DEMO 3 : Configurer dynamiquement une interface réseau Ethernet

ping et ping6

Demande ICMP pour un envoi, vers une adresse existante :

```
# ping -c 1 192.168.1.108
PING 192.168.1.108 (192.168.1.108) 56(84) bytes of data.
64 bytes from 192.168.1.108: icmp_seq=1 ttl=64 time=0.450 ms
--- 192.168.1.108 ping statistics ---
1 packets transmitted, 1 received, 0% packet loss, time 0ms
rtt min/avg/max/mdev = 0.450/0.450/0.450/0.000 ms
```

Demande ICMP pour un envoi, vers une adresse inactive (ou ne répondant pas aux demandes ICMP) :

```
# ping -c 1 192.168.1.100
PING 192.168.1.100 (192.168.1.100) 56(84) bytes of data.
From 192.168.1.140 icmp_seq=1 Destination Host Unreachable

--- 192.168.1.100 ping statistics ---
1 packets transmitted, 0 received, +1 errors, 100% packet loss, time 0ms
```

Demande ICMP pour un envoi, vers un hôte d'un autre réseau/sous-réseau :

```
# ping -c 1 www.google.com
PING www.google.com(par10s38-in-x04.1e100.net (2a00:1450:4007:805::2004))
56 data bytes
64 bytes from par10s38-in-x04.1e100.net (2a00:1450:4007:805::2004):
icmp_seq=1 ttl=116 time=1.78 ms
--- www.google.com ping statistics ---
1 packets transmitted, 1 received, 0% packet loss, time 0ms
rtt min/avg/max/mdev = 1.777/1.777/1.777/0.000 ms
```

Demande ICMP pour un envoi, vers un sous-réseau inconnu du routeur :

```
# ping -c1 192.168.2.1
PING 192.168.2.1 (192.168.2.1) 56(84) bytes of data.
From 192.168.1.254 icmp_seq=1 Destination Host Unreachable
--- 192.168.2.1 ping statistics ---
1 packets transmitted, 0 received, +1 errors, 100% packet loss, time 0ms
```

⇨ Le routeur répond à la demande ICMP par un message d'erreur ICMP : Destination Host Unreachable.

Demande, en mode IPv6, vers un hôte d'un autre réseau/sous-réseau :

```
# ping6 -c 1 www.centos.org
PING www.centos.org(2a05:d01c:c6a:cc02:e4d3:88b0:60da:6fb4
(2a05:d01c:c6a:cc02:e4d3:88b0:60da:6fb4)) 56 data bytes
64 bytes from 2a05:d01c:c6a:cc02:e4d3:88b0:60da:6fb4
(2a05:d01c:c6a:cc02:e4d3:88b0:60da:6fb4): icmp_seq=1 ttl=225 time=10.5 ms
--- www.centos.org ping statistics ---
1 packets transmitted, 1 received, 0% packet loss, time 0ms
rtt min/avg/max/mdev = 10.515/10.515/10.515/0.000 ms
```

Demande en mode broadcast (10 envois) pour le sous-réseau de la machine :

```
# ping -c10 -b 192.168.1.255
```

```
WARNING: pinging broadcast address
PING 192.168.1.255 (192.168.1.255) 56(84) bytes of data.
64 bytes from 192.168.1.115: icmp_seq=1 ttl=64 time=6.01 ms
64 bytes from 192.168.1.180: icmp_seq=1 ttl=64 time=71.7 ms
64 bytes from 192.168.1.115: icmp_seq=2 ttl=64 time=3.02 ms
64 bytes from 192.168.1.180: icmp_seq=2 ttl=64 time=52.2 ms
64 bytes from 192.168.1.115: icmp_seq=3 ttl=64 time=5.59 ms
64 bytes from 192.168.1.180: icmp_seq=3 ttl=64 time=33.6 ms
64 bytes from 192.168.1.115: icmp_seq=4 ttl=64 time=5.69 ms
64 bytes from 192.168.1.180: icmp_seq=4 ttl=64 time=15.9 ms
64 bytes from 192.168.1.115: icmp_seq=5 ttl=64 time=2.84 ms
64 bytes from 192.168.1.180: icmp_seq=5 ttl=64 time=242 ms
64 bytes from 192.168.1.115: icmp_seq=6 ttl=64 time=2.89 ms
64 bytes from 192.168.1.180: icmp_seq=6 ttl=64 time=224 ms
64 bytes from 192.168.1.115: icmp_seq=7 ttl=64 time=5.33 ms
64 bytes from 192.168.1.180: icmp_seq=7 ttl=64 time=206 ms
64 bytes from 192.168.1.115: icmp_seq=8 ttl=64 time=2.85 ms
64 bytes from 192.168.1.180: icmp_seq=8 ttl=64 time=188 ms
64 bytes from 192.168.1.115: icmp_seq=9 ttl=64 time=2.88 ms
64 bytes from 192.168.1.180: icmp_seq=9 ttl=64 time=170 ms
64 bytes from 192.168.1.115: icmp_seq=10 ttl=64 time=55.0 ms

--- 192.168.1.255 ping statistics ---
10 packets transmitted, 10 received, +9 duplicates, 0% packet loss, time
9013ms
rtt min/avg/max/mdev = 2.838/68.210/241.899/85.730 ms
```

⇨ Deux machines ont répondu, alors que d'autres machines sont actives sur ce sous-réseau.