# Lab 3.2 Konfigurácia PaGP a LACP EtherChannel. L2/L3 etherchannel

# Topo



# Požadované kroky

* Premazanie prepínačov

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Task** | | | **Konfigurácia** | | | **Verifikácia** |
| **Príprava:**   * Premaž prepínače * Vytvor VTP v2 doménu s heslom *PROTECT,* server*y* budú DLS, klienti ALS * Vytvor VLAN:   + 99, Manazment, vlož všetky prepínače do VLan   + 100, Users, vlož fa0/5 | | | | | | |
| **Etherchannel** | | | | | | |
| * Konfiguruj L2 etherchannel porty podľa obrázku (PAGP a LACP) | | | | | | |
| **PAGP** | Príklad: DLS1  Int range fa 0/7 – 8  Channel-group 2 mode desirable  Int port-channel 2  Switchport trunk encapsulation dot1q  Switchport mode trunk | | | Príklad: ALS1  Int range fa 0/7 – 8  Channel-group 2 mode desirable | auto  Int port-channel 2  Switchport mode trunk | | Sh etherchannel summary  Sh etherchannel  Sh int trunk  show spanning tree |
| **LACP** | DLS1  Int range fa 0/9 – 10  Channel-group 4 mode active  Int port-channel 4  Switchport trunk encapsulation dot1q  Switchport mode trunk | | | ALS1  Int range fa 0/9 – 10  Channel-group 4 mode active | passive  Int port-channel 4  Switchport mode trunk | | Sh etherchannel summary  Sh etherchannel detail |
| POZN: pri zmenách z jedného bonding protokolu iný najprv v range zhoď dané fyzické porty, sprav zmeny a nahoď ich späť | | | | | |  |
| Aká je kapacita logických portov? | | | | | | Sh int port # |
| **Experiment – chyba v bonding protokole** | | | | | | |
| Sprav umelo chybu medzi svojim ALS a DLS zmenou jedného konca etherchannelu, pozoruj zmeny v show príkaze | | Sho etherchannel summary | | | | |
| Môžu sa objaviť logovacie hlášky od Etherchannel Msconfig Guide | | | | | | |
| Koriguj chybu do správnej činnosti. Over. | | | | | | |
| **Load balancing** | | | | | | |
| Aká je default load balance metóda?  Je rozdiel medzi platformami? | | Show etherchannel load-balance | | | | |
| Nastav typ, ktorý zohľadní zdrojovú a cieľovú IP adresu | | port-channel load-balance src-dst-ip | | | | Show etherchannel load-balance |
| **Testovanie LB** | | | | | | |
| Vymysli si zdrojovú a cieľovú IP adresu | | test etherchannel load-balance in po 2 ip 10.1.99.103 10.1.99.203 | | | |  |
| **Vytvorenie L3 etherchannel** | | | | | | |
| Etherchannel je možné vytvárať na L2 ako aj na L3 linkách MLS prepínačov. Skonvertujeme etherchannel medzi DLS na L3 lnku. | | | | | | |
| Zrušíme port 1 a resetneme nastavenie int fa0/11-12 do default stavu1 | | DLS1  No int port-channel 1  default iint ra fa 0/11-12 | | | DLS2  No int po 1  default iint ra fa 0/11-12 | Sh run |
| Vytvor etherchannel a nastav ho ako L3 port | | Int ra fa 0/11-12  Channel-group 1 mode desirable  No switchport | | | Int ra fa 0/11-12  Channel-group 1 mode desirable  No switchport |  |
| Nastav portchannelu IP adresy, over ping | | Int port 1  No switchport  Ip add 1.0.0.1 255.255.255.0 | | | Int port 1  No switchport  Ip add 1.0.0.2 255.255.255.0 | Sh ether summ  Sh ip int brie  Ping |

# Overenia a listingy

## Chyba v etherchannel

Jedna strane je PAGP, druhá LACP

DLS1(config-if)#do sh ether sum

Flags: D - down P - bundled in port-channel

I - stand-alone s - suspended

H - Hot-standby (LACP only)

R - Layer3 S - Layer2

U - in use f - failed to allocate aggregator

M - not in use, minimum links not met

u - unsuitable for bundling

w - waiting to be aggregated

d - default port

Number of channel-groups in use: 2

Number of aggregators: 2

Group Port-channel Protocol Ports

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2 Po2(SD) PAgP Fa0/7(I) Fa0/8(I)

ALS1#sh ether sum

Flags: D - down P - bundled in port-channel

I - stand-alone s - suspended

H - Hot-standby (LACP only)

R - Layer3 S - Layer2

U - in use f - failed to allocate aggregator

M - not in use, minimum links not met

u - unsuitable for bundling

w - waiting to be aggregated

d - default port

Number of channel-groups in use: 1

Number of aggregators: 1

Group Port-channel Protocol Ports

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2 Po2(SD) LACP Fa0/7(I) Fa0/8(I)

## Load Balance

### 3560v2

DLS1#sh etherchannel load-balance

EtherChannel Load-Balancing Configuration:

src-mac

EtherChannel Load-Balancing Addresses Used Per-Protocol:

Non-IP: Source MAC address

IPv4: Source MAC address

IPv6: Source MAC address

### 2960

ALS1#sh etherchannel load-balance

EtherChannel Load-Balancing Configuration:

src-mac

## Load Balance test

DLS1#test etherchannel load-balance in po 2 ip 10.1.99.103 10.1.99.203

Would select Fa0/8 of Po2

DLS1#test etherchannel load-balance in po 2 ip 10.1.99.103 10.1.99.203

Would select Fa0/8 of Po2

DLS1#test etherchannel load-balance in po 2 ip 10.1.99.103 10.1.99.204

Would select Fa0/7 of Po2

# L3 EtherChannel

## Funkčný

DLS2#sh etherchannel summary

Flags: D - down P - bundled in port-channel

I - stand-alone s - suspended

H - Hot-standby (LACP only)

R - Layer3 S - Layer2

U - in use f - failed to allocate aggregator

M - not in use, minimum links not met

u - unsuitable for bundling

w - waiting to be aggregated

d - default port

Number of channel-groups in use: 1

Number of aggregators: 1

Group Port-channel Protocol Ports

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1 Po1(RU) PAgP Fa0/11(P) Fa0/12(P)