

Configuration de l'Etherchannel

Etherchannel permet l'agrégation de lien. Il est utilisé pour augmenter la bande passante entre deux switches.

Introduction

Nous allons utiliser la topologie suivante :[cisco-lacp.png](#)

LACP

Configuration sur le 3750

```
3750#conf t
3750(config)#interface range fastEthernet 1/0/1 - 2
3750(config-if-range)#channel-protocol lacp
3750(config-if-range)#channel-group 1 mode active
```

Configuration sur le 3550

```
3550#conf t
3550(config)#interface range fastEthernet 0/1 - 2
3550(config-if-range)#channel-protocol lacp
3550(config-if-range)#channel-group 1 mode active
```

Vérification

```
3750#sh interfaces port-channel 1
Port-channel1 is up, line protocol is up (connected)
  Hardware is EtherChannel, address is 2037.0606.7484 (bia 2037.0606.7484)
  MTU 1500 bytes, BW 200000 Kbit, DLY 100 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Full-duplex, 100Mb/s, link type is auto, media type is unknown
  input flow-control is off, output flow-control is unsupported
  Members in this channel: Fa1/0/1 Fa1/0/2
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:00, output 00:21:40, output hang never
  Last clearing of "show interface" counters never
```

```
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
 1153 packets input, 132950 bytes, 0 no buffer
Received 895 broadcasts (0 multicasts)
 0 runts, 0 giants, 0 throttles
 0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
 0 watchdog, 895 multicast, 0 pause input
 0 input packets with dribble condition detected
490 packets output, 66172 bytes, 0 underruns
 0 output errors, 0 collisions, 1 interface resets
 0 babbles, 0 late collision, 0 deferred
 0 lost carrier, 0 no carrier, 0 PAUSE output
 0 output buffer failures, 0 output buffers swapped out
3750#
```

- Ligne 2 : Le port-channel 1 est passé UP
- Ligne 4 : BW (bandwidth) est à 200Mbps (2x100Mbps)
- Ligne 9 : Membres Fa1/0/1 et Fa1/0/2

PAGP

Le PAgP est un protocole propriétaire Cisco. Il se configure comme suit :

Configuration sur le 3750

```
3750#conf t
3750(configure)#interface range f1/0/1 - 2
3750(configure-if-range)#channel-group 2 mode auto
3750(configure-if-range)#end
```

Configuration sur le 3550

```
3550#conf t
3550(configure)#interface range f0/1 - 2
3550(configure-if-range)#channel-group 2 mode desirable
3550(configure-if-range)#end
```

Vérification


```
dst-mac      Dst Mac Addr
src-dst-ip   Src XOR Dst IP Addr
src-dst-mac  Src XOR Dst Mac Addr
src-ip       Src IP Addr
src-mac      Src Mac Addr
```

```
3750(config)#port-channel load-balance
```

Le 3750 étant un switch de niveau 3, j'ai accès à tous les modes.

Agrégation de niveau 3

Cette partie est en bêta

Configuration sur le 3750

```
3750(config)#interface range fastEthernet 1/0/1 - 2
3750(config-if-range)#channel-group 3 mode on
3750(config-if-range)#no switchport
3750(config-if-range)#exit
3750(config-if)exit
3750(config)#interface port-channel 3
3750(config-if)#no switchport
3750(config-if)#ip address 10.0.0.1 255.255.255.0
3750(config-if)#no shutdown
3750(config-if)exit
3750(config)ip routing
3750(config)router ospf 1
3750(config-router)#network 10.0.0.0 0.0.0.255 area 0
3750(config-router)#exit
3750(config)#do wr
```

Configuration sur le 3550

```
3550(config)#interface range fastEthernet 0/1 - 2
3550(config-if-range)#channel-group 3 mode on
3550(config-if-range)#no switchport
3550(config-if-range)#exit
3550(config-if)exit
3550(config)#interface port-channel 3
3550(config-if)#no switchport
```

```
3550(config-if)#ip address 10.0.0.2 255.255.255.0
3550(config-if)#no shutdown
3550(config-if)exit
3550(config)ip routing
3550(config)router ospf 1
3550(config-router)#network 10.0.0.0 0.0.0.255 area 0
3550(config-router)#exit
3550(config)#do wr
```

Vérification de l'OSPF

```
3750#sh ip ospf neighbor

Neighbor ID      Pri   State           Dead Time   Address      Interface
172.16.3.202    1     FULL/BDR        00:00:30   10.0.0.2     Port-channel3
3750#
3750#sh ip route
Codes: C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route

Gateway of last resort is not set

    172.16.0.0/24 is subnetted, 1 subnets
C       172.16.3.0 is directly connected, Vlan1
    10.0.0.0/24 is subnetted, 1 subnets
C       10.0.0.0 is directly connected, Port-channel3
```

Test de ping entre les deux switches

```
3750#ping 10.0.0.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.0.2, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/2/8 ms
```

3750#

Revision #2

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