

LACP (Link Aggregation Control Protocol):

- o Link Aggregation Control Protocol (LACP) is the open standard 802.3ad.
- o Combine multiple links into a single logical link to increase the bandwidth.
- o All links participating in a single logical link must have the same settings.
- o All ports participating must have the same speed and duplex configuration.
- o All ports participating in single logical link must be in the same Switch VLAN.
- o All ports participating in single logical link must be in same operational mode.
- o No ports participating in single logical link can have SPAN configured on SW.
- o Can have up to 16 ports in LACP EtherChannel only 8 can be active at a time.
- o The LACP protocol can be configured in either **passive** mode or **active** mode.
- o In the active mode, the port or the interface actively tries to bring up LACP.
- o In the passive mode, it does not initiate the negotiation of LACP protocol.
- o LACP advertises messages with the multicast MAC address **0180:C200:0002**.

PAgP (Port Aggregation Protocol):

- o PAgP stand for Port Aggregation Protocol and cisco proprietary protocol.
- o It also creates EtherChannel links and is configured similarly to LACP.
- o PAgP automatically configure individual ports into a single logical link.
- o There are also two modes for the Port Aggregation Protocol (PAgP).
- o **Auto** is the passive negotiating state, which responds to PAgP packets.
- o **Desirable** mode places interface or port into an active negotiating state.
- o Having two ends of a PAgP link in auto mode will not result in a PAgP link.
- o Because neither side will negotiate to bring up the PAgP EtherChannel.
- o PAgP advertises messages with multicast MAC address **0100:0CCC:CCCC**.
- o You can have up to eight ports in a single PAgP EtherChannel or logical link.
- o All ports in PAgP EtherChannel must have the same speed & duplex settings.

EtherChannel Static (Manual):

- o The Cisco switchports can be configured to bypass LACP or PAgP protocols.
- o It is simply changing the mode to **ON** both sides of the Cisco Switches.
- o This mode is used to manually configure the EtherChannel or Port Channel.
- o This mode can be used if device on other end does not support PAgP or LACP.

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