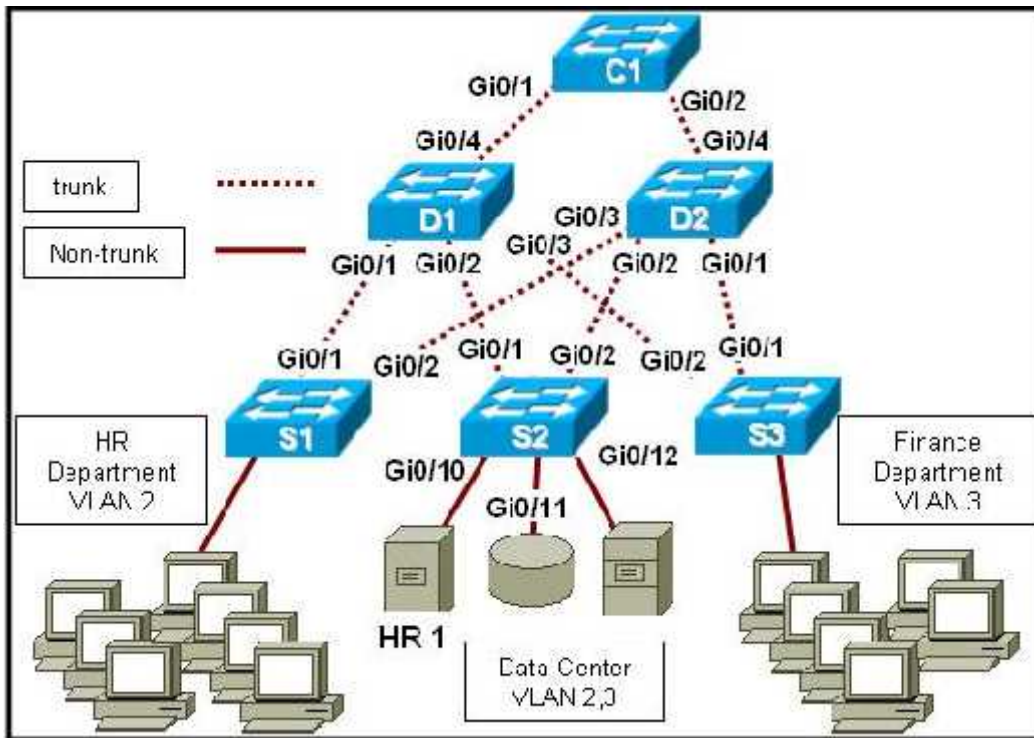


CCNA Exploration: LAN Switching and Wireless (Version 4.0)

Chapter 1 - LAN Design

- 1** Which layer of the hierarchical network design model is referred to as the high-speed backbone of the internetwork, where high availability and redundancy are critical?
- ☐ access layer
 - ☒ core layer
 - ☐ data-link layer
 - ☐ distribution layer
 - ☐ network layer
 - ☐ physical layer
-
- 2** For organizations that are implementing a voice over IP solution, what functionality should be enabled at all three layers of the hierarchical network?
- ☐ Power over Ethernet
 - ☒ quality of service
 - ☐ switch port security
 - ☐ inter-VLAN routing
-
- 3** Which hierarchical design model layer controls the flow of network traffic using policies and delineates broadcast domains by performing routing functions between virtual LANs (VLANs)?
- ☐ application
 - ☐ access
 - ☒ distribution
 - ☐ network
 - ☐ core
-
- 4** At which hierarchical layer are switches normally not required to process all ports at wire speed?
- ☐ core layer
 - ☐ distribution layer
 - ☒ access layer
 - ☐ entry layer
-
- 5** Link aggregation should be implemented at which layer of the hierarchical network?
- ☐ core only
 - ☐ distribution and core
 - ☐ access and distribution
 - ☒ access, distribution, and core
-
- 6** Which layer of the OSI model does an access layer LAN switch use to make a forwarding decision?
- ☐ Layer 1
 - ☒ Layer 2
 - ☐ Layer 3
 - ☐ Layer 4
-

7



Refer to the exhibit. Beginning with HR servers and workstations, a network engineer is designing a new security structure for the network. Which set of policies adheres to the hierarchical network model design principles?

- ☐ Implement Layer 3 switching on S1 to reduce the packet processing load on D1 and D2. Install all security processing on S1 to reduce network traffic load.
- ☒ Configure port security options on S1. Use Layer 3 access control features on D1 and D2 to limit access to the HR servers to just the HR subnet.
- ☐ Move all HR assets out of the data center and connect them to S1. Use Layer 3 security functions on S1 to deny all traffic into and out of S1.
- ☐ Perform all port access and Layer 3 security functions on C1.

8 A technician is attempting to explain Cisco StackWise technology to a client that is setting up three stackable switches. Which explanation accurately describes StackWise technology?

- ☐ StackWise technology allows up to eight ports to be bound together to increase available bandwidth.
- ☐ StackWise technology allows the switch to deliver power to end devices by using existing Ethernet cabling.
- ☐ StackWise technology allows the switch capabilities and ports to be expanded by the addition of line cards.
- ☒ StackWise technology allows up to nine switches to be interconnected via the use of a fully redundant backplane.

9 Configuring communication between devices on different VLANs requires the use of which layer of the OSI model?

- ☐ Layer 1
- ☒ Layer 3
- ☐ Layer 4
- ☐ Layer 5

10 What statement best describes a modular switch?

- ☐ a slim-line chassis
- ☐ allows interconnection of switches on redundant backplane
- ☐ defined physical characteristics
- ☒ flexible characteristics

- 11 Which three (3) features are commonly supported at the distribution layer of the Cisco hierarchical network model?
- ☒ security policies
 - ☐ Power over Ethernet
 - ☐ switch port security
 - ☒ quality of service
 - ☒ Layer 3 functionality
 - ☐ end user access to network
-
- 12 Which two characteristics are associated with enterprise level switches? (Choose two.)
- ☐ low port density
 - ☒ high forwarding rate
 - ☐ high latency level
 - ☒ support link aggregation
 - ☐ predefined number of ports
-
- 13 A network administrator is selecting a switch that will operate at the network core. Which three features should the switch support for optimum network performance and reliability? (Choose three.)
- ☐ port security
 - ☐ security policies
 - ☒ 10 Gigabit Ethernet
 - ☒ quality of service (QoS)
 - ☒ hot-swappable hardware
 - ☐ Power over Ethernet (PoE)
-
- 14 Which hierarchical design characteristic would be recommended at both the core and distribution layers to protect the network in the case of a route failure?
- ☐ PoE
 - ☒ redundancy
 - ☐ aggregation
 - ☐ access lists
-
- 15 What is the likely impact of moving a conventional company architecture to a completely converged network?
- ☐ Local analog phone service can be completely outsourced to cost-effective providers.
 - ☐ The Ethernet VLAN structure is less complex.
 - ☒ A shared infrastructure is created resulting in a single network to manage.
 - ☐ QoS issues are greatly reduced.
 - ☐ There is less bandwidth competition between voice and video streams.
-
- 16 Which two features are supported at all three levels of the Cisco three-layer hierarchical model? (Choose two.)
- ☐ Power over Ethernet
 - ☐ load balancing across redundant trunk links
 - ☐ redundant components
 - ☒ Quality of Service
 - ☒ link aggregation
-

18 A network technician is asked to examine an existing switched network. Following this examination, the technician makes recommendations for adding new switches where needed and replacing existing equipment that hampers performance. The technician is given a budget and asked to proceed. Which two pieces of information would be helpful in determining necessary port density for new switches? (Choose two.)

- ☐ forwarding rate
- ☒ traffic flow analysis
- ☒ expected future growth
- ☐ number of required core connections
- ☐ number of hubs that are needed in the access layer to increase performance

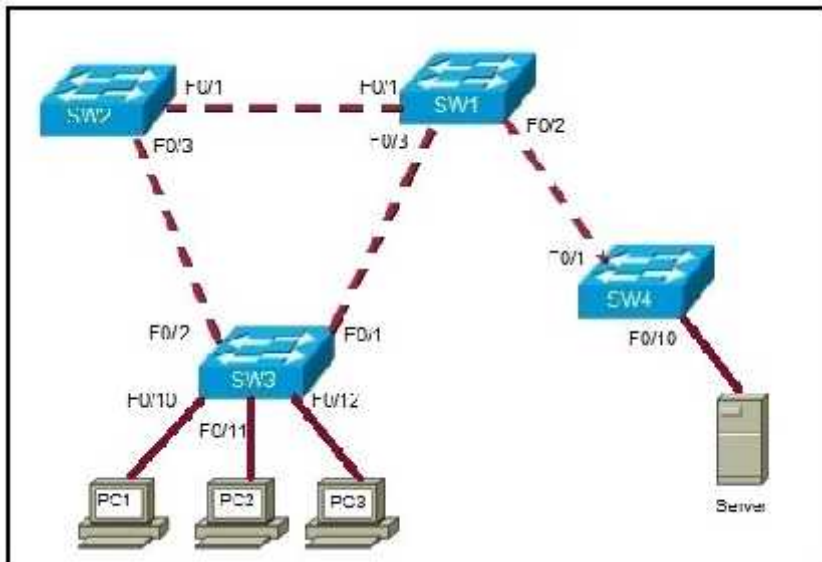
17 Which feature supports higher throughput in switched networks by combining multiple switch ports?

- ☐ convergence
- ☐ redundant links
- ☒ link aggregation
- ☐ network diameter

18 Which layer of the hierarchical design model provides a means of connecting devices to the network and controlling which devices are allowed to communicate on the network?

- ☐ application
- ☒ access
- ☐ distribution
- ☐ network
- ☐ core

20



Refer to the exhibit. What characteristic of hierarchical network designs is exhibited by having SW3 connected to both SW1 and SW2?

- ☐ scalability
- ☐ security
- ☒ redundancy
- ☐ maintainability