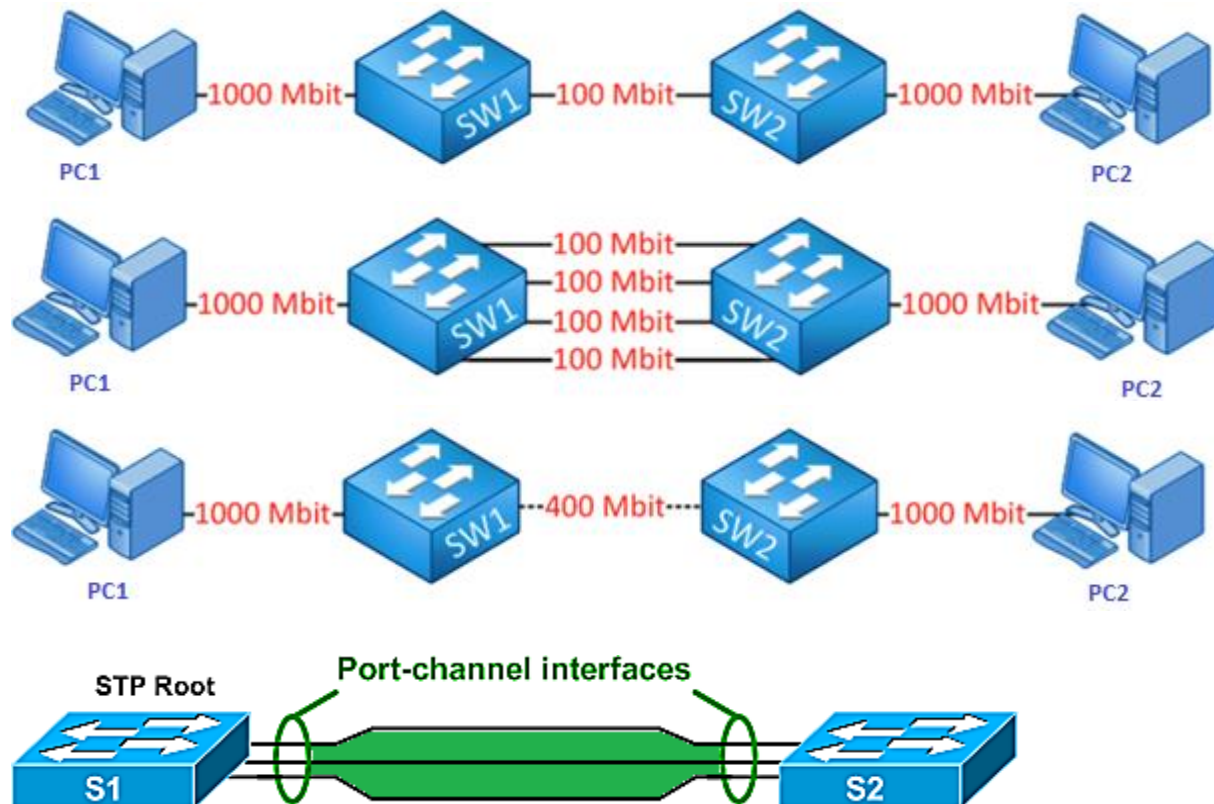
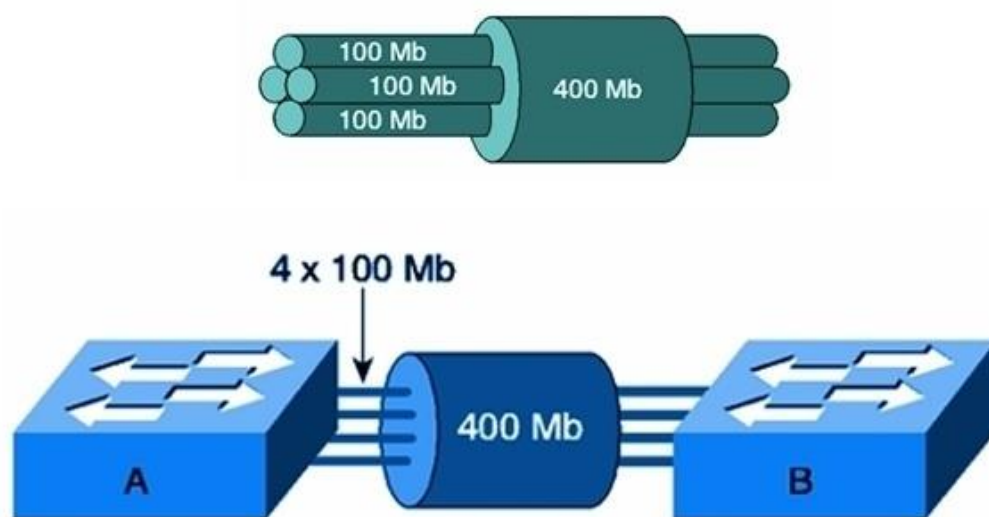


Introduction to EtherChannel:

- o Etherchannel, which is also, known as link aggregation or port channel.
- o Etherchannel bundle multiple physical links into a single logical link or port.
- o Technique to combine multiple physical link to make a single logical link.
- o Etherchannel can be used for load balancing or load sharing & fault tolerance.
- o Etherchannel also known as bundling, port channel or EtherChannel bundle.
- o EtherChannel or port channel have three modes LACP, PAgP and ON mode.
- o Etherchannel Increased bandwidth, increased availability and Load Sharing.
- o Etherchannel provide Auto Configuration, Faster convergence & cheaper solution.
- o Etherchannel require same duplex, speed, native, allowed VLANs & switchport mode.
- o Etherchannel load not equally distributed across all links bundled in Etherchannel.
- o In EtherChannel Load balancing is done based on flows, not based on packets.
- o By default, Layer 2 packets are distributed on source & destination MAC address
- o By default, Layer 3 packets based on source and destination IP address.
- o Maximum of eight interfaces can be aggregated to form a single logical link.
- o Channel must be made up of minimum two ports and maximum 8 interfaces.
- o EtherChannel or Port Channel can be configured either manually or dynamically.
- o EtherChannel port groups can be run from Switch-to-Switch or Switch-to-Server.



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



Steps for EtherChannel Configuration:

Before starting the configuration of EtherChannel, we should consider the following guidelines:

- o Port-channel interface configuration changes affect the EtherChannel.
- o The physical interface configuration changes affect the interface only.
- o EtherChannel cannot be used if SPAN is a destination port.
- o All interfaces within an EtherChannel must have same configuration.
- o All interfaces within an EtherChannel must have same speed and duplex.
- o All interfaces within an EtherChannel must have same mode (access or trunk).
- o Same native and allowed VLANs on trunk ports.
- o Same access VLAN on access ports.
- o Configure these parameters on the port-channel interface.