Chapter 5: Quiz – VLAN Trunks and EtherChannel Bundles (Answers) CCNPv8 ENCOR

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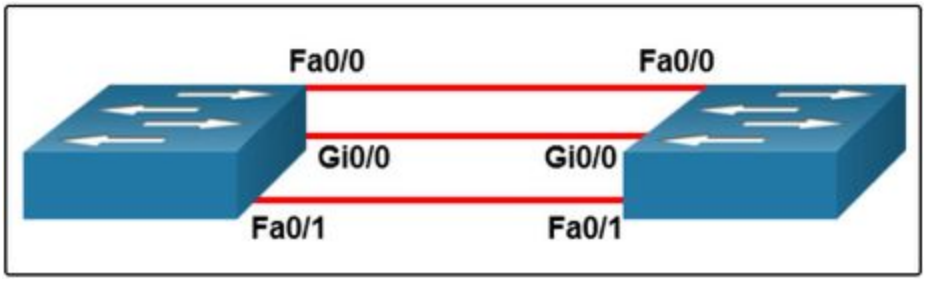
49. What protocol or technology manages trunk negotiations between switches?

- **DTP**
- STP
- EtherChannel
- VTP

50. Refer to the exhibit. An administrator tried to implement an EtherChannel between two switches by grouping the six physical ports as shown. However, the administrator was not successful. What is the reason for that?



- An EtherChannel link can only be created between Layer 3 switches.
- **An EtherChannel link can only be formed by grouping interfaces of the same type.**
- An EtherChannel link can only be implemented on Gigabit Ethernet interfaces.
- An EtherChannel link can only be implemented on Fast Ethernet interfaces.

Explanation: Fast Ethernet and Gigabit Ethernet interfaces cannot be combined into a single EtherChannel interface. The interfaces must all be of the same type. EtherChannel links can be configured on Layer 2 and Layer 3 switches.

51. What is the effect of entering the switchport mode trunk and switchport nonegotiate interface configuration commands on a Cisco Catalyst 2960 switch that is connected to a switch that does not support DTP?

- It will cause the port to generate DTP frames.
- It will cause the port to become an access port.
- **It will cause the interface to become a trunk but not generate DTP frames.**
- It will set the port as dynamic desirable.

Explanation: When a non-Cisco device that does not support DTP is connected to a Cisco device that supports DTP, the commands `switchport mode trunk` and `switchport nonegotiate` have to be entered on the respective interfaces in order to create the trunk between the two connected devices. Scaling networks: 3.2.3

52. Which feature could be used in a network design to increase the bandwidth by combining multiple physical links into a single logical link?

- VLANs
- trunk sports
- subinterfaces
- **EtherChannel**

Explanation: VLANs create several groups of users which use a single physical link. Trunk ports are single physical links. Subinterfaces allow one physical link to be used to create several logical links. EtherChannel provides the ability to combine multiple physical links into a single logical link.

53. A network administrator is planning to add a new switch to the network. What should the network administrator do to ensure the new switch exchanges VTP information with the other switches in the VTP domain?

- **Configure the correct VTP domain name and password on the new switch.**
- Associate all ports of the new switch to a VLAN that is not VLAN 1.
- Configure the VLANs on the new switch.
- Configure all ports on the new switch to access mode.

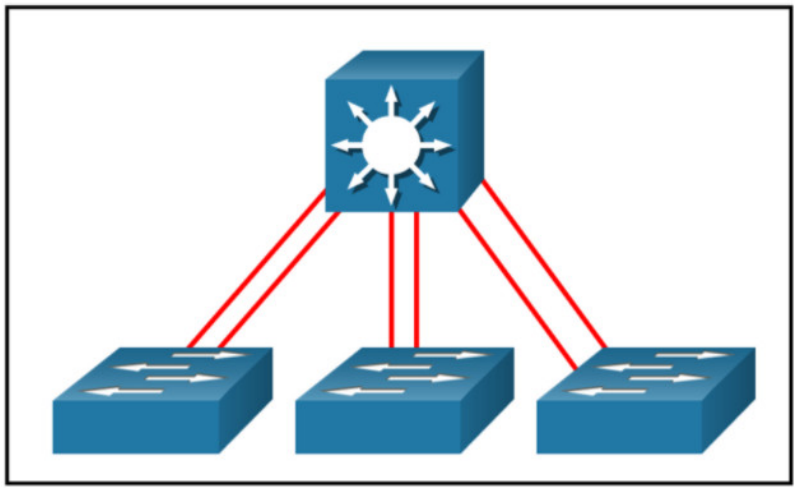
Explanation: In order to exchange VTP information, the new switch must be configured with the same VTP domain name and password as the other switches in the network.

54. Which statement describes a characteristic of EtherChannel?

- It can combine up to a maximum of 4 physical links.
- It can bundle mixed types of 100Mb/s and 1Gb/s Ethernet links.
- It consists of multiple parallel links between a switch and a router.
- **It is made by combining multiple physical links that are seen as one link between two switches.**

Explanation: An EtherChannel is formed by combining multiple (same type) Ethernet physical links so they are seen and configured as one logical link. It provides an aggregated link between two switches. Currently each EtherChannel can consist of up to eight compatibly configured Ethernet ports.

55. Refer to the exhibit. Which switching technology would allow data to be transmitted over each access layer switch link and prevent the port from being blocked by spanning-tree because of the redundant link?



- **EtherChannel**
- HSRP
- PortFast
- trunking

Explanation: PortFast is used to reduce the amount of time that a port spends going through the spanning-tree algorithm, so that devices can start sending data sooner. Trunking can be implemented in conjunction with EtherChannel, but trunking alone does not aggregate switch links. HSRP is used to load-balance traffic across two different connections to Layer 3 devices for default gateway redundancy. HSRP does not aggregate links at either Layer 2 or Layer 3 as EtherChannel does.

56. Which technology is an open protocol standard that allows switches to automatically bundle physical ports into a single logical link?

- Multilink PPP
- DTP
- **LACP**
- PAgP

Explanation: LACP, or Link Aggregation Control Protocol, is defined by IEEE 802.3ad and is an open standard protocol. LACP allows switches to automatically bundle switch ports into a single logical link to increase bandwidth. PAgP, or Port Aggregation Protocol, performs a similar function, but it is a Cisco proprietary protocol. DTP is Dynamic Trunking Protocol and is used to automatically and dynamically build trunks between switches. Multilink PPP is used to load-balance PPP traffic across multiple serial interfaces.

57. When EtherChannel is configured, which mode will force an interface into a port channel without exchanging aggregation protocol packets?

- active
- auto
- **on**
- desirable

Explanation: For both LACP and PAgP, the "on" mode will force an interface into an EtherChannel without exchanging protocol packets.

58. Which three parameters must match, on the ports of two switches, for a PAgP Etherchannel to be created? (Choose three.)

- **speed**
- **duplex**
- PAgP mode
- Port ID
- MAC address
- **VLAN information**

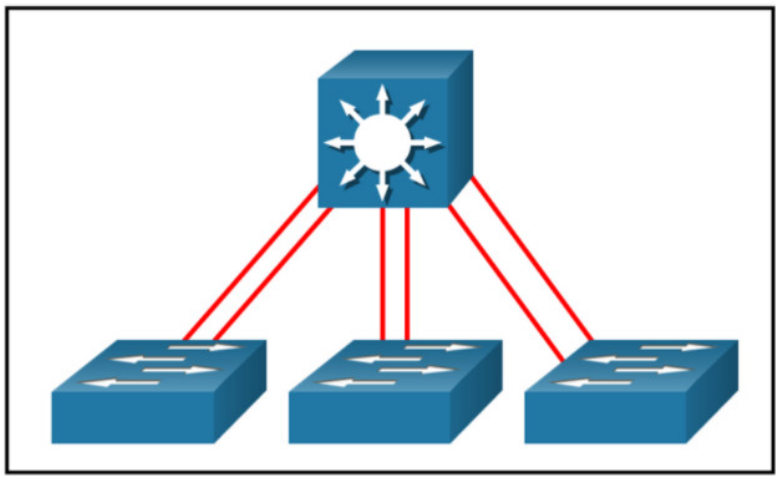
Explanation: PAgP will automatically create EtherChannel links between two switches but the connecting ports must have the same speed, duplex, and VLAN information. The PAgP mode must be compatible but not necessarily equal. The port ID and the MAC addresses do not have to match.

59. In which link aggregation mode does an interface initiate EtherChannel negotiation by sending LACP packets?

- desirable
- **active**
- on
- auto

Explanation: LACP has three configurable modes: on, active, and passive. Only the active mode places a port into an active negotiating state. Auto and desirable are PAgP modes and not LACP modes.

60. Refer to the exhibit. Which switching technology would allow each access layer switch link to be aggregated to provide more bandwidth between each Layer 2 switch and the Layer 3 switch?



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61. As the network administrator you have been asked to implement EtherChannel on the corporate network. What does this configuration consist of?

- providing redundant links that dynamically block or forward traffic
- **grouping multiple physical ports to increase bandwidth between two switches**
- grouping two devices to share a virtual IP address
- providing redundant devices to allow traffic to flow in the event of device failure

Explanation: EtherChannel is utilized on a network to increase speed capabilities by grouping multiple physical ports into one or more logical EtherChannel links between two switches. STP is used to provide redundant links that dynamically block or forward traffic between switches. FHRPs are used to group physical devices to provide traffic flow in the event of failure.

62. A network administrator is configuring an EtherChannel trunk link to add additional allowed VLANs to pass the link. Which statement describes the process of this change?

- **The change should be made on the port channel interface at both sides.**
- The change should be made on each physical interface of the EtherChannel.
- The change only needs to be made on one side of the EtherChannel link, because it will automatically propagate to the other side.
- The change can be made on the port channel interface at one side and the change will be negotiated to the other side.

Explanation: If a configuration change needs to be made after an EtherChannel is established, the change should be made in port channel interface configuration mode. After the port channel interface is configured, any configuration that is applied to the port channel interface also affects individual interfaces. However, configurations that are applied to the individual interfaces do not affect the port channel interface. Also, an EtherChannel trunk link is established if the parameter (in this case, allowed range of VLANs) matches.

63. Which two events will cause the VTP revision number on a VTP server to change? (Choose two.)

- **adding VLANs**
- rebooting the switch
- **changing the VTP domain name**
- changing the switch to a VTP client
- changing interface VLAN designations

Explanation: Changing the VTP domain name always resets the VTP revision number to 0. This is an important step in adding switches to an existing VTP domain no matter what VTP mode the switch uses.