=true
lxc network create qa-network ipv6.address=None ipv4.address=10.10.20.1/24 ipv4.nat=true
lxc network create auto-network ipv6.address=None ipv4.address=10.10.30.1/24
lxc network create auto-network ipv6.address=None ipv4.address=10.10.30.1/24
```

```
gonzalo@HP-Pavilion-Notebook: ~$ lxc network list
```

NAME	TYPE	MANAGED	DESCRIPTION	USED BY
auto-network	bridge	YES		3
dev-network	bridge	YES		1
eno1	physical	NO		0
lxdbr0	bridge	YES		3
qa-network	bridge	YES		0

Adjuntamos las nuevas redes a los contenedores repository-server y nfs-server.

```
lxc network attach dev-network repository-server eth1
lxc network attach qa-network repository-server eth2
lxc network attach auto-network nfs-server eth1
lxc network attach auto-network media-server eth1
```

Luego editamos el archivo interfaces para configurar las nuevas interfaces en el servidor repository-server.

```
lxc file edit repository-server/etc/network/interfaces
```

Agregamos las siguientes instrucciones.

```
auto eth1
iface eth1 inet dhcp
auto eth2
iface eth2 inet dhcp
```

Posteriormente reiniciamos la interfaz para ver los cambios.

```
lxc exec repository-server /etc/init.d/networking restart
```

Se realiza la misma acción para el servidor nfs-server.

```
lxc file edit nfs-server/etc/network/interfaces
```

```
auto eth1
iface eth1 inet dhcp
```

```
lxc exec nfs-server /etc/init.d/networking restart
```

Se realiza la misma acción para el servidor media-server.

```
lxc file edit media-server/etc/network/interfaces
```

```
auto eth1
iface eth1 inet dhcp
```

```
lxc exec media-server /etc/init.d/networking restart
```

```
gonzalohk@HP-Pavilion-Notebook: ~  
gonzalohk@HP-Pavilion-Notebook:~$ lxc exec nfs-server /etc/init.d/networking restart  
[ ok ] Restarting networking (via systemctl): networking.service.  
gonzalohk@HP-Pavilion-Notebook:~$ lxc list
```

NAME	STATE	IPV4	IPV6	TYPE	SNAPSHOTS
media-server	RUNNING	10.19.238.103 (eth0)	fd42:79fd:5a0d:6889:216:3eff:fe19:44bb (eth0)	CONTAINER	0
nfs-server	RUNNING	10.19.238.246 (eth0) 10.10.30.96 (eth1)	fd42:79fd:5a0d:6889:216:3eff:fe6a:62fe (eth0)	CONTAINER	0
repository-server	RUNNING	10.19.238.248 (eth0) 10.10.20.243 (eth2) 10.10.10.53 (eth1)	fd42:79fd:5a0d:6889:216:3eff:fe33:5c11 (eth0)	CONTAINER	0

```
gonzalohk@HP-Pavilion-Notebook:~$
```

Probamos si existe conexión entre el servidor media-server y nfs-server

```
lxc exec media-server ping 10.10.30.96
```

```
gonzalohk@HP-Pavilion-Notebook: ~  
gonzalohk@HP-Pavilion-Notebook:~$ lxc exec media-server ping 10.10.30.96  
PING 10.10.30.96 (10.10.30.96) 56(84) bytes of data.  
64 bytes from 10.10.30.96: icmp_seq=1 ttl=64 time=0.133 ms  
64 bytes from 10.10.30.96: icmp_seq=2 ttl=64 time=0.096 ms  
64 bytes from 10.10.30.96: icmp_seq=3 ttl=64 time=0.090 ms  
64 bytes from 10.10.30.96: icmp_seq=4 ttl=64 time=0.121 ms  
64 bytes from 10.10.30.96: icmp_seq=5 ttl=64 time=0.102 ms  
^X64 bytes from 10.10.30.96: icmp_seq=6 ttl=64 time=0.097 ms  
64 bytes from 10.10.30.96: icmp_seq=7 ttl=64 time=0.138 ms  
^X^X^C  
--- 10.10.30.96 ping statistics ---  
7 packets transmitted, 7 received, 0% packet loss, time 135ms  
rtt min/avg/max/mdev = 0.090/0.111/0.138/0.017 ms  
gonzalohk@HP-Pavilion-Notebook:~$
```

Para hacer las últimas pruebas desacoplamos la red qa-network del repository-server y acoplamos la red auto-network al mismo server.

```
lxc network detach qa-network repository-server  
lxc network attach auto-network repository-server eth2  
lxc exec repository-server /etc/init.d/networking restart
```

Luego, listamos los contenedores para ver los detalles los últimos cambios realizados.

NAME	STATE	IPV4	IPV6	TYPE	SNAPSHOTS
media-server	RUNNING	10.19.238.103 (eth0) 10.10.30.147 (eth1)	fd42:79fd:5a0d:6889:216:3eff:fe19:44bb (eth0)	CONTAINER	0
nfs-server	RUNNING	10.19.238.246 (eth0) 10.10.30.96 (eth1)	fd42:79fd:5a0d:6889:216:3eff:fe6a:62fe (eth0)	CONTAINER	0
repository-server	RUNNING	10.19.238.248 (eth0) 10.10.30.40 (eth2) 10.10.10.53 (eth1)	fd42:79fd:5a0d:6889:216:3eff:fe33:5c11 (eth0)	CONTAINER	0

Finalmente, probamos si existe conexión entre el servidor media-server y repository-server

```
lxc exec repository-server ping 10.10.30.147
```

```
gonzalo@HP-Pavilion-Notebook: ~$ lxc exec repository-server ping 10.10.30.147
PING 10.10.30.147 (10.10.30.147) 56(84) bytes of data:
64 bytes from 10.10.30.147: icmp_seq=1 ttl=64 time=0.107 ms
64 bytes from 10.10.30.147: icmp_seq=2 ttl=64 time=0.107 ms
64 bytes from 10.10.30.147: icmp_seq=3 ttl=64 time=0.094 ms
64 bytes from 10.10.30.147: icmp_seq=4 ttl=64 time=0.116 ms
64 bytes from 10.10.30.147: icmp_seq=5 ttl=64 time=0.110 ms
64 bytes from 10.10.30.147: icmp_seq=6 ttl=64 time=0.095 ms
64 bytes from 10.10.30.147: icmp_seq=7 ttl=64 time=0.119 ms
^C
--- 10.10.30.147 ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 141ms
rtt min/avg/max/mdev = 0.094/0.106/0.119/0.016 ms
gonzalo@HP-Pavilion-Notebook: ~$
```