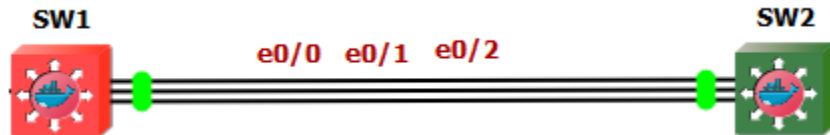


Layer 3, EtherChannel:

- o Layer 3 EtherChannel is as a single port configured in routed mode.
- o Layer 3 EtherChannel or port channel is configured with no switchport.
- o There is no concept of VLANs an IP address is associated to the port-channel.
- o Logical interface and no ip address is configured under member interfaces.
- o Layer 3 port channel are used for interconnecting routers with routers.
- o Layer 3 port channel are used for interconnecting routers with Layer 3 switches.



SW1 Layer 3 Etherchannel Configuration	
SW1(config)#default interface range e0/0-2	
SW1(config)#no interface port-channel 1	
SW1(config)#interface range ethernet 0/0-2	
SW1(config-if-range)#no switchport	
SW1(config-if-range)#no ip address	
SW1(config-if-range)#channel-group 1 mode on	
SW1(config)#interface port-channel 1	
SW1(config-if)# ip address 192.168.0.100 255.255.255.0	
SW1# show etherchannel summary	
SW1# show etherchannel detail	
SW1# show etherchannel port-channel	
SW2 Layer 3 Etherchannel Configuration	
SW2(config)#default interface range e0/0-2	
SW2(config)#no interface port-channel 1	
SW2(config)#interface range ethernet 0/0-2	
SW2(config-if-range)#no switchport	
SW2(config-if-range)#no ip address	
SW2(config-if-range)#channel-group 1 mode on	
SW2(config)#interface port-channel 1	
SW2(config-if)# ip address 192.168.0.200 255.255.255.0	
SW2# show etherchannel summary	
SW2# show etherchannel detail	

Group	Port-channel	Protocol	Ports
1	Po1(RU)	RLayer 3	Et0/0(P) Et0/1(P) Et0/2(P)

LACP			PAgP			Static Persistence	
	Active	Passive		Desirable	Auto		On
Active	Yes	Yes	Desirable	Yes	Yes	On	Yes
Passive	Yes	No	Auto	Yes	No	On	Yes

```

S1#show 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       N - not in use, no aggregation
       f - failed to allocate aggregator

       M - not in use, minimum links not met
       m - not in use, port not aggregated due to minimum links not met
       u - unsuitable for bundling
       w - waiting to be aggregated
       d - default port

       A - formed by Auto LAG

```

```

Number of channel-groups in use: 1
Number of aggregators:          1

```

```

Group  Port-channel  Protocol  Ports
-----+-----+-----+-----
1      Po1(SU)          LACP      Et0/0(P)  Et0/1(P)  Et0/2(P)

```

Logical EtherChannel Interface Status Fields	
Field	Description
U	The EtherChannel interface is working properly.
D	The EtherChannel interface is down.
M	EtherChannel interface has successfully established at least one LACP adjacency.
S	The port-channel interface is configured for Layer 2 switching.
R	The port-channel interface is configured for Layer 3 routing.

EtherChannel Member Interface Status Fields	
Field	Description
P	The interface is actively participating and forwarding traffic for this port channel.
H	The port-channel is configured with the maximum number of active interfaces.
I	The member interface has not detected any LACP activity on this interface and is treated as an individual.
w	There is time left to receive packet from neighbor to ensure that it is still alive.
s	The member interface is in a suspended state.